

POWER AMPLIFIER SERVICE MANUAL

CE Series CE 4000

Some models may be exported under the name Amcron®

H A Harman International Company



The information furnished in this manual does not include all of the details of design, production, or variations of the equipment. Nor does it cover every possible situation which may arise during installation, operation or maintenance. If you need special assistance beyond the scope of this manual, please contact the Crown Technical Support Group.

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CAUTION

TO PREVENT ELECTRIC SHOCK DO NOT REMOVE TOP OR BOTTOM COVERS. NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL. DISCONNECT POWER CORD BEFORE REMOVING REAR INPUT MODULE TO ACCESS GAIN SWITCH.

AVIS

À PRÉVENIR LE CHOC ÉLECTRIQUE N'ENLEVEZ PAS LES COUVERTURES. RIEN DES PARTIES UTILES À L'INTÉRIEUR. DÉBRANCHER LA BORNE AVANT D'OUVRIR LA MODULE EN ARRIÈRE.



WARNING

TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE!



The lightning bolt triangle is used to alert the user to the risk of electric shock.



The exclamation point triangle is used to alert the user to important operating or maintenance instructions.



Revision History

Revision Number	Date	Comments
Rev. A	05-2001	Initial Printing
Rev. B	11-2002	Added missing parts list on Page 5-76. Updated area code and mailing address on Pages 1, 2 and 7. Updated sections 3.2.4, 4.3.3, 4.3.9, 4.4.5, 4.6.1, 4.6.8, 4.7.2, 4.7.3, Figure 4.16. Added notes to pages 5-39, 5-73, 5-97.

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1 Introduction

1.1 Introduction

This manual contains complete service information on the *Crown*[®] CE 4000 power amplifier. It is designed to be used in conjunction with the *CE 4000 Reference Manual*; however, some important information is duplicated in this Service Manual in case the *CE 4000 Reference Manual* is not readily available.



NOTE: THE INFORMATION IN THIS MANUAL IS INTENDED FOR USE BY AN EXPERIENCED TECHNICIAN ONLY!

1.2 The CE 4000 Amplifier

The Crown CE 4000 is a compact audio amplifier designed for professional use, providing high-power amplification from 20 Hz–20 kHz with minimum distortion. The CE 4000 features Crown's patented, award-winning BCA® (Balanced Current Amplifier) engineering, for superior power output, increased efficiency, legendary Crown sound and extraordinary reliability. Crown's enhanced, switch-mode power supply with power factor correction allows the amplifier to be used worldwide without changing power supply components or settings. Other features include selectable on-board high-and low-pass filter sets, SST (System Solution Topologies) module compatibility, and a choice of dual output connectors:

Speakon® plus 5-way barrier block, 5-way barrier block plus binding strip, or dual Speakon.

1.3 Scope

This Service Manual in intended to apply to all versions of the CE 4000 amplifier. The Parts Listings include parts specific for the US version and the European version. For parts specific only to other versions contact the Crown Technical Support Group for help in finding part numbers.

1.4 Warranty

Each Reference Manual contains basic policies as related to the customer. In addition, it should be stated that this service documentation is meant to be used only by properly trained personnel. Because most Crown products carry a 3-Year Full Warranty (including round trip shipping within the United States), all warranty service should be referred to the Crown Factory or Authorized Warranty Service Center. See the applicable Reference Manual for warranty details. To find the location of the nearest Authorized Warranty Service Center or to obtain instructions for receiving Crown Factory Service, please contact the Crown Technical Support Group (within North America), or your Crown/Amcron Importer (outside North America). If you are an Authorized Warranty Service Center and have guestions regarding the warranty of a product, please contact the Field Service Manager or the Technical Support Group.

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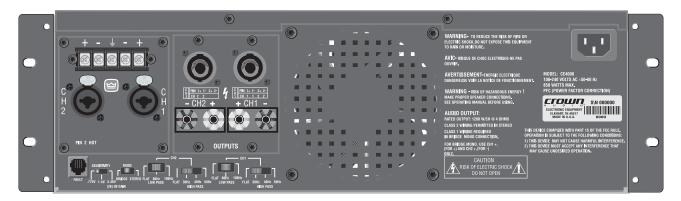


Figure 1.1 CE 4000 Front and Rear Views



2 Specifications

Note: All measurements are in Stereo mode with 8-ohm loads and an input sensitivity of 26-dB gain at 1-kHz rated power unless otherwise specified.

Power

Output Power:

CE 4000 Power Maximum power @ 1 kHz with 0.5% THD	Chart
2 ohm Dual	1800W ¹
4 ohm Dual	1200W
8 ohm Dual	600W
4 ohm Bridge-Mono	3600W
8 ohm Bridge-Mono	2400W
1. ≥ 200-V line voltage.	

Load Impedance: Safe with all types of loads. Rated for 2, 4 and 8 ohms in Stereo mode, 4 and 8 ohms in Bridge-Mono mode.

Voltage Gain to 1-kHz, 8-ohm rated output:

39.0-dB gain at 0.775-volt sensitivity; 33.8-dB gain at 1.4-volt sensitivity; 26-dB gain at 3.46-volt sensitivity.

Required AC Mains: 50/60Hz, 100-240VAC ($\pm 10\%$). AC Line Current,

100 Volts: 8.5 A; 120 Volts: 7.1 A; 230-240 Volts: 3.7 A;

At Idle: Amp draws no more than 155 watts.

AC Line Connector: 15A IEC Connector with

Country

Specific Cord and Plug. Inrush Current*: 50.86 A.

Performance

Frequency Response: ±0.25 dB from 20 Hz to 20 kHz at 1 watt (See Figure 2.1).

Phase Response: ±15 degrees deviation from linear phase from 20 Hz to 20 kHz at 1 watt.

Signal to Noise Ratio, A-Weighted, 20 Hz to 20 kHz: Better than 100 dB below rated 1-kHz power;

Total Harmonic Distortion (THD): 1-kHz rated power, 0.5% or less THD.

Intermodulation Distortion (IMD): (60 Hz and 7 kHz at 4:1) Less than 0.5% at rated power to 30 dB below rated power at 8 ohms.

Damping Factor: Greater than 700 from 10 Hz to 400 Hz.**

Crosstalk: Better than 50 dB below rated power, 20 Hz to 20 kHz.

Common Mode Rejection (CMR): Better than 70 dB from 20 Hz to 1 kHz.

DC Output Offset (Shorted Input): ±10 mV.

Controls & Connectors

Level: A 31-step detented rotary level control for each channel located on the front panel.

Power: An on/off rocker switch located on the front panel.

Mode: Turn power off before switching. A two-position switch located on the back panel below the input connectors which, when turned to stereo, operates the amplifier as two independent channels. When "Bridge-Mono" mode is selected, the amplifier bridges the two output channels for twice the output voltage.

Sensitivity: A three-position switch located on the back panel next to the Mode switch. Switchable among 0.775 volts or 1.4 volts for full output into an 8-ohm load (default setting), or 3.46 volts for a fixed voltage gain of 26 dB.

Fault Jack: A back-panel RJ-11 jack that may be remotely monitored to signal amplifier Fault condition. An LED or other signalling device (not supplied) may be used.

Filter Switches:

Low Pass: A three-position switch for each channel located on the back panel below the input and output modules. Switchable among settings for Flat, 80 Hz and 100 Hz. Filter rolloff is 24-dB per octave.

High Pass: A four-position switch for each channel located on the back panel below the input and output modules. Switchable among settings for Flat, 30 Hz, 40 Hz and 50 Hz. Filter rolloff is 18-dB per octave.

Indicators

Signal: A green LED for each channel which flashes when a very low-level signal (>-40 dBm) is present at input. May be used for troubleshooting cable runs.

Clip: A red LED for each channel which turns on when distortion becomes audible in the amplifier output.

^{*} Per EN 55103-1: 1996 Annex B and Annex F. Highest reading from a sample of 10 random readings.

^{**} Measured using binding-post output connectors.

Fault: Normally off, this red indicator will blink under five different conditions:

- 1. When the amplifier is first powered up, until the unit is ready for operation.
- 2. If the heatsinks reach a temperature above normal working limits.
- 3. If the transformer thermal protection circuit is activated.
- 4. If amplifier output wires develop a short-circuit.
- 5. If the amplifier output stage becomes non-operational.
- 6. If there is a problem elsewhere in the amplifier.

This circuit may be monitored remotely by plugging a simple switching circuit using an LED or other signaling device into the back-panel RJ-11 (Fault) jack. Under some conditions, the output of the amplifier will be muted.

Power: A green LED that turns on when the amplifier has been turned on and has power.

Input/Output

Input Connector (standard module): One Neutrik® Combo connector for each channel which features a balanced ¼-inch (6.35-mm) phone jack and a 3-pin female XLR connector, in parallel with a barrier strip termination.

Input Stage: Input is electronically balanced and employs precision 1% resistors.

Input Impedance: Nominally 20 k ohms, balanced. Nominally 10 k ohms, unbalanced.

Input Sensitivity: 0.775 volts or 1.4 volts for standard 1-kHz power, or fixed 26-dB gain.

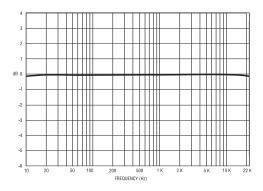


Figure 2.1 Typical Frequency Response

Output Connectors: Three options available: Four (4) Neutrik® Speakon® NL4MP (mates with NL4FC) output connectors; (2) 5-way binding posts in parallel with two (2) Speakon® connectors; or barrier strip outputs in parallel with two (2) 5-way binding posts.

Output Signal,

Stereo: Unbalanced, two-channel;

Bridge-Mono:Balanced, single-channel. Channel 1 controls are active; Channel 2 should be turned down.

Wiring Configuration: (see Figure: 2.2).

Protection

CE 4000 amplifiers are protected against shorted, open or mismatched loads; overloaded power supplies; excessive temperature, chain destruction phenomena, input overload damage and high-frequency blowups. They also protect loudspeakers from input/output DC, large or dangerous DC offsets and turn-on/turn-off transients.

Construction

Rugged steel chassis is formed into a durable package any stagehand could love. Coated with environmentally friendly powder for long life and ease of maintenance.

Cooling: Three-speed proportional speed fan.

Dimensions: EIA Standard 19-inch rack mount width (EIA RS-310-B), 5.25-inch (13.34-cm) height and 16.25-inch (36.56-cm) depth with additional 1-inch rear rack ears.

Weight: The CE 4000 net weight is 33.3 pounds (15.1 kg). Shipping weight is 39.3 pounds.

OU.	OUTPUT ASSIGNMENT					
PIN	CH		PIN	СН		
1+	2		1+	1		
1-	2		1-	1		
2+			2+	2		
2-			2-	2		
CH	-2]	CH	l-1		

Figure 2.2 Output Pin Assignments



3 Theory of Operation



WARNING: All voltages on the primary side of the flyback or bridge isolation transformers are not referenced to ground. They are referenced to the mains. When measuring these voltages with mains voltage applied, always use an isolation transformer to provide the mains voltage (and tie SMPSREF to signal ground) or use an isolated differential probe.

3.1 Audio Signal Path

For the sake of simplicity, only channel one of the audio signal path is described.

3.1.1 Input Stage

Signal is presented to the CE4000 through one of three connectors when using the standard input module. Each channel is outfitted with a balanced XLR / phone jack, and a barrier strip. These connectors are wired in parallel, which allows daisy chaining when needed. The incoming shield is tied to ground through an 82-Ohm resistor (R607) in parallel with a 0.1uF cap (C605) for the purpose of inhibiting ground loop circulating currents and RFI protection. The signal is then converted from balanced to unbalanced in the Balanced Input Stage where it receives further RFI protection. Input impedance is 20k Ohm balanced and 10k Ohm unbalanced. Signal then flows into the Variable Gain Stage where the front panel level controls are allowed to affect the gain.

The CE4000 amplifier comes with three input sensitivity selections: 0.775V, 1.4V, and fixed 26dB gain set by a switch on the Bridge/Fault/Gain (BFG) PWA. With the gain switch (S1) in the 0.775V position, R6 sets the gain while in the 1.4V position R5 in parallel with R6 set the gain. In the 26dB position, R4 in parallel with R6 set the gain. The signal is then put under the control of a full-time compressor circuit comprised of a symmetrical window detector, a buffer amplifier, and the gating op-amp which uses several small components to set the compressor's attack and decay characteristics. These components are found on the large main PWA. The actual compressing is accomplished by an opto-isolator (U1) on the BFG PWA that affects the gain in the signal path.

The signal then is passed through a series of switchable filters that allow the signal to be low pass

and high pass filtered at various frequencies. The switches are located at the back panel. The low pass filter is a fourth-order Linkwitz-Riley type and the high pass filter is a third-order Butterworth type. These switches (S3 for the low pass and S5 for the high pass) and their necessary circuitry are found on the BFG PWA.

Inherent in all PWM amplifiers is a rise in gain at higher frequencies. Because of this, a 32 kHz 7th-order Gaussian low pass filter has been included in the input stage of the CE4000 (on the main PWA). The Gaussian filter-type is unique in that it has minimal ringing and excellent phase response so even a high-order filter such as this one does not adversely affect the sonic excellence of the product. U111-A, -B, -C and -D comprise this filter while U110-B and R178 form the gain calibration stage for this 7th order filter.

3.1.2 Error Amplifier

The signal next enters the main amplifier error amp (U100-C) where it is mixed with a small portion of the output voltage and current in such a way as to control the amplifier's overall output performance. From the error amplifier, the signal is divided and fed to the modulator. Since the modulator circuit is balanced, the drive signal for the positive modulator is inverted by U100-D.

3.1.3 Modulator

U101 and U103 are high-speed differential comparators. U101 is the positive comparator and U103 is the negative comparator. The comparator section has two outputs: inverting and non-inverting. The output is therefore balanced. The audio signal is applied to the inverting input of both differential comparators (with the positive modulator receiving the audio 180 degrees out of phase from the negative modulator). The 250 kHz triangle wave (described below) is applied to the non-inverting input of both differential comparators. With no audio signal, the bipolar triangle wave is therefore compared to a zero-volt signal and this results in a 250 kHz square wave pulse train that is passed to the NAND gate section of the differential comparator.

Each NAND gate has two inputs: the modulated signal from the high speed comparator section and the current limiter detect signal from U106-A. In the event of over-current, the current limiter signal is shut off disabling the NAND gates. This results in no

pulses exiting the comparators long enough to keep the current at an acceptable level.

If there is no current-limiting action, the balanced output of U101 forms the positive portion of the output waveform (Vp). The output of U103 is also balanced and forms the negative portion of the output waveform (Vn). These two balanced signal lines are routed to the output stage drivers, U119 and U123. If an audio signal is present at the inputs of the modulators, the triangle wave will be compared to a varying signal at the comparators and the outputs of the NAND gates will be a 250 kHz pulse train in which the widths of the pulses vary with the audio amplitude.

This operation is described as Pulse Width Modulation (PWM), as used in the BCA amplifier.

3.1.4 Triangle Generator

The 250 kHz triangle wave has its origins from the 4MHz generator (clock generation is described in the power supply section). After U224-A divides the 500kHz square wave down to 250 kHz, U105 converts the signal from a 0V-5V square wave to a -5V to +5V triangle wave that is extremely accurate. R171, C159, C153, C154, R168, and R169 provide the feedback loop to the linear IC U105. The potentiometer R170 allows the triangle wave to be DC offset in order to change the overlap/underlap characteristics of the output stage. Overlap/underlap is analogous to the bias adjustment made in linear output stages but it does not require a temperature sense to prevent thermal runaway. The output of U105 is routed to the non-inverting inputs of the modulators.

A note on the triangle generator for channel two: Before the frequency is divided down by two, the 500 kHz clock is inverted by U106-B. This effectively shifts the channel two triangle wave 90 degrees from that of channel one.

3.1.5 **Output**

The PWM modulated 250 kHz signals exit the modulators and enter the output stage via optocouplers U119 (Vp) and U123 (Vn). These optocouplers give electrical isolation from the low voltage circuitry to the high voltage output circuitry. The output of U119 and U123 are then sent to the output MOSFET drivers.

U120 and U121 are dual inverting high-speed drivers designed to interface low current digital circuitry (U119 and U123) with power MOSFETs (also abbreviated FETs). U120 and U121 are used to drive the gates of the output FETs (Q106-Q113).

In order to produce gate drive power to the drivers, a floating supply is generated for the Vp side. This supply uses U124-A and U124-B to divide the 500kHz clock down to 125 kHz. The half-bridge driver U22 uses this 125 kHz clock to control the high-side and low-side FETs in the dual FET IC U23 so that the output of U23 is alternately connected to +15VPS and ground. The rate of current rise is kept in control by the inductance of transformer T101. The end result is that the output of U23 is a square wave of 15V amplitude and approximately 50% duty cycle that is used as the primary excitation for the transformers. The transformer provides the required isolation and the secondary AC is converted back to DC by diodes D131 and D132 and filter capacitors C316-C319. The Vn side receives gate driver power from the flyback PWA (see below) and this power is referenced to the -Vcc rail.

We pause now for a qualitative description of output stage operation (refer to Figure 4.1). All parts to the left of "lout" are positive or "p" side parts and all parts to the right of "lout" are negative or "n" side parts. The switches Swp and Swn are analogous to the FETs. Quiescent operation will be considered first. At the start of a switching cycle Swp and Swn are both turned on. Current flows from +Vcc, through Swp, through Lp, through Ln, through Swn, and down to -Vcc. The current rises at a controlled rate in the Lp and Ln inductors (see the current diagram to the right in Figure 4.1). Halfway through the cycle, the switches turn off but the inductors have reached a certain current flow (the peaks on the diagram) and now must continue pushing current in the same direction. The current continues to flow in the same direction through the inductors but comes through the diodes because the switches are open. Specifically, current flows from -Vcc through D1, through Lp, through Ln, through D2, and to +Vcc while ramping down. At quiescent, the Lp and Ln currents cancel so the net voltage developed at lout across the capacitor is zero. For positive voltage output, Swp is left on longer than Swn and for a negative output voltage, the opposite occurs. Note that for any output voltage, the "on" time of both switches will overlap, even if one is on longer than the other.

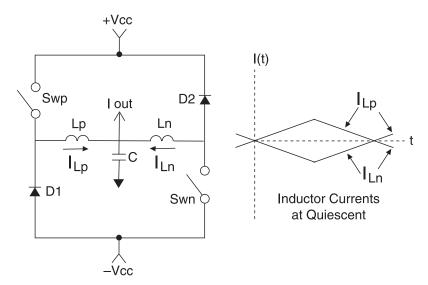


Figure 4.1 BCA Operation

Now back to the description of output circuit flow: after the FETs, the signal is then routed to the BCA filter inductors (Lp and Ln) and the current sense resistors (R383/R361 and R384/R362). The combining point (B1) is then sent to the Output Filter.

With no audio modulation, the PWM pulse train that is sent to the gates of each set of FETs is the same and the duty cycle is approximately 50%. This means that for no audio input, the positive FETs (Q106, Q107, Q110 and Q111) turn on and off at the same time as the negative FETs (Q108, Q109, Q112, Q113. As mentioned before, the Lp and Ln inductors control the rate of rise of the current during this time so that this does not act like a short during the couple of microseconds that they are on. The time that the FETs are on ramps current up in the inductors which stores energy in them. This energy is released through the diodes (D140-D143) when the FETs are turned off. The Vp and Vn nodes swing between –Vcc and +Vcc with a duty cycle of approximately 50%.

Operating the output stage in this way causes the current in the Lp and Ln inductors to completely cancel at the B1 node. This drastically reduces the filtering requirements necessary after the output stage.

If an audio signal is present at the input of the amplifier, the widths of the pulses at Vp and Vn change but the amplitude of the pulses stays at 2 * Vcc. Positive audio signals will cause the positive side of the output stage to be on more than 50%

of the time while the negative side will be on less than 50% of the time. The total "on-time" will add to approximately 100%. Also, the on-time of the two polarities will overlap so that when the negative side is on, the positive side is also. For negative-going signals, the action is reversed (swap positive and negative). The result at the summing junction B1 is an amplified version of the input signal, with some noise superimposed on it. The B1 signal is then routed to the Output Filter.

3.1.6 Output Filter

The output filter is made up of three individual filters: a 250 kHz filter (L101/C128), a 500 kHz filter (L102/C131/C397), and a final 250 kHz filter (L104/C136-C139). The signal passes through these three filters to eliminate both residual 500 kHz and 250 kHz signals. The audio signal is then connected to the output PWA through buss bars.

3.2 Protection and Control Circuitry 3.2.1 Current Monitor

Audio output current levels are monitored by the use of transformer T100. A small primary winding is in series with the output current and the secondary develops a voltage across R140 proportional to the output current of the amplifier. This output current information is used for two purposes:

- 1. Negative feedback
- 2. Current feedback information for the modulators.



3.2.2 Current Limiter

To prevent excessive output current, the CE4000 amplifier incorporates a current limiting protection circuit. The current sense resistors (R383/R361 and R384/R362) in series with the Lp and Ln inductors sense the output current. The voltage dropped across these two resistors is sent back to U108-A and U108-B. D109, R163, and R165 set the voltage reference for U108-B. D109, R164, and R167 set the voltage reference for U108-A. Due to the circuit configuration, only the reference at U108-5 will show a voltage and it is set to 0.48VDC referenced to node B1 with no signal input.

The outputs of the comparators are normally open but since these two outputs are connected together and to U107-2 and through R161 to B1+15V, the level sits at one diode drop above B1 or +0.6VDC. Pin 3 of U107 is tied to B1. The output of U107 is inverting so normally the output is low. U106-A inverts the output and is used to turn the modulators on and off. Overall, if the outputs of U108 go low, the output of U106-A goes low to turn off the modulatorsU101 and U103.

The second input to U106-A is from the protection circuitry and is used to turn off the modulators (U101 and U103) for various reasons (see Section 4.2.4).

3.2.3 Display Circuitry

Just after the input signal is converted from balanced to unbalanced, it is routed to the signal detection circuit. With a signal approximately 45-dB below that required for full output, the Signal LED will illuminate. Note that this LED will indicate whether signal is present at the amplifier but not whether it is being output from the amplifier.

The compressor circuit is initiated by either the Input-Output Comparator (IOC) circuit or by the Thermal Limit Control (TLC) circuit. The IOC circuit, composed of Q100, Q101, R121-R126, and D105-D106, uses the error signal from the error amplifier (U100-C). If the error amplifier is unable to correct for non-linear behavior in the amplifier, the error amplifier (U100-C) will generate a voltage spike of approximately ±7V. The IOC circuit clamps that voltage to the ±7V limit (normally it would go to the op-amp's rails) and also generates a voltage greater than the window of ±0.3V that is detected by U117-C and U117-B. Depending on the polarity, U117-C or U117-B will go low during an IOC event. If this happens, U125-D goes high

and Q103 turns on, Q103 turns on the compressor opto (located on the BFG PWA) which compresses the input signal and reduces the peak voltage the amplifier is required to produce. U125-D going high will activate the "Clip" LED, but only if the IOC condition occurs long enough to be audible. C312 and R413 set the conditions at which the "Clip" LED illuminates. Details of the generation of the TLC signal are discussed in the next section.

The "Fault" LED indicates any condition when there is a reason for the modulators to be turned off. When activated, the Fault LED will flash at approximately 3Hz.

The "Enable" LED is turned on by the presence of the +15V supply (see Section 4.3.3).

3.2.4 Control Circuitry

After the low and high voltage rails are powered up and stable, the C354 timing capacitor, along with U114-C and associated circuitry holds the enable line (the net is called "Timing Cap 1") low for approximately four seconds. If Timing Cap 1 is low, U115-A stays low which causes Q115 to be high. This is input to U106-A that is inverted on the output and holds the modulators off.

Several detectors affect the status of Timing Cap 1. U114-A, along with scaling resistors R309 and R310 pull the line low if +Vcc rises beyond a safe limit. In a like fashion, U213-A, R315, and R316 look at the -Vcc rail. U213-B with scaling resistors R320 and R319 determine if the high voltage rails are high enough to ensure proper operation. If a large amount of high frequency energy is being produced by the output stage (such as during a shorted load condition), U114-B with scaling resistors R311 and R312 and time delay cap C176 will pull Timing Cap 1 low. If the airflow is blocked or severely clogged and even the fan on high speed can not keep the amplifier cool, U115-D will pull Timing Cap 1 low. If Timing Cap 1 goes low, it also turns on Q1 on the BFG PWA, which causes U5's transistor to not conduct. U5 is connected to pins 2 and 5 of the modular jack J3 that allows for remote sensing of the amplifier's operating condition.

Special Negative Temperature Coefficient (NTC) resistors are attached to three heatsinks and the power transformer to tell the amplifier if action needs to be taken to reduce the temperature. RT1 and RT2



are attached to the amplifier output heatsinks (one per channel). R711 is attached to the primary side power supply heatsink and R713 is attached to the power transformer. The NTC sensors feed the fan control circuit. Normally, the fan runs at very low speed and R325, R42, R508, R509, R333, R334, and R86 limit the voltage applied to the fan. For medium speed, Q105 conducts, shorting out R333, R334, and R86. For high speed, Q104 also conducts which shorts out the other dropping resistors.

"TLC" is a feature that allows the amplifier to decrease the amount of power it is dissipating if the power devices or transformer are climbing towards an unsafe temperature. This circuit uses the NTC-derived voltage to control a varying power limiter. This circuit only comes into play if forcing the fan into high speed is not enough to keep the unit at a safe temperature. The TEMP IN signal is delivered to U125-A's noninverting input while a reference voltage is sent to its inverting input. U125-A scales and inverts the temperature signal while U125-B inverts this new signal. U112-B and U112-C compare the temperature information to the input signal amplitude. Normally, the output of U112-B&C is open collector but if limiting is required, this output is forced low and is sent to the compressor circuit as TLC 1.

The NTC voltages controlled by R339, R74, R712, and R714 respectively are diode-OR'd to U115-D. U115-D compares this voltage to a reference formed by R337 and R336 to determine if, as a last line of defense, Timing Cap 1 should be pulled low until the amplifier cools off.

In the rare event that DC is produced by the output stage, U113-C and U113-D form a window detector whose output goes low in that condition. This signal is latched on permanently by U113-A and U113-B and R304. This signal, which is high for a fault condition, is sent to U115-4 and will also turn off the modulators. To reset this latch, the power must by cycled to the amplifier.

3.3 Power Supply Operation 3.3.1 Power Entry and Filtering

AC power enters the amplifier through a power cord equipped with an IEC (unplugable) connector. It then passes through the EMI filter to remove switching noise caused by the amplifier and power supply. The parts on the primary side of the power distribution circuitry (including those on the EMI PWA) have all

met stringent regulatory safety requirements and, if they fail, must be replaced by the correct part as called out in the PWA documentation.

3.3.2 Fuse

In the rare event that a power supply failure draws excessive current from the mains and the power supply itself cannot reduce the current by shutting down the controllers, a fuse will blow on the EMI filter PWA. This fuse is accessible through a slot in the filter shield and is the same value regardless of the mains voltage that the amplifier is used with. Always replace the fuse with the same type and rating!

3.3.3 Low-Voltage Supplies (Flyback)

Several things happen in parallel when the power switch is first turned on. The line current flows through PTCs R1 and R2 to prevent high inrush currents. The current is then rectified by D1 and flows through L1 and D2 to charge energy reserve caps C1 and C6. As soon as sufficient voltage is detected at the "Vbulk" node, the low voltage "flyback PWA" supply starts running. It is a buck supply that self-starts by free running (not synchronized to any clock) at about 80 kHz. This supply produces all of the required low voltage supplies except the Vp gate drive power mentioned above in the "Output" section. All of the secondary supplies are isolated from the primary by a transformer. After the low voltage supplies are up and running, the clock circuitry runs and generates a synchronizing signal for the flyback PWA that overrides the free-running circuit and forces the flyback to run at 125 kHz.

3.3.4 Turn-On Control Circuitry

As mentioned in the previous section, while C1 and C6 are being charged through the PTCs, Q11 is held off and C47 charges up in approximately two seconds. U10-A's output then goes high which turns Q8 on forcing U13-B's output high which turns on the relay via Q9 and shorts out the PTCs and allows full line voltage to get to C1 and C6. As Q8 is turning on, Q3 turns off causesing C24 to discharge through R9 and, after about 15mS, forces U13-A's output low which turns Q14 and Q15 off. When Q14 and Q15 are on, they ground the soft-start pins of controllers U2 and U4 and this prevents them from running.

Three conditions can prevent the node at U10-A's output from going high. U24-A will hold this node low through D45 if there is a fault detected by the audio output stage or if the power supply detects an

overcurrent condition. The circuit of U24-A and U24-B will latch if either of these conditions is detected. U11-B will hold the node low if U11-A detects a low line voltage condition (about 60VAC) such as a brownout.

3.3.5 PFC Boost Stage

After the relay closes and the soft-start pins are opened, the PFC controller, U2, starts to run. The GDRV pin (20) on U2 controls gate drivers U9 and U26 which drive the gates of Q1 and Q2 in a boost mode configuration. Several inputs to the controller affect its operation. The controller uses feedback from the "V BULK" node, compensated by R24, C314, and C14 and fed into U2-13 and U2-14 to maintain approximately 400VDC at this node. The feedback loop is quite slow, in the "10's of Hz" range, unlike that of a power amplifier, and so depends on the large energy reserve capacitors to supply impulsive power but overall, the voltage is regulated to 400VDC regardless of the line voltage or the load current. Note that 400VDC is higher than the highest expected peak line voltage so the PFC stage is always boosting to a known voltage. The PFC controller also looks at the incoming "RECT AC+" voltage and makes sure that the current the boost stage draws is in phase and shaped like the voltage. This makes the amplifier look like a resistor to the AC mains, and allows it to pass certain regulatory requirements. Pin U2-3 looks at the incoming line voltage to make sure it is within safe limits and if not, shuts down the FETs. R36 sets the current limit of the PFC stage to approximately 47Amps peak. Using all of these inputs, U2 causes the boost stage to take small amounts of current from the line 62,500 times each second.

3.3.6 Bridge Isolation Stage

The 400VDC is then "bucked" down to the ground referenced rails (+Vcc and -Vcc) needed by the audio amplifier. Controller U4, through gate drivers U17, U31, U29, and U32 and transformers T2 and T3. turns Q4 and Q7 on at the same time, then turns Q4 and Q7 off and Q5 and Q6 on at the same time, causing T1 to convert voltage and current to its secondary. This process is repeated so that any two of the four FETs are on about 85% of the time. U4 runs at 125kHz (the 250kHz sync signal is divided down within the IC). Diodes D3-D6 and capacitors C7-C8 rectify the secondary AC to DC. Transformer T1 provides isolation between primary (mains) and secondary (ground referenced) power for safety. Controller U4 is called a "Phase-Shifted Bridge Controller" because as its soft-start pin is released and U4-19 climbs in voltage (U4-19 is a current source), the controller slowly allows the power transfer to ramp up by phase-shifting the power FETs properly. This stage is referred to as a "buck" stage (as mentioned previously), an "isolation" stage for its transformer action, and a "bridge" stage since the four FETs form a full bridge topology.

The AC primary current travelling through the transformer is also passed through a small current transformer in order to sense the current. This AC signal is passed through diodes D9-D10 and D12-D13 and cap C26 to convert it to DC. If the bridge current is high and remains high for several seconds (such as when the amplifier is producing high voltage, high current sine waves), the average power limiter will tell the audio amplifier to invoke the compressor and slowly reduce the power output. The DC signal from C26 is also compared to a reference in the Over Current Detect Circuit and will latch both U2 and U4 off if currents above 50-55 Amps are detected in the bridge primary. The power to the amplifier must be cycled to reset this latch.



4 Maintenance

4.1 Where to Begin

Effective repair involves three basic steps:

- 1) Determine the symptom(s) of the problem
- 2) Identify the cause(s) of the symptom(s)
- 3) Repair the unit to eliminate the cause(s).

To determine the symptoms, you will want to get as much information from the user as possible. Get as much information as you can about the system and how the amplifier is used. There is always the possibility that the problem will show up only if used in a specific way.

Once you have all the information about the symptom(s), it is time to inspect the amplifier. A careful visual inspection is valuable for most problems, which you may encounter. To inspect the inside of the amplifier remove the cover as described in Section 4.3.1.

Begin the inspection by looking for anything, which appears abnormal, like loose connectors, broken wires and burnt or visibly damaged components. Inspect the printed circuit assemblies for broken traces and loose connections. Be thorough. The time you spend visually inspecting the amp is time well spent.

4.2 Surface Mount Technology

CE Series amplifiers use surface mount technology in their design. There are several advantages to using surface mount technology (SMT), including; (1) surface mount devices (SMDs) are much smaller, and are mounted to the surface of the board, so more components can be placed on the board. (2) Components can be attached to both sides of the board, allowing the board size to be reduced. (3) SMT boards are lighter and provide better electrical performance and signal speed.

Of course, there are also things to watch out for with SMT. (1) The placement of the components on the board, not through a hole, makes the components and the solder joint more susceptible to damage. (2) Rework of SMDs can often require specialized tools, equipment, or training. (3) SMDs are very small and can be difficult to handle, see, and identify.

Remember that on the CE-Series amplifiers, the SMDs on the bottom side of the main module are GLUED. Take care not to damage components while trying to remove them from the surface of the module.

4.3 Disassembly for Inspection & Service

The extent of disassembly required will depend upon the extent of inspection and service required.

Note: To avoid the risk of electric shock, turn off and unplug the amplifier from the ac power outlet before disassembly or reassembly is attempted.

4.3.1 Top Cover Removal

To remove the cover of the amplifier you will need a #15 torx bit (TX15). After the cover is removed, and before any internal cables are disconnected, **discharge the supplies**. See Section 4.3.2.

- 1. Turn the amplifier on its bottom on your workbench. The only access to the inside of the amplifier is the top cover.
- 2. Using the TX15 bit, Loosen the 8 screws around the perimeter of the cover.
- 3. The cover lifts up and back after the screws are removed.

4.3.2 Power Supply Discharge

Before any connectors and PWAs (<u>Printed Wire Assemblies</u>, or circuit boards) are removed, the Power Supplies need to be discharged. Follow these simple steps.

- 1. Make sure the amplifier is unplugged from the AC power source.
- 2. Locate L6 and L9 on the Main PWA (see Figure 4.3).



WARNING

Amplifier components are ESD sensitive. When servicing the amplifier, the technician must have approved ESD protection. Proper grounding straps and test equipment are required. Failure to use proper protection will result in component failure.



WARNING

Before unplugging or plugging in any connectors or wires in the amplifier, discharge the power supplies. See section 4.3.2 for instructions. Failure to do so will result in circuit failure.



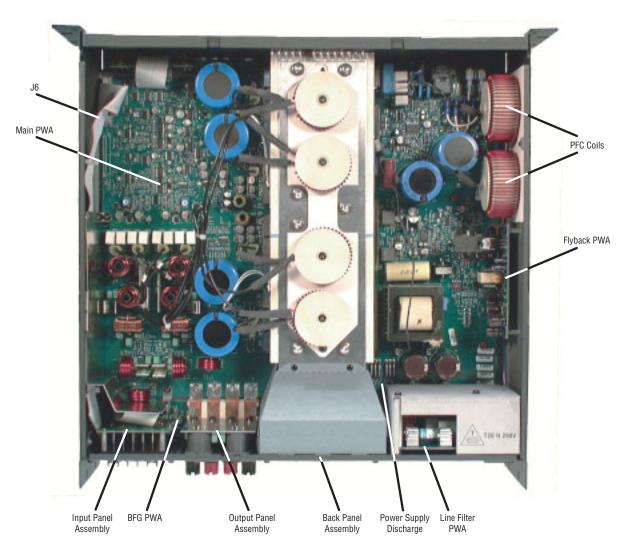


Figure 4.1 CE 4000 Top View A

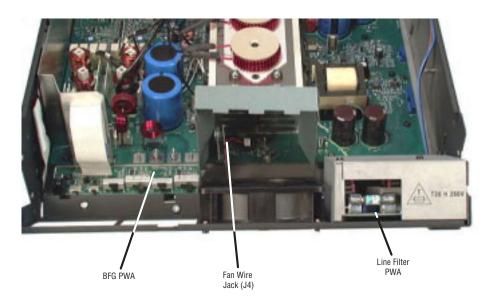


Figure 4.2 CE 4000 Top View B



- 3. Connect a 600 Ohm 10 watt resistor from L6 to L9. Be careful not to touch the leads with your fingers, as ±100V could be present at this point.
- 4. Wait 30 seconds before removing the resistor.



Caution: the ten-watt resistor will become hot as the power supplies discharge.



Figure 4.3 Power Supply Discharge



4.3.3 Flyback Supply PWA Removal

- 1. Follow the instructions in Section 4.3.2. Supply discharge is necessary to avoid circuit damage.
- 2. Remove the two screws and two plastic washers securing the Flyback PWA to the Chassis (see Figure 4.4).
- 3. Release the retention latches on the connectors located at the bottom of the Flyback PWA.
- 4. Lift the Flyback PWA straight up and out of the chassis.

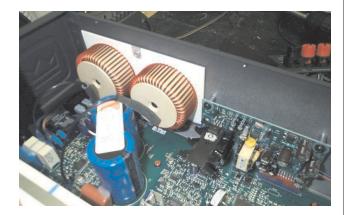


Figure 4.4 Flyback PWA and PFC Coils

4.3.4 Input Module (SST) Removal

- 1. Remove the four Phillips-head screws that secure the SST to the chassis.
- 2. Gently slide the SST out to expose the ribbon cable connector.
- 3. Release the retention latch and disconnect the ribbon cable from the SST Module and finish by removing the SST from the chassis.

4.3.5 Output Panel Removal

- 1. Remove the four nuts on the Main PWA that hold the output buss bars to the Main PWA (see Figure
- 2. Remove the four T15 screws that secure the output panel to the back panel.
- 3. Slide the output panel up and out of the back of the amplifier.

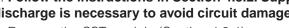


Figure 4.5 Output Bus Bars

4.3.6 Back Panel Assembly Removal

The back panel assembly is removed to access the BFG, Main and Filter PWAs.

1. Follow the instructions in Section 4.3.2. Supply discharge is necessary to avoid circuit damage.



- 2. Remove the SST module (Section 4.3.4).
- 3. Remove the output panel (Section 4.3.5).
- 4. Disconnect the Brown and Blue primary wires from the Main PWA. Slide both wires out from underneath Flyback PWA.
- 5. Remove the 8 Flathead T15 screws on the side and bottom of chassis that secure the back panel to the chassis. Slide the back panel partially out and away from the amplifier, then unplug the fan wires from the Main PWA at J4 (see Figure 4.3).



- 6. Disconnect the safety ground wire attaching the back panel to the chassis.
- 7. Pull the back panel assembly the rest of the way out of the back of the amplifier.

4.3.7 Line Filter PWA Removal

- 1. Remove the back panel assembly (see Section 4.3.6).
- 2. Remove the four T15 screws that secure the shield.
- 3. Disconnect the faston connectors before removing the PWA.
- 4. Remove the four standoffs that hold the Line Filter PWA to the back panel assembly.
- 5. Remove the Line Filter PWA.

4.3.8 BFG PWA Removal

- 1. Remove the back panel assembly (see Section 4.3.6).
- 2. Remove the T15 flathead screw that holds the metal cable shield to the chassis.
- 3. Remove the two T15 screws that hold the shield to the Main PWA.
- 4. Remove the metal shield out of the chassis.
- 5. Disconnect the ribbon cable from the Main PWA at J6. (see Figure 4.2)
- 6. Remove the tie-wraps securing the ribbon cables.
- 7. Remove the two T15 screws securing the BFG PWA to the chassis.
- 8. Lift the BFG PWA straight up from the chassis.

4.3.9 Main PWA Removal

- 1. Remove the FlyBack PWA (see Section 4.3.3).
- 2. Remove the back panel assembly (see Section 4.3.6).
- 3. Disconnect the PFC coils and remove them from the side panel of the chassis.
- 4. Remove the T15 flathead screw that holds the metal cable shield to the chassis.
- 5. Remove the two T15 screws that hold the shield to the Main PWA.
- 6. Remove the metal shield out of the chassis.
- 7. Remove the knobs from the front panel.
- 8. Remove the nuts that secure the level controls to the front panel.
- 9. Slide the level controls into the chassis.
- 10. Remove the air shroud from the Main PWA heatsink.
- 11. Unplug the power switch wires at J26, J27, J28 and J29 on the Main PWA.
- 12. Remove the seven screws that secure the heatsink assembly and coil assembly to the chassis.

- 13. Remove the seven orange- or blue-painted screws that secure the Main PWA assembly to the chassis
- 14. Holding the heatsinks, lift and slide the Main PWA straight up and backwards out of the chassis.

4.4 Troubleshooting

As mentioned earlier, the three steps to effective repair are: Determine the symptoms; identify the cause of the symptoms; repair the unit to eliminate the cause.

Please troubleshoot based on the order listed below.

4.4.1 Troubleshooting Flyback Power Supply.

- 1. Nulls off the error amplifier output of channel 1 by placing a jumper between TP100 and TP104 (Jumper 1 in Figure 4.6).
- 2. Nulls off the error amplifier output of channel 2 by placing a jumper between TP200 and TP204 (Jumper 2 in Figure 4.6).
- 3. Defeat Undervoltage protection circuitry on BCA side by pulling TP248 to +15V (TP254) (Jumper 3

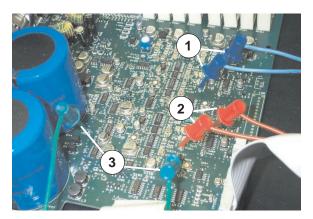


Figure 4.6 Shorting Jumpers

in Figure 4.6).

4. Defeat Brown-out effect protection circuitry by pulling TP249 to +15V (TP-6) with a jumper, as shown

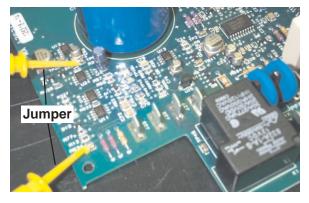


Figure 4.7 Brown-Out Jumper



5. Connect half wave rectified AC power flyback and power it up **through an isolation transformer** as shown in Figure 4.



Warning: NOT using an isolation transformer in Step 5 can result in test equipment damage.

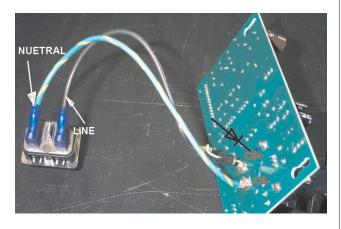


Figure 4.8 Half-Wave Rectified Flyback

- 6. Using a multimeter check DC supplies on power supply side. Confirm TP6, TP7 and TP8 = +15V, TP46 = +7.5V, TP252 = 19.0V, U2 pin 11 = 5.1V, and TP256 and U14 pin 1 = 5.0V. All measurements should be made with respect to SMPS reference (TP2).
- 7. Using a multimeter check DC supplies on audio side. Confirm TP254 is +15V, TP255 is -15V and TP257 is 5.0V. All measurements should be made with respect to AGND (TP-105).

4.4.2 Troubleshooting Trianglewave Generator and BCA Output Stage.

1. Using an oscilloscope check audio side triangle waveforms at TP102 with respect to TP105 (see Figure 4.9).

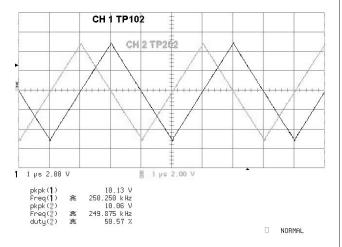


Figure 4.9 Output Signal of Triangle-Wave Generator

- 2. Using an oscilloscope check audio side triangle waveforms at TP202 with respect to TP205 (see Figure 4.9).
- 3. Using an oscilloscope check BCA output stage gate switching (see Figure 4.10). Probe at each gate drive resistor.

R360 for Q107 and Q110 (Figure 4.10) while R357 for Q108 and Q111 (Figure 4.11) of Vp. Channel 1.

R365 for Q108 and Q112 (Figure 4.10) while R368 for Q109 and Q113 (Figure 4.11) of Vn Channel 1.

R460 for Q207 and Q210 (Figure 4.10) while R457 for Q208 and Q211 (Figure 4.11) of Vp Channel 2.

R465 for Q208 and Q212 (Figure 4.10) while R468 for Q209 and Q213 (Figure 4.11) of Vn Channel 2.

A total of four measurements for each channel, 2 for each Vp and Vn sides.

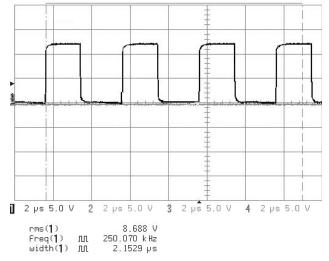


Figure 4.10 Gate Switching, View A

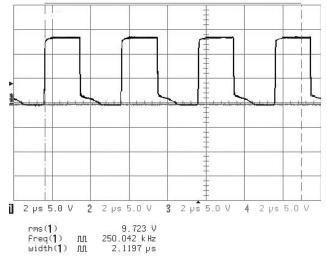


Figure 4.11 Gate Switching, View B

4.4.3 Troubleshooting Power Supply, PFC PWA and Full Bridge DC to DC Converter

1. Using an oscilloscope check power supply clocks at TP-253 and TP-12, as shown in Figure 4.12. All measurements are with respect to SMPS reference.

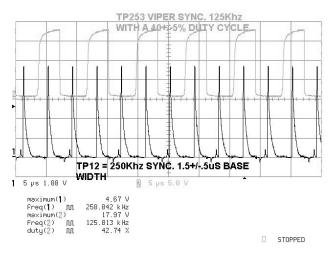
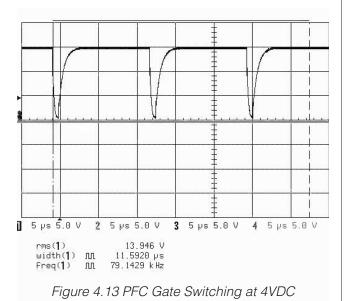


Figure 4.12 Power Supply Clock

- 2. Place jumper between J28 and J29 to simulate front panel switch on.
- 3. Remove/ bypass boost inductor L1 and using an external power supply apply 4VDC at J23.
- 4. Using an oscilloscope check PFC gate switching at TP-5 with respect to TP-2, as shown in Figure 4.13.



5. Using an external power supply apply 60VDC to J23 and verify that the frequency changes, as shown in Figure 4.14.

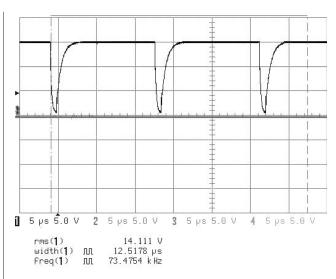


Figure 4.14 PFC Gate Switching at 60VDC

6. Using an oscilloscope check gate switching of the Full Bridge DC to DC Converter, as shown in Figure 4.15. Verify the phase shift at startup. Probe at TP-27, TP-29, TP-30 and TP-31. All measurements are with respect to SMPS reference.

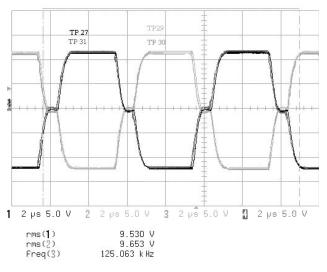


Figure 4.15 Full-Bridge DC to DC Converter

Gate Switching

4.4.4 Identifying Symptoms

Why was the amplifier brought in for repair? Can you get it to malfunction again? Some problems can be intermittent and difficult to find.

Once you have identified and verified the symptoms, you can look for helpful information in Section 4.4.5 as to where the cause of the problem is located.



If you don't observe anything wrong with the amplifier, tactfully inquire how the owner used it and try to determine if it was misused or some other component in their system could have been at fault. Remember that the protection circuits in this amplifier will protect loudspeakers from problems caused upstream from the amplifier (DC protect).

If you lack sufficient information about the problem, and there aren't any obvious problems with the amplifier, skip to Section 4.6, the Electrical Checkout Procedures.

4.4.5 Identifying and Repairing the Cause

The first step in identifying the cause of the problem is always a visual inspection. Once the top cover is removed, and the supplies are discharged, look for loose connectors, broken wires, loose hardware, burnt components, or bad solder joints on the PC boards. Check both sides of the board.

Once the visual inspection is complete you may power up the unit. The best way to positively locate which PWA is at fault is to have a working PWA of each type on hand and plug them into the amplifier one at a time to see when the problem goes away.

The following Symptoms and Causes may help you determine which corrective action to take. We realize that this list is limited. Please read through the Theory chapter in this manual to better understand the function of each PWA. This will help you come to your own conclusion as to the location of the problem.

Amp does not appear to power up. No Enable LED.

First, check the power supply fuse (located on the Line Filter PWA). Check for faulty switch or faulty inductor connection in the EMI and Filter module. Also, make sure the AC line voltage is correct for the amplifier you are working on. Severely low AC line voltage could cause the amp to not power up. If both check out, then the amplifier is in a fault mode. Viper could be dead. The most likely trouble area is the Flyback PWA.

The Fault LEDs on one or both channels are flashing.

- 1. The Fault LEDs normally flash during turn-on delay. Wait for six seconds to see if the LED stops flashing.
- 2. One or more of the power supplies are out of tolerance or missing. Replace or troubleshoot the Flyback PWA. If this does not correct the problem, check for the 400 V Vboost by measuring from TP251 to TP50. If it is low, then troubleshoot the PFC boost stage. If 400 V is o.k., check the ±Vccs at L6 and L9. They should measure approximately 105 VDC to

ground. If Vcc is low or missing, troubleshoot the Full Bridge DC to DC converter stage.

- 3. ±15 V supply is too low. Check the Flyback PWA.
- 4. DC is present on the Channel 1 or Channel 2 output terminals, usually caused by a bad MOSFET or diode in the amplifier's output stage.
- 5. The channel one heatsink is too hot. Verify the heatsink temperature is less than 80°C. The output heatsinks should be at earth ground. The SMPS reference heatsink is above ground, so **do not touch amplifier ground and the SMPS reference heatsink at the same time.**
- 6. The overvoltage sensor has been tripped. Measure the ±Vccs at L6 and L9. They should read less than 120 VDC referenced to ground.
- 7. Transformer T1 has exceeded its thermal limit. Replace T1. Replace R713.

Signal LED is off and the Clip LED is on for either channel.

1. Troubleshoot the appropriate channel. A Clip LED on generally means an output stage failure.

Signal LED is on and the Clip LED is on for either channel.

- 1. The amplifier channel is clipping. Reduce the input signal level
- 2. A short is present at the output. Check the output wiring.

Output sounds distorted. Clip LED is off.

- 1. The input stage is being overdriven. Reduce the input signal level.
- 2. There is a problem in the Input PWA. Replace or troubleshoot the Input PWA.

Amplifier does not meet Output Power specification.

- 1. The amplifier has reached thermal limits. Check for proper fan operation.
- 2. PFC boost stage is not functioning properly. Check for 400 VDC at TP-251 with respect to TP-50. Troubleshoot PFC boost stage if measurement is nonconforming.

Amplifier does not meet Frequency Response specification.

- 1. Make sure the output voltage does not exceed 45Vrms.
- 2. Check back panel filter switch positions.
- 3. Check BFG PWA highpass and lowpass circuitry.
- 4. Possible problem in the 32-kHz 7th-order Gaussian filter. Readjust R178 and R278 for channel 1 and 2

filter. Readjust R178 and R278 for channel 1 and 2 respectively to get the frequency response in spec. Troubleshoot and repair filter as necessary.

Amplifier does not meet Voltage Gain specifica-

- 1. The gain of the amplifier is determined by the BFG PWA. Check the optocoupler for proper operation or replace the BFG PWA.
- 2. Check residual resistance of gain level potentiometers.

Amplifier does not meet DC Output Offset specification.

1. Possible problem on the Main PWA, and is likely

- a faulty U100/200 or a faulty MOSFET or diode in the output stage. Troubleshoot and repair as necessary.
- 2. Input PWA might be passing input signal DC components. Check for short capacitors in the Input PWA.

4.5 Required Test Equipment

Due to the complex circuitry utilized the CE 4000 amplifier, special calibration procedures and the correct test equipment are necessary to insure original factory specifications are achieved.

Figure 4.16 is list of test equipment needed to successfully service the amplifier. Recommended models are those used by Crown.

Device	Requirements	Recommended Model
Oscilloscope	500 MHz or greater	LeCroy 9354A
Distortion Analyzer	THD and IM measurements	Audio Precision ATS-1
DC Power Suppies	105 VDC with I-Limiting and 12-15 VDC with I-Limiting	Leader 760-3D (Qty. 2) Leader 18-3D
Function Generator		Hewlett-Packard HP 33120A
AC/DC volt meter	dB reading capability	Hewlett-Packard HP 34401A
Dummy Loads	8 ohm, 600 watt, 4 ohm, 1,200 watt, and 2 ohm, 1,800 watt	
Isolation Transformer	1:1 Primary to Secondary Turn Ratio	

Alternate oscilloscope choices: Tektronix TDS360 and HP HP54610B. The latter is a 500 MHz scope, which is needed to test newer BCA power supplies.

Figure 4.16 Required Test Equipment



4.6 Electrical Checkout Procedures

The test procedures in this section are used to verify the operation of the amplifier. You may, however, find these tests helpful in troubleshooting a problem if the problem is not easily identified.

All tests assume that AC power is from 100-240 VAC $\pm 10\%$.

During each test, it is assumed that the following conditions are set on the amplifier unless otherwise noted:

- Level controls fully clockwise.
- Bridge Output switch off.
- Input Sensitivity of both channels set at 26 dB.
- Filter settings in the back panel are set to FLAT.

4.6.1 Quiescent AC Power Draw

Spec:130 watts maximum quiescent.

Procedure: With no load connected to the amplifier, turn on the amplifier. Measure AC power draw. It should be less than 130 watts.

4.6.2 Gain Switches

Spec: 0.775V, 1.4 V, 26 dB

Procedure: No Load. With the level controls at full gain and the input sensitivity switches set to 1.4 V, inject a 1 kHz, 0.775 Vrms, into each channel. At the output of each channel measure 38.3 Vrms, ± 3.8 Vrms. Switch the Input Sensitivity switches to 26 dB. At the output of each channel measure 15.5 Vrms, ± 0.5 Vrms. Switch the Input Sensitivity switches to 0.775 V, At the output of each channel measure 69.3 Vrms, ± 6.9 Vrms.

4.6.3 Bridge Mono Operation

Spec: Same voltage out both channels, channel 2 out of phase.

Procedure: No load. Switch the Bridge Mono switch on and inject a 1 kHz sine wave into channel 1 only. Monitor both outputs of the amplifier. They should be the same voltage and 180 degrees out of phase with each other. Remove the signal and turn the Bridge Mono switch off.

4.6.4 Frequency Response

Spec: ±0.25 dB from 20 Hz to 20 kHz.

Procedure: Load the channel under test to 4 ohms. Inject a 0.1Vrms, 1kHz sine wave into the input. Measure the output voltage. It should be 2.0 Vrms. This is now your 1 kHz reference voltage. Switch the frequency to 20 Hz and verify that the input voltage is still 0.1 Vrms. Measure the output voltage. It should be the same as the 1 kHz reference voltage ± 0.25 dB. Switch the frequency to 20 kHz and verify that the input voltage is still 0.1 Vrms. Measure the

output voltage and compare it to the 1 kHz reference voltage. Tolerance is ± 0.25 dB. Remove the load and signal. Note: Many oscillators need a frequency check at 20 kHz.

4.6.5 Short Circuit Test

Spec: Amplifier will protect itself

Procedure: Inject a 1kHz, 1Vrms sine wave into the input of channel 1. Short the output of channel 1 to ground for 10 seconds. The amplifier should cycle into fault mode. Every four to six seconds the Clip LEDs will flash, indicating that it is checking to see if the short is still there. Remove the short and perform the test on channel 2.

4.6.6 Output Power

Spec: Each channel

600 watts into 8 ohms 1,200 watts into 4 ohms

1,800 watts into 2 ohms (at ≥200V line voltage).

Spec: less than 0.5% THD.

Procedure 8 ohm: Load the channel under test to 8 ohms. Inject a 1kHz sine wave and bring the level up until the output reaches 0.5% THD. Measure at least 69.3 Vrms at the output.

Procedure 4 ohm: Load the channel under test to 4 ohms. Inject a 1kHz sine wave and bring the level up until the output reaches 0.5% THD. Measure at least 69.3 Vrms at the output.

Procedure 2 ohm: When testing 2-ohm power at line voltages under 200 VAC, test one channel at a time. Load the channel under test to 2 ohms. Inject a 1kHz sine wave and bring the level up until the output reaches 0.5% THD. Measure at least 60.0 Vrms at the output.

4.6.7 Intermodulation Distortion

Spec: Less than 0.5% from 0 dB to -30 dB.

Procedure: Load the channel under test to 8 ohms. Inject a SMPTE standard IM signal (60 Hz and 7 kHz mixed at 4:1). Adjust the output voltage for a peak equivalent voltage of 69.3 volts. This is your 0-dB reference. Measure less than 0.5% IMD from 0 dB to -30 dB in 5- dB steps.

4.6.8 Signal to Noise Ratio

Spec: Greater than 100 dB below rated 8 ohm power, A weighted.

Procedure: Load the channel under test to 8 ohms. Terminate the input with 600 ohms. Verify that the gain switch is set at 26 dB and level control is at full volume. Measure less than 550 μ Vrms at the output using an A-weighted filter.

4.6.9 Crosstalk at 20 kHz

Spec: Greater that 50 dB.

Procedure: Load each channel to 8 ohms. Verify that both gain switches are set at 26 dB and both level controls are at full volume. Inject a 2.0 Vrms, 20 kHz, sine wave into channel 1 and terminate channel 2 with 600 ohms. Measure less than 126.5 mV at the output of channel 2. Now remove the signal from channel one and inject it into channel 2. Terminate channel 1 with 600 ohms. Measure less than 126.5 mV at the output of channel 1.

4.6.10 Post Test Settings

After completion of testing, if all tests are satisfactory, the amplifier controls should be returned to the positions required by the customer. If the conditions are unknown or unspecified, the factory settings are as follows:

- Gain switches set to 1.4 V
- Bridge Mono switch turned off
- · Level controls set fully counterclockwise
- Power switch turned off
- All filter switches set to the flat position

4.7 Calibrations

4.7.1 Gaussian Filter Calibration

Procedure 1: Obtain a multimeter with decibel measurement capabilities. Set the multimeter to dB measurement mode. Insert a 1 kHz signal into the input and measure at pin 14 of U111D. Reset the meter to 0 dB using the 1 kHz signal as a reference signal. Increase the signal generator frequency to 20 kHz, leaving the output level unchanged. While measuring pin 14 of U111D adjust R178 for a reduction of level by 2.6 dB (readout should be –2.6 dB).

Procedure 2: Obtain a multimeter with decibel measurement capabilities. Set the meter to dB measurement mode. Insert a 1 kHz signal into the input and measure at the speaker output (no load). Reset the meter to 0 dB using the 1 kHz signal as a reference signal. Increase the signal generator frequency to 12.5 kHz, leaving the output level unchanged. Adjust R178 for a meter reading of 0 db. This second test method is an alternative to the first and should give the desired results: a flat frequency response throughout the audio bandwidth.

4.7.2 Overlap Correction and Adjustment Conditions:

- Amplifier output assembly MUST be room temperature (72 degrees F/21 degrees C)
- No input signal
- No load

Procedure: Monitor TP37 found on the Main PWA. Center oscilloscope to view lower right portion of waveform (see Figure 4.17). Adjust R170 for the sharpest-possible squarewave rising edges, with a transition curve less than 10.0V. Figure 4.18 shows a correct transition curve, Figure 4.19 shows "underlap" (under adjustment), where the transition curve exceeds 10.0V. Figure 4.20 shows "overlap" (over adjustment), where the transition curve is not "smooth"

Repeat for channel 2, monitoring TP244 and adjusting R270.

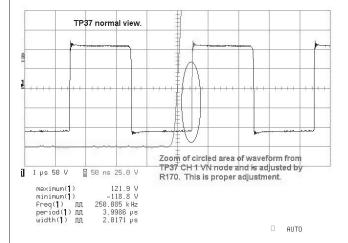


Figure 4.17 Overlap Adjustment

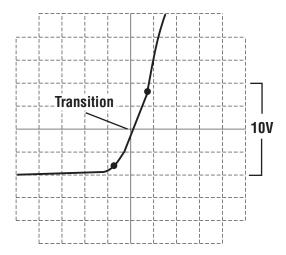


Figure 4.18 Correct Overlap Adjustment (Less than 10V)

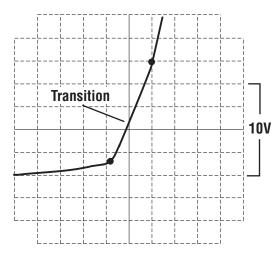


Figure 4.19 Underlap (Greater than 10V)

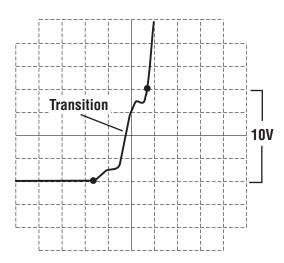


Figure 4.20 Excessive Overlap (No Smooth Transition)

4.7.3 Current Sensing Calibration

Drive and test one channel at a time.

- 1. Connect output to 8 Ohms load and apply 1kHz Sinewave input signal.
- 2. Adjust output gain level until output voltage measures 40Vrms on one channel.
- 3. Adjust R160 while observing TP-10 for channel 1 in order to achieve 1.0Vrms +/-10mVrms (see Figure 4.21).
- 4. Repeat the adjustment on R260 while observing TP-245 for channel 2.

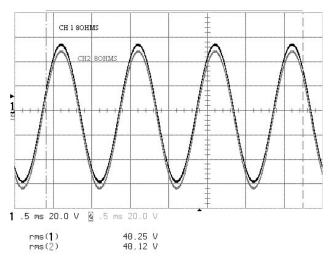


Figure 4.21 Current Sensing Calibration

4.7.4 Output Filter Calibration

Output Filter Calibration is **NOT** field adjustable and should not need adjustment. If you suspect the slugs (L101, L102 for Channel 1 while L201 and L201 for Channel 2) have been moved, the amplifier should be sent to CROWN Factory Service for proper adjustment.



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5 Parts

5.1 General Information

Replacement parts for this Crown amplifier can be ordered from the Crown Parts Department.

PART PRICES AND AVAILABILITY ARE SUBJECT TO CHANGE WITHOUT NOTICE.

5.2 Ordering and Receiving Parts

When ordering parts, be sure to give the product model, and include a description and part number from the parts listing. Price quotes are available on request.

5.2.1 Terms

Normal terms are prepaid. Net-30 Days applies to only those having pre-established accounts with Crown. The Crown Parts Department does accept Visa or Master Card. If prepaying, the order must be packed and weighed before a total bill can be

established, after which an amount due will be issued and shipment made upon receipt of payment. New parts returned for credit are subject to a restocking fee, and authorization from the Crown Parts Department must be obtained before returning parts for credit.

5.2.2 Shipment

Shipment will normally be made via UPS, or best other method unless you specify otherwise. Shipments are made to and from Elkhart, Indiana USA, only. Established accounts with Crown will receive shipment freight prepaid and will be billed. All others will receive shipment on a C.O.D. or prepayment (check or credit card) basis.

5.3 Mechanical Parts

This section includes a mechanical part list for this product. All serviceable parts and assemblies will have a Crown Part Number (CPN) listed in this chapter. The parts listed are current as of the date printed. Crown reserves the right to modify and improve its products for the benefit of its customers.

Crown Customer Service

Technical Support Group Factory Service Parts Department

Mailing Address: P.O. Box 1000, Elkhart IN 46515 Shipping Address: Plant 2 S. W. 1718 W. Mishawaka Rd., Elkhart IN 46517 Phone: (219) 294-8200 Toll Free: (800) 342-6939 Fax: (219) 294-8301 http://www.crownaudio.com



5.3.1 CE4000 Amplifier Assembly

Refer to Figure 5.1 for Exploded View

Item	Quantity	Description	Part # (CPN)
28	1	ASM, CE4000 BACK PANEL	See section 5.2.2
27	1	ASM, CE4000 POWER SWITCH	See section 5.2.8
26	1	COVER, CE4000 TOP PC	126223-4
25	3	4" CABLE TIE	C 1811-1-6
24	1	8-32 HEX NUT W/BELLE	A11056-2
23	2	TIE, 5.625" CABLE	127330-1
22	1	SUB-FRONT, CE4000 FP PC	130526-1
21	7	CAP, CE400 PEM STANDOFF	128119-2
20	1	PWA, CE4000 MAIN	See section 5.4
19	1	INDUCTOR,PFC	127399-6
18	1	PWA, CE4000 FLYBACK	See section 5.4
17	2	RIVET, CE4000 INS RET PLASTIC	128130-1
16	2	INSULATOR, CE4000 HS NOMEX	126923-4
15	1	COILS, CE4000 L/PLN MATCHED	127401-3
14	7	WASHER, CE4000 HEATSINK SHLDR	128120-1
13	7	#10 BELLVILLE WASHER SS	A10098-4
12	7	MSCREW, 10-32 X 3.50 TORX PNHD Z	128345-1
11	2	RIVET, CE4000 FAN PLENUM SNAP	127777-1
10	1	PLENUM, CE4000 FAN	127473-3
9	4	6-32 HEX NUT W/BELLE	A11056-1
8	16	SCREW, #6 X .250 MACH TORX PNHD	103436-70604
7	2	.5 X .136 X .02 NYLON WASHER	A10101-5
6	1	SHEILD, CE4000 MAIN BD RBN AP	128218-7
5	1	PWA, CE4000 BFG	See section 5.4
4	16	SEMS, 6-32 X .31 TORX PNHD STAR	103433-70605
3	10	8-32 X .31 SERR FLTHD T15 BZ	102156-1
2	2	KNOB, D350	D 8959-5
1	1	CHASSIS, CE4000 WELD/AP/PC	126222-11 ASM, NUMBER: 127390-4

NOTES:

- 1) THESE 8 SCREWS ARE USED TO FASTEN INPUT AND OUTPUT MODULES TO BACK PANEL.
- 2) THESE 4 NUTS ARE USED TO FASTEN OUTPUT MODULE BUSS BARS TO MAIN PWA.
- 3) SLIDE CABLE TIES (ITEM 25) THRU LANCES IN CHASSIS, PLACE RIBBON CABLE (PART OF ITEM 5) AGAINST CHASSIS SIDE PANEL BETWEEN LANCES, THEN SECURE CABLE TIES AROUND RIBBON CABLE.

RECOMMENDED ASSEMBLY TORQUES

ITEM NO.	C.P.N.	TORQUE SETTINGS
3	102156-1	12-14 IN LBS.
4	103433-70605	16-18 IN LBS.
8	103436-70604	10-12 IN LBS.
9	A11056-1	10-12 IN LBS.
12	128345-1	16-18 IN LBS
24	A11056-2	10-12 INLBS

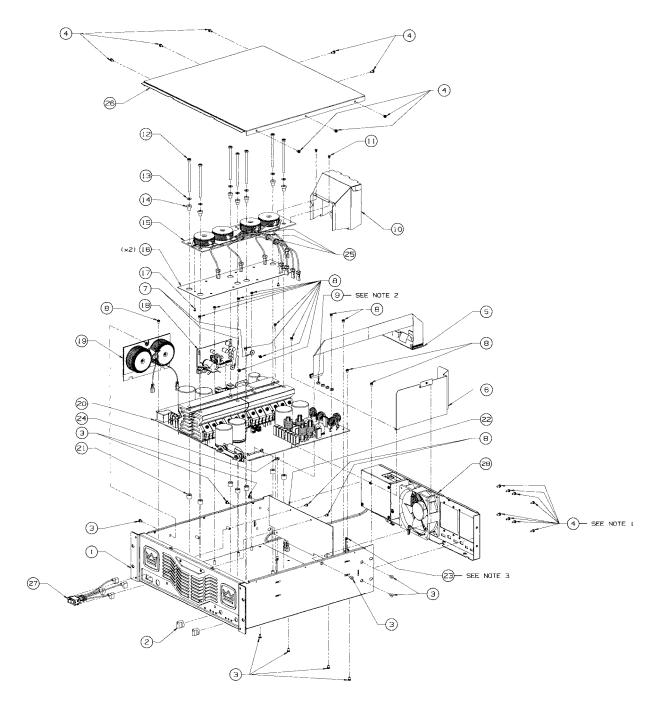


Figure 5.1 Amplifier Assembly (Exploded View)



5.3.2 Back Panel Assembly

Refer to Figure 5.2 for Exploded View

Item	Quantity	Description	Part # (CPN)
13	1	LABEL, VDE EARTH GROUND	D 7037-1
12	2	8-32 HEX NUT W/BELLE	A11056-2
11	1	WIRE, 14 GRN/YEL RING X 6.0 X RING	A11544-G060G
10	1	SHIELD, CE400EMI FILTER	128229-7
9	1	WIRE, 14 BLU FAST X 21 X FLAG	A11386-HZ10M
8	1	WIRE, 14 BRN FAST X 21 X FLAG	103448-A21OM
7	4	STAND, 6-32 X 1.9375 HEX MALE/FEM	A12095-12
6	1	PWA, CE EMI FILTER	See section 5.4
5	1	WIRE, 14 GRN/YEL RING X 6.0 X FLAG	A11544-GO60M
4	1	IEC SNAP IN 15A UL/10A VDE	102650-1
3	8	SCREW, 6-32 X .250 MACH TORX PNHD	103436-70604
2	1	FAN, 120 X 120 X 38mm 12VDC 140CFM	126992-2
1	1	PANEL, CE4000 BACK AP/PC/PP	127227-12
			ASM. NUMBER:
			130251-2

NOTES:

1) CONNECT ITEM 8 TO "J9" & ITEM 9 TO "J10" ON ITEM 6 PWA PRIOR TO ASSEMBLING ITEM 10.

RECOMMENDED ASSEMBLY TORQUES ITEM NO. C.P.N. **TORQUE SETTINGS**

3 103436-70604 13-15 IN LBS. 12 A11056-2 10-12 IN LBS.

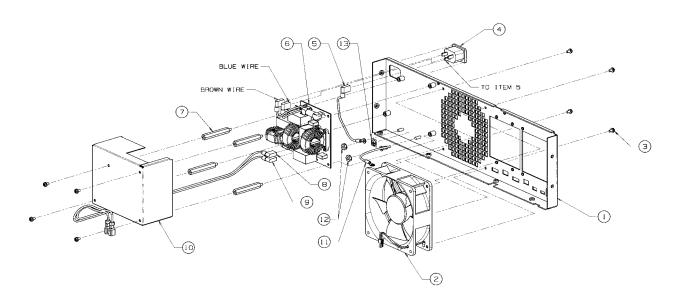


Figure 5.2 CE4000 Back Panel Assembly (Exploded View)

5.3.3 CE4000 PS Primary Heatsink Assembly

Refer to Figure 5.3 for Exploded View

Item	Quantity	Description	Part # (CPN)
11	X	TYPE 340HEATSINK COMPOUND	S2162-6
10	1	SHIM, CE4000 BRIDGE RECTIFIER	128246-1
9	9	8-32 X .312 TORX PNPH SEM	103415-10805
8	2	CLIP, CE40002 FINGER	127182-1
7	1	CLIP, CE4000 2 FINGER	127552-1
6	4	MOSFET, 0.11 OHM 500V	126738-1
5	1	DIODE, 30A 600V HYPERFAST	127457-1
4	2	MOSFET, 0.08 OHM 500V TO-247	127456-1
3	1	RECT, 50A 600V PC MNT BRIDGE	125427-1
2	2.5	WAFER, 3.000 X .90X.04 CERAMIC	127204-1
1	1	EXTRU, CE4000L-FR HS MACHINED	127976-3 ASM. NUMBER: 128009-1

RECOMMENDED ASSEMBLY TORQUES ITEM NO. C.P.N. TORQUE SETTINGS

) 103415-10805 22-24 IN LBS.

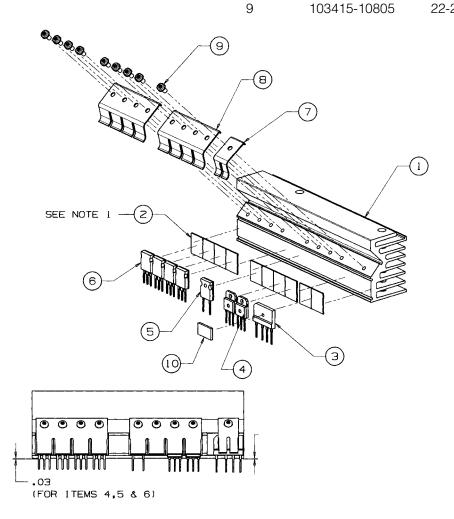


Figure 5.3 CE4000 PS Primary Heatsink Assembly (Exploded View)

5.3.4 CE4000 PS Diode Heatsink Assembly

Refer to Figure 5.4 for Exploded View

Item	Quantity	Description	Part # (CPN)
6	X	TYPE 340HEATSINK COMPOUND	S2162-6
5	4	8-32 X .312 TORX PNPH SEM	103415-10805
4	1	CLIP, CE4000 4 FINGER SS .040	127182-1
3	4	DIODE, 30A 600V HYPERFAST	127457-1
2	1	WAFER, 3.00 X.90 X .04 CERAMIC	127204-1
1	1	EXTRU,CE4000 L-RR HS MACHINED	127977-3 ASM. NUMBER: 128010-1

RECOMMENDED ASSEMBLY TORQUES ITEM NO. C.P.N. TORQUE SETTINGS

5 103415-10805 22-24 IN LBS.

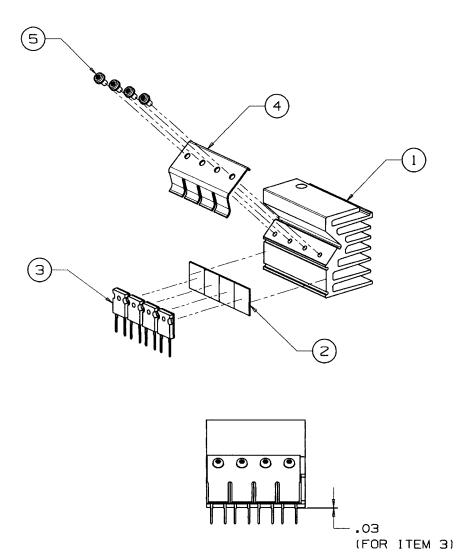


Figure 5.4 CE4000 PS Diode Heatsink Assembly (Exploded View)



5.3.5 CE4000 PS Output Heatsink Assembly

Refer to Figure 5.5 for Exploded View

Item	Quantity	Description	Part # (CPN)
7	X	TYPE 340HEATSINK COMPOUND	S2162-6
6	6	8-32 X .312 TORX PNPH SEM	103415-10805
5	6	CLIP, CE4000 2 FINGER	127552-1
4	4	DIODE, 300V ULTRAFAST APT15D30K	D9053-6
3	8	MOSFET, 250V 16A MTP16N25E	C10207-6
2	2	WAFER, 2.7000 X .90 X .04 CERAMIC	127564-1
1	1	EXTRU, CE4000 R-HALF HS MACHINED	127978-3 ASM. NUMBER: 128011-3

RECOMMENDED ASSEMBLY TORQUES ITEM NO. C.P.N. TORQUE SETTINGS

6 103415-10805 22-24 IN LBS.

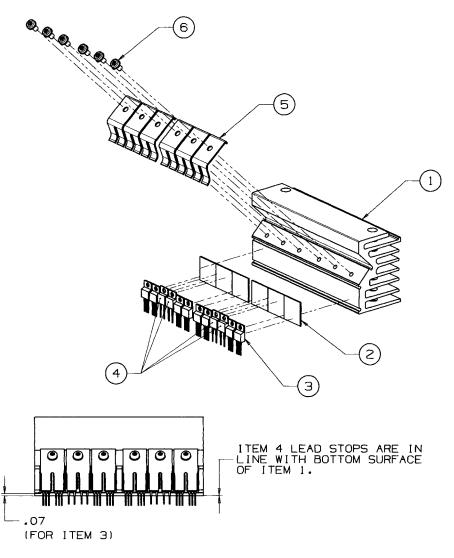


Figure 5.5 CE4000 PS Output Heatsink Assembly (Exploded View)

5.3.6 CE4000 Standard Input AssemblyRefer to Figure 5.6 for Exploded View

Item	Quantity	Description	Part # (CPN)
3	4	SCREW, #4 X .5 PNHD PH AB BZ	A10111-70408
2	1	PWA, CE INPUT EC	See section 5.4
1	1	PANEL, CE INPUT CHARCOAL	126787-5
			ASM. NUMBER: 127049-1

RECOMMENDED ASSEMBLY TORQUES ITEM NO. **TORQUE SETTINGS** C.P.N.

3 A10111-70408 4-5 IN LBS. 2 (REF) 103435-70608 13-15 IN LBS.

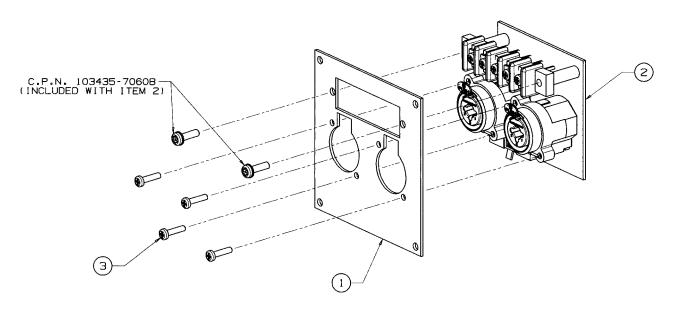


Figure 5.6 CE4000 Standard Input Assembly (Exploded View)

5.3.7 CE4000 Standard Domestic Ouput AssemblyRefer to Figure 5.7 for Exploded View

Item	Quantity	Description	Part # (CPN)
5	4	SCREW, 6-32 X .250 MACH TORX PNHD	103436-70604
4	1	SHEILD, CE4000 OTPT BUSS BAR	128203-1
3	1	INSULATOR, CE4000 OTPTBUSS BAR	128202-1
2	4	BAR, CE4000 OUTPUT BUSS AP	127672-2
1	1	PWA, CE4000 SPEAKON/BDG POST OTPT	See section 5.4
			ASM. NUMBER: 127831-1

RECOMMENDED ASSEMBLY TORQUES ITEM NO. C.P.N. **TORQUE SETTINGS**

5 103436-70604 13-15 IN LBS

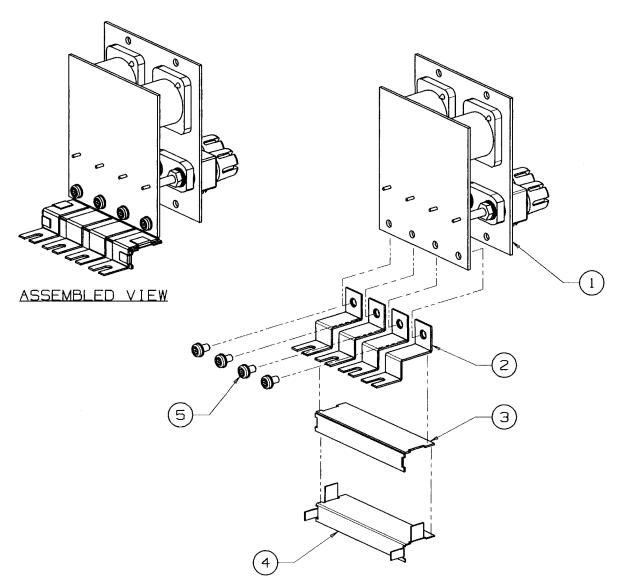


Figure 5.7 CE4000 Standard Domestic Output Assembly (Exploded View)

5.3.8 CE4000 Power Switch Assembly Refer to Figure 5.8 for Exploded View

Item	Quantity	Description	Part # (CPN)
3	2	WIRE, 16 WHT FAST X 4 X FLAG	A11518-K040P
2	2	WIRE, 16 BLK FAST X 4 X FLAG	A11608-EO30R
1	1	SWITCH, ROCKER PNL MNT DPST 16A	127455-1
			ASM. NUMBER: 128425-1

NOTES:

- 1) MARKINGS 1, ID, 2, 2D ARE IDENTIFIED ON SWITCH HOUSING.
- 2) J26, J27, J28, J29 ARE CORRESPONDING LOCA-TIONS ON PWA.

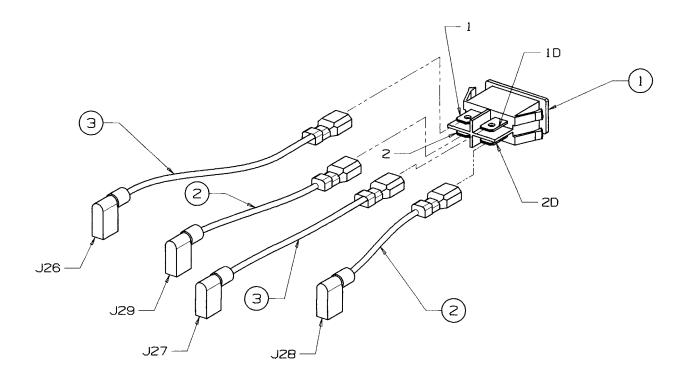


Figure 5.8 CE4000 Power Switch Assembly (Exploded View)



5.4 Circuit Board Parts

This section includes electrical parts lists for this product. All serviceable parts and assemblies will have a Crown Part Number (CPN) listed in this section. The parts listed are current as of the date printed. Crown reserves the right to modify and improve its products for the benefit of its customers. Please note: where reference designations are listed as "installed on next assembly," the CPN (Crown Part Number) for the associated part may be found in Section 6.2, Mechanical Parts.

5.4.1 Circuit Board and Schematic Part Numbers

The schematics referenced and provided are representative only. There may be slight variations between amplifier to amplifier. These schematics are intended to be used for troubleshooting purposes only.

Note on circuit board designations: Crown circuit boards are referenced with a PWA and/or PWB part number. PWA stands for Printed Wire Assembly. This is the completed circuit board with all components assembled. PWB stands for Printed Wire Board. This is the circuit board only, without components.

CE4000 MAIN

PWA NUMBER: 126218-13

Drawing Sheet:

41 42

PWA NUMBER: 126218-14

Drawing Sheet:

41 42

CE4000 BFG

PWA NUMBER: 126828-7

PWA NUMBER: 126828-12 (REV.2)

PWA NUMBER: 126828-12 (REV.A)

CE4000 INPUT CE

PWA NUMBER: 126883-4

Drawing Sheet:

4

CE4000 FLYBACK

PWA NUMBER: 127027-6

CE4000 POT BOARD

PWA NUMBER: 127563-3

CE 4K SPEAKON/BDG POST OTPT

PWA NUMBER: 127820-3

Drawing Sheet: 5

CE4000 EMI FILTER

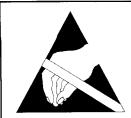
PWA NUMBER: 128243-6



		REVISION HISTORY		
E.C.N.	REV	DESCRIPTION	DATE	APPROVED DWN CHK CM PE
00N0568	Α	RELEASE FOR PRODUCTION	06-16-00	JAW FLM OB TAS
l '				

UNLESS OTHERWISE SPECIFIED, THIS PRINTED WIRING ASSEMBLY SHALL MEET THE SPECIFICATION DESCRIBED IN IPC-A-610_ CLASS 2 STANDARDS.
NOTES:

- 1. PRINTED WIRING BOARD PART NUMBER 126583-8.
- 2. ALL LEADS SHALL BE TRIMMED TO 0.093" OR LESS.
- 3. POSITION COMPONENTS AS SHOWN ON COMPONENT MAPS.
- 4. THE PRINTED WIRING ASSEMBLY PART NUMBER FOR THIS ASSEMBLY SHALL BE MARKED ON THE PRINTED WIRING BOARD AND SHALL BE PERMANENT.
- REMOVE SOLDER OR PREVENT SOLDER FROM ACCUMULATING IN HOLES INDICATED ON COMPONENT MAP.
- 6. MAP LOCATIONS DENOTED BY AN ASTERISK (*), INDICATE COMPONENTS MOUNTED ON THE BOTTOM SIDE OF THE PRINTED WIRING BOARD.
- 7. THE VENT HOLE ON TOP OF THE RELAY K1 MUST BE OPENED AFTER THE CLEANING PROCESS, BY EITHER REMOVING THE SEALING TAPE OR CUTTING OFF THE CIRCULAR TAB WITH AN "EXACTO" KNIFE OR SIMILAR CUTTING TOOL. WARNING, THIS STEP MUST BE DONE AFTER THE CLEANING PROCESS NOT BEFORE!! WATER OR CLEANING SOLVENTS ENTERING THE RELAY.
- B. APPLY HOT MELT ADHESIVE(125647-1) FOR SUPPORT TO THE FOLLOWING COMPONENTS: C2,C700,R42,R142,R143,R149,R150,R242,R243,R249,R250,R325,R363,R364,R463, AND R464. ADHESIVE MUST HAVE A MINIMUM CONTACT AREA OF 1/4" X 1/2" ON BOTH THE DESIGNATED PART AND EITHER THE PWB OR ANY ADJACENT SOLID COMPONENT.
- 9. ATTACH R713 TO THE SIDE OF T1 WITH LOCTITE ADHESIVE(125482-1)
 AND ACTIVATOR(125483-1). NO MORE THAN 0.1" GAP ALLOWED BETWEEN
 BODY OF R713 AND SIDE OF T1. ANY GAP MUST BE FILLED WITH ADHESIVE
 (NO AIR BETWEEN R713 & T1).
- 10. THIS PWA MUST MEET ALL SPECIFICATIONS AS LISTED IN 128315 SPECS, CE4000 MAIN PWA.
- 11. ADD 1/4" SQ. PIECE OF KAPTON TAPE(S 6285-1) UNDER R260 AS SHOWN.



CAUTION

STATIC CAN DAMAGE COMPONENTS!

DO NOT HANDLE

UNLESS WRIST STRAP IS WORN

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FILENA			СМ	CB	6/19/00	T
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EFOUN INTERNATIONAL, INC.

1718 W. MISHAWAKA RD. ELKHART IN, 48517 PHONE(219)294-8000 WWW.CROWNINTL.COM

TITLE

PWA, CE4000 MAIN

	i				
	SIZE	DWG NO.	126216 12		REV
	Α		126218-13		A
-	5CAL	E NONE	PROJ NO. MD425DØ SHEET SHEET	OF	4B



	· · · · · · · · · · · · · · · · · · ·	PARTS LIST	MARIOC
EF DES	C. P. N.	DESCRIPTION DIRECT	MAP LOC.
21	127046-1	CAP, 940UF 450V HIGH RIPPLE	D 6
22	C10094-8	1.5UF 630V 5% RADIAL POLY CAP	D B
23	126542-1	2.2UF 50V 5.5MM HIGH SMD	
24	126542-1	2.2UF 50V 5.5MM HIGH SMD	E 4
25		OPEN	B 10
26	127046-1	CAP, 940UF 450V HIGH RIPPLE	B 4
27	127047-1	CAP, 820UF 150V HIGH RIPPLE	D 13
:B	127047-1	CAP, 820UF 150V HIGH RIPPLE	C 13
29		.33UF 50V 5% CHIP X7R 1210	E 3
10	A11427-334J6	.33UF 50V 5% CHIP X7R 1210	D 4
211		.1UF 50V CHIP CAP 10% 0805 X7R	D 4*
12		.1UF 50V CHIP CAP 10% 0805 X7R	D 3*
13	A11427-104J2	.1UF 50V 5% X7R 0805 T/R	D 3
214		.01 UF 50V 10% X7R MLC 0805	D 3
215	A11369-221J5	220PF 50V 5% NPO 1206 SMD	M 6*
216	126551-1	100UF 25V 5.5MM HIGH SMD	C 3
17	C10090-6	4.7UF 400V 10% AXIAL FILM	D 9
C18		100UF 25V 5.5MM HIGH SMD	D 7
219		.1UF 50V CHIP CAP 10% 0805 X7R	D 3
20		.1UF 50V CHIP CAP 10% 0805 X7R	D 3*
221		560PF 50V 1% NPO MLC 0805	D 4
22	A11369-152J2	1500PF 50V 5% NPD MLC 0805 T/R	D 3
223		10UF 16V 5.5MM HIGH SMD	D 3
24	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	<u>C 4</u>
25	C 7091-9	.33 UF 50V Z5U CHIP CAP	D 4*
226	A11427-102K2	.001UF 50V 10% X7R CER CHIP	СВ
27	C 4253-B	4.7UF 63V 20% VERT ELECT T/R	E 4
C28	C 826B-2	220UF 35V 20% VERT	B 8
229	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	B 8*
C30	126551-1	100UF 25V 5.5MM HIGH 5MD	M 7
C31	126551-1	100UF 25V 5.5MM HIGH 5MD	N 7
C32	126551-1	100UF 25V 5.5MM HIGH SMD	0.7
C33	A11369-222K5	2200PF 50V 10% CHIP NPO 1206	€ 8*
 C34	A11427-103K2	.01 UF 50V 10% X7R MLC 0805	B 3
C35		470PF 50V 10% NPO 0805 T/R	C B
C36	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	D B
C37	126551-1	100UF 25V 5.5MM HIGH SMD	D 8
C38	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	D 8
C39	126539-1	10UF 16V 5.5MM HIGH SMD	DB
C40		OPEN	A 7
C41	126551-1	100UF 25V 5.5MM HIGH SMD	P 7
C42	A11369-101J2	100 PF 50V 5% NPO MLC 0805 T/R	м 6*
C43	A11369-102J2	.001UF 50V 5% NPO MLC 0805 T/R	C 9*
C44	A11369-102J2	.001UF 50V 5% NPO MLC 0805 T/R	A B
C45	126551-1	100UF 25V 5.5MM HIGH SMD	E 4
C46		.1UF 50V CHIP CAP 10% 0805 X7R	E 9*
C47	C 9465-3	10UF 50V 20% VERT ELECT T/A	B 4

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SIZE DWG NO. 126218-13 REV A

SCALE NONE PROJ NO. MD425DØ SHEET 11 OF 48



255 250	CBN	PARTS LIST DESCRIPTION	MAP LOC.
REF DES	C.P.N.	.33 UF 50V Z5U CHIP CAP	A 3
C4B	C 7091-9	0.47UF 50V Z5U 1210 T/R	В 3
C49	103191-1	2.2UF 50V 5.5MM HIGH SMD	A 4
C50	126542-1	.1UF 50V CHIP CAP 10% 0805 X7R	м в*
C51		.1UF 50V CHIP CAP 10% 0805 X7R	M 8*
C52	A11427-104K2	.01 UF 50V 10% X7R MLC 0805	мв
C53	126630-1	CAP, 470UF 25V RAD ELECT	I 13
C54		.1UF 50V CHIP CAP 10% 0805 X7R	D 1*
C56		.1UF 50V CHIP CAP 10% 0805 X7R	0 1*
C57	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	D 1*
C58	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	N 1*
C59	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	0 1
C60	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	0 1
C61	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	□ 8*
C62		.33UF 50V 5% CHIP X7R 1210	H 14
C63	125508-1	10UF 50V 20% SMT AL ELECT T/R	G 14
C64		.1UF 50V CHIP CAP 10% 0805 X7R	G 14
C65		56PF 200V 10% NPO 0805 T/R	H 14
C66 C67		56PF 200V 10% NPO 0805 T/R	H 13
C68	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	H 14
C69	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	D 5
C70	126542-1	2.2UF 50V 5.5MM HIGH SMD	C 7
C71		.1UF 50V CHIP CAP 10% 0805 X7R	В 9*
C72	103191-1	0.47UF 50V Z5U 1210 T/R	B 3
C73	126551-1	100UF 25V 5.5MM HIGH SMD	A 4
C74		.1UF 50V CHIP CAP 10% 0805 X7R	E 7*
C75	A11427-473K5	.047UF 50V CHIP CAPACITOR X7R	B 3
C76	126542-1	2.2UF 50V 5.5MM HIGH 5MD	С 3
C78		.001UF 50V 10% X7R CER CHIP	В 3
C79	126551-1	100UF 25V 5.5MM HIGH SMD	E 7
CBØ	126551-1	100UF 25V 5.5MM HIGH SMD	E 8
C81	126551-1	100UF 25V 5.5MM HIGH SMD	0 1
C82	126551-1	100UF 25V 5.5MM HIGH SMD	M 5
СВЗ		.1UF 50V CHIP CAP 10% 0805 X7R	L 6*
CB4	A11427-104K2		L 6*
CB5	126551-1	100UF 25V 5.5MM HIGH SMD	L 5
C86	126551-1	100UF 25V 5.5MM HIGH SMD	L 6
CB7	C10516-0	470.UF 10V 20% LOW ESR RDL T/R	L 6
CBB	C10516-0	470.UF 10V 20% LOW ESR RDL T/R	L 7
C89	A11427-103K2	.01 UF 50V 10% X7R MLC 0805	B 7
C90	103191-1	0.47UF 50V Z5U 1210 T/R	N 3*
C91	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	N 5
C92	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	N 3*_
C93	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	□ □ 3*
C94	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	*E A
C95	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	A 3*
C96	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	E 3*
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REV SIZE DWG NO. 126218-13 Α SHEET 12 DF 48 SCALE NONE PROJ NO. MD425DØ



		PARTS LIST	
REF DES	C. P. N.	DESCRIPTION	MAP LOC.
C97	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	E 12
C98	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	D 12
C99	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	C 7*
C100		.001UF 50V 5% NPO MLC 0805 T/R	N 13
C101		OPEN	P 5*
C102	103191-1	0.47UF 50V Z5U 1210 T/R	P 5
C103		100PF 200V NPO 0805 T/R	0.6
C104		220PF 200V 1% NPO 0805	0.6
		1000PF 200V 5% 1210 NPO	0.6*
C105		330PF 250V 10% NPO 0805 T/R	0.6*
C106		220PF 200V 1% NPO 0805	P 6
C107		.047UF 50V CHIP CAPACITOR X7R	0.6
C10B			0.6
C109		0.01UF 500V 5% X7R 1206 T/R	P 5*
C110		12PF 50V 10% NPO 0805 T/R	-}-
C111		12PF 50V 10% NPO 0805 T/R	0.5*
C112		470.PF 50V 1% NPO MLC 0805	0 5*
C113		100 PF 50V 5% NPO MLC 0805 T/R	0.5*
C114	A11369-332F5	3300.PF 50V 1% NPO MLC 1206	0.5
C115		3300.PF 50V 1% NPO MLC 1206	P 6*
C116		12PF 50V 10% NPO 0805 T/R	P 6*
C117	A11369-120K2	12PF 50V 10% NPO 0805 T/R	P 6*
C11B	A11369-470K2	47PF 50V 10% NPO 0805 T/R	N 5*
C118	A11369-470K2	47PF 50V 10% NPO 0805 T/R	N 6*
C120	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	0.5
C121	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	0.5
C122		.1UF 50V CHIP CAP 10% 0805 X7R	N 5*
C123	103191-1	0.47UF 50V Z5U 1210 T/R	0 5
C124		.1UF 50V CHIP CAP 10% 0805 X7R	0.6
C125		.1UF 50V CHIP CAP 10% 0805 X7R	0.6
C126		.1UF 50V CHIP CAP 10% 0805 X7R	N 6*
C127	103191-1	0.47UF 50V Z5U 1210 T/R	0.6
C128		.22UF 50V 5% MTL FILM RDL T/A	м 9
		.1UF 250V 5% MTL POLY FILM T/A	M 10
C129 C130		0.01UF 50V 10% X7R SMD 1206	N 7
		.1UF 250V 5% MTL POLY FILM T/A	M 10
C131		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	N 12
C132		.1UF 250V 5% MTL POLY FILM T/A	N 12
C133		.047UF 250VDC 5% MET POLY T/A	
C134		0.22UF 50V 5% X7R 1206 T/R	M 12
C135		.047UF 250VDC 5% MET POLY T/A	M 12
C136		.1UF 250V 5% MTL POLY FILM T/A	N 13
		.1UF 250V 5% MTL POLY FILM T/A	N 13
C13B		.1UF 250V 5% MTL POLY FILM T/A	N 13
C139		.1UF 250V 5% MTL POLY FILM T/A	N 13
C140		.1UF 250V 5% MTL POLY FILM T/A	D 13
C141	A11369-120K2	12PF 50V 10% NPO 0805 T/R	E 4
C142	103191-1	0.47UF 50V Z5U 1210 T/R	A 9
C143	A11369-221J5	220PF 50V 5% NPD 1206 SMD	B 9
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		PARTS LIST	
REE DES	C.P.N.	DESCRIPTION	MAP LOC.
C144	A11427-473K5	.047UF 50V CHIP CAPACITOR X7R	A 4*
C145	A11427-334JB	.33UF 50V 5% CHIP X7R 1210	N B
C146	A11427-103K5	0.01UF 50V 10% X7R SMD 1206	N B
C147	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	М 6
C148	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	M 7*
C149	130551-1	10UF 25V 20% ALUM ELEC SMT T/R	M_7
C150	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	N 7*
C151	A11369-102K5	1000PF 50V 10% NPO 1206 SMD	M 7*
C152	A11369-102K5	1000PF 50V 10% NPO 1206 SMD	N 7*
C153	C 6995-2	022UF 100V CHIP CAPACITOR X7R	N 6*
C154	A11369-221J5	220PF 50V 5% NPO 1206 SMD	N 6*
C155	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	N 6*
C156	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	N 6*
C157	126539-1	10UF 16V 5.5MM HIGH SMD	N 6
C158		10UF 16V 5.5MM HIGH SMD	N 6
C159		220.PF 50V 10% NPO MLC 0805	N 6
C160	127684-1	.0047UF 5% 16V 0805 FILM SMT	0 4*
C161		.0047UF 5% 16V 0805 FILM SMT	0 4*
C162		.1UF 50V 5% X7R 0805 T/R	0 5*
C163	A11369-221J5	220PF 50V 5% NPO 1206 SMD	0 5*
C164	A11369-102J2	.001UF 50V 5% NPO MLC 0805 T/R	0 5*
C165	A11369-221J5	220PF 50V 5% NPO 1206 SMD	0.5*
C166	A11369-102J2	.001UF 50V 5% NPO MLC 0805 T/R	0 5*
C167	A11369-102J2	.001UF 50V 5% NPO MLC 0805 T/R	N 5*
C168		220PF 50V 5% NPO 1206 SMD	0 5*
C169	A11369-102J2	.001UF 50V 5% NPO MLC 0805 T/R	N 5*
C170	126623-1	47UF 16V 6.3X5.5MM 20% SMT	0.5
C171	A11369-102K5	1000PF 50V 10% NPO 1206 SMD	L 3*
C172	126539-1	10UF 16V 5.5MM HIGH SMD	м 6
C173	126539-1	10UF 16V 5.5MM HIGH SMD	P 5
C174	126539-1	10UF 16V 5.5MM HIGH 5MD	0.5
C175	126543-1	2.2UF 50V 5.5MM HIGH NP SMD	N 5
C176	103191-1	Ø.47UF 50V Z5U 1210 T/R	M 4*
C177	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	L 3*
C178		OPEN	L 8
C179		0.18UF 50V 5% X7R 1206 T/R	N 2*
C180		100UF 25V 5.5MM HIGH SMD	N 3
C181	126551-1	100UF 25V 5.5MM HIGH SMD	M 5
C182		.1UF 50V CHIP CAP 10% 0805 X7R	L B
C183	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	L B
C1B4	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	L 11*
C185		.1UF 50V CHIP CAP 10% 0805 X7R	L 8
C186	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	K B
C187	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	K B
C188	103430-151K2	150PF 250V 10% NPO 0805 T/R	K B*_
C189		150PF 250V 10% NPO 0805 T/R	K B*
C190	A10434-473JD	.047UF 250VDC 5% MET POLY T/A	N 9
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INACTIVE

size i	OWG NO.		12621	8-13		REV A
SCALE	NONE	PROJ NO.	MD425DØ	SHEET 14 OF	4B	



	p		PARTS LIST				T	_
REF DES		DESCRIPTION					MAP LOC.	
C191	A10434-104JD	.1UF 250V 5%	MTL POLY F	ILM T/A			N 9	
C192	A10434-473JD	.047UF 250VDC	5% MET PC	LY T/A			Р 9	
€193	103430-151K2	150PF 250V 10	% NPO 0805	T/R			K 11*	
C194	103430-151K2	150PF 250V 10	% NPO 0805	T/R			K 11*	
C195	126551-1	100UF 25V 5.5	MM HIGH SM	D			K 12	
C196	A11427-104K2	.1UF 50V CHIP	CAP 10% 0	805 X7R			K 11	
C197		.1UF 50V CHIP					K 12	Т
C198	A11427-104K2	.1UF 50V CHIP	CAP 10% 0	805 X7R			М 6*	_
C199		470PF 50V 10%					P 6*	
C200		.001UF 50V 5%					D 13	_
C201		OPEN					P 3*	_
C202	103191-1	0.47UF 50V Z5	II 1210 T/B			-	P 3	
C203		100PF 200V NP					0 4	_
		220PF 200V 1%					0 4	_
C204							0 4*	_
C205		1000PF 200V 5						
C206	-	330PF 250V 10		1/17			0 4* P 4	_
C207		220PF 200V 1%		00 V35			· · · · · · · · · · · · · · · · · · ·	_
C208		.047UF 50V CH					0 4	_
C209		0.01UF 500V 5					0 4	_
C210		12PF 50V 10%					P 3*	_
C211		12PF 50V 10%					0.4*	_
C212		470.PF 50V 1%					0 4*	
C213	A11369-101J2	100 PF 50V 5%	NPO MLC Ø	805 T/R			D 4*	
C214	A11369-332F5	3300.PF 50V 1	% NPO MLC	1206			0 4	_
C215	A11369-332F5	3300.PF 50V 1	% NPO MLC	1205			P 4*	
C216	A11369-120K2	12PF 50V 10%	NPO 0805 T	/R			P 4*	_
C217	A11369-120K2	12PF 50V 10%	NPO 0805 T	/R			P 4*	
C21B	A11369-470K2	47PF 50V 10%	NPO 0805 T	/R			N 4*	
C219	A11369-470K2	47PF 50V 10%	NPO 0805 T	/R			N 3*	
C22Ø	A11427-104K2	.1UF 50V CHIP	CAP 10% 0	805 X7R			D 4	_
C221	A11427-104K2	.1UF 50V CHIP	CAP 10% 0	805 X7R			0 4	Т
C222		.1UF 50V CHIP					N 4*	-
C223	103191-1	0.47UF 50V Z5					0 4	_
C224		.1UF 5ØV CHIP		805 X7R			0.3	_
C225		.1UF 50V CHIP					0 4	_
C226		.1UF 50V CHIP					N 3*	_
C227	103191-1	0.47UF 50V Z5					0.3	
							P 9	_
C228		.22UF 50V 5%						_
C229		.1UF 250V 5%					P 10	_
C230		0.01UF 50V 10					0 7	_
		.1UF 250V 5%					P 10	_
C232		.1UF 250V 5%					P 12	_
C233		.047UF 250VDC					P 12	_
C234		0.22UF 50V 5%					0 12	
C235		.047UF 250VDC					0 12	
C236	A10434-104JD	.1UF 250V 5%	MTL POLY F	ILM T/A			D 13	_
C237	A10434-104JD	.1UF 250V 5%	MTL POLY F	ILM T/A			0 13	_
								_
		5.4.45000PP						_
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		PARTS LIST	LAND LOS
REF DES		DESCRIPTION	MAP LOC.
C238	A10434-104JD	.1UF 250V 5% MTL POLY FILM T/A	P 13
C239	A10434-104JD	.1UF 250V 5% MTL POLY FILM T/A	P 13
C240	A10434-104JD	.1UF 250V 5% MTL POLY FILM T/A	0 13
C241		2.2UF 50V 5.5MM HIGH SMD	<u>C B</u>
C242		2.2UF 50V 5.5MM HIGH 5MD	D B
C245	A11427-334J6	.33UF 50V 5% CHIP X7R 1210	0.6
C246	A11427-103K5	0.01UF 50V 10% X7R SMD 1206	0.6
C247	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	M 5
C24B	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	<u> </u>
C249	130561-1	10UF 25V 20% ALUM ELEC SMT T/R	0.7
C250	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	P 7*
C251	A11369-102K5	1000PF 50V 10% NPO 1206 SMD	0.7*
C252	A11369-102K5	1000PF 50V 10% NPD 1206 SMD	P 7*
C253	C 6995-2	022UF 100V CHIP CAPACITOR X7R	N 4*
C254		220PF 50V 5% NPO 1206 SMD	N 4*
C255	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	N 4*
C256	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	N 4*
C257		10UF 16V 5.5MM HIGH SMD	N 4
C258		10UF 16V 5.5MM HIGH SMD	N 4
C259		220.PF 50V 10% NPO MLC 0805	N 4
C260	127684-1	.0047UF 5% 16V 0805 FILM SMT	D 3*
C261		.0047UF 5% 16V 0805 FILM SMT	0 3*
C262		.1UF 50V 5% X7R 0805 T/R	0 3*
C263	A11369-22115	220PF 50V 5% NPO 1206 SMD	0.3*
C264	A11369-102J2	.001UF 50V 5% NPO MLC 0805 T/R	0 3*
C265	A11369-221J5	220PF 50V 5% NPO 1206 SMD	D 3*
C266	A11369-10212	.001UF 50V 5% NPO MLC 0805 T/R	0 3*
C267	A11369-10212	.001UF 50V 5% NPO MLC 0805 T/R	N 3*
C268	A11369-22115	220PF 50V 5% NPO 1206 SMD	0 3*
C269	A11369-102J2	.001UF 50V 5% NPO MLC 0805 T/R	N 3*
C27Ø	126623-1	47UF 16V 6.3X5.5MM 20% 5MT	0 3
C271		470PF 50V 10% CHIP NPO 1206	P 4*
C272	126539-1	10UF 16V 5.5MM HIGH SMD	N 5
C273	126539-1	10UF 16V 5.5MM HIGH SMD	P 4
C274	126539-1	10UF 16V 5.5MM HIGH SMD	0.4
	128543-1	2.2UF 50V 5.5MM HIGH NP SMD	N 4
C275	103191-1	Ø.47UF 50V Z5U 1210 T/R	M 2*
C276		.1UF 50V CHIP CAP 10% 0805 X7R	E 3*
C277	DITTE! TOTKE	OPEN	N 3*
C27B	A11427-1841E	0.18UF 50V 5% X7R 1206 T/R	N 2*
C279	1.55555	47UF 16V 6.3X5.5MM 20% SMT	B 7
C281		470PF 50V 10% CHIP NPO 1206	0 4
C282		.1UF 50V CHIP CAP 10% 0805 X7R	E 8*
C283	A11427-104NZ	.1UF 50V CHIP CAP 10% 0805 X7R	B 7*
C2B4		100UF 25V 5.5MM HIGH SMD	N 3
C285	126551-1	.1UF 50V CHIP CAP 10% 0805 X7R	K 4
C286		.1UF 50V CHIP CAP 10% 0805 X7R	K 5
C287	A1142/-184K2	. TOP JEV CHILL CALLED BOOD AVII	
	 		
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INACTIVE

51ZE A	DWG	NO.			12621	B - 1	3		REV A
SCAL	E N	ONE	PROJ	NO.	MD425DØ	SHEET	16 DF	48	



		PARTS LIST	1.445 : 55
REF DES	C. P. N.	DESCRIPTION	MAP LOC.
C28B		150PF 250V 10% NPO 0805 T/R	K 5*
C289	103430-151K2	150PF 250V 10% NPO 0805 T/R	K 5*
C290		.047UF 250VDC 5% MET POLY T/A	0 9
C291		.1UF 250V 5% MTL POLY FILM T/A	0 9
C292		.047UF 250VDC 5% MET POLY T/A	0 9
C293	103430-151K2	150PF 250V 10% NPO 0805 T/R	K 2*
C294	103430-151K2	150PF 250V 10% NPO 0805 T/R	K 2*
C295	126551-1	100UF 25V 5.5MM HIGH SMD	K 2
C296	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	K 2
C297	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	K 2
C298		.1UF 50V CHIP CAP 10% 0805 X7R	B 7
C299	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	A 4*
C300	A11369-102K5	1000PF 50V 10% NPO 1206 SMD	L 3*
C3Ø1		.1UF 50V CHIP CAP 10% 0805 X7R	E 7*
C302	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	A 4*
C303	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	A 4*
C304		OPEN	A 10
C305		OPEN	B 10
C306	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	A 7
C307	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	H 14
C30B	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	B 8
C309	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	B 8
C310	125508-1	10UF 50V 20% SMT AL ELECT T/R	м 3
C313	126542-1	2.2UF 50V 5.5MM HIGH SMD	М 9
C314		0.01UF 50V 10% X7R SMD 1206	D 3*
C315	A11369-471K5	470PF 50V 10% CHIP NPO 1206	0.5
C316	126551-1	100UF 25V 5.5MM HIGH SMD	K 8
C317	126551-1	100UF 25V 5.5MM HIGH SMD	K B
C318	126551-1	100UF 25V 5.5MM HIGH SMD	K B
C319	126551-1	100UF 25V 5.5MM HIGH 5MD	K B
C320	126539-1	10UF 16V 5.5MM HIGH SMD	D 3
C321		.1UF 50V CHIP CAP 10% 0805 X7R	K 7
C322		.1UF 50V CHIP CAP 10% 0805 X7R	K 8
C323		.1UF 50V CHIP CAP 10% 0805 X7R	0.5*
C324	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	0.5
C325	A11427-104K2		P 5*
C326	A11427-104K2		P 5*
C327	A11427-104K2		P 5*
C328		.1UF 50V CHIP CAP 10% 0805 X7R	P 5*
C329	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	0 2*
C330	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	0 2*
C332	126539-1	10UF 16V 5.5MM HIGH SMD	D 8
C333	A11427-103K2	.01 UF 50V 10% X7R MLC 0805	C 3*
C334	A11427-103K2		C 7*
C335	A11427-103K2	.01 UF 50V 10% X7R MLC 0805	C 3*
C336	126539-1	10UF 16V 5.5MM HIGH SMD	M_5
C337	A11427-103K2	.01 UF 50V 10% X7R MLC 0805	A 10
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51ZE A	DWG	NO.		1	2621	B - 1	3			A
SCAL	E NC	ONE	PROJ	ND.	MD425D0	SHEET	17	OF	48	



		PARTS LIST	
REF DES	C. P. N.	DESCRIPTION	MAP LOC.
C338		.1UF 50V CHIP CAP 10% 0805 X7R	A 9
C339		0.22UF 50V 5% X7R 1206 T/R	N 2*
C340		.1UF 50V CHIP CAP 10% 0805 X7R	M 4*
C341		.1UF 50V CHIP CAP 10% 0805 X7R	M 4*
C342		.1UF 50V CHIP CAP 10% 0805 X7R	м 5*
C343		.1UF 50V CHIP CAP 10% 0805 X7R	м 5*
C344		.1UF 50V CHIP CAP 10% 0805 X7R	0 2*
C345		.1UF 50V CHIP CAP 10% 0805 X7R	0 2*
C346		.1UF 50V CHIP CAP 10% 0805 X7R	L B
C347		.1UF 50V CHIP CAP 10% 0805 X7R	L B
C34B	C10325-6	2200.PF 250VAC 20% FILM Y2	C 11
C349	126539-1	10UF 16V 5.5MM HIGH SMD	M 4
C350	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	N 6*
C351	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	0 6*
C352	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	м 6*
C353		.1UF 50V CHIP CAP 10% 0805 X7R	0 2*
C354	126551-1	100UF 25V 5.5MM HIGH SMD	N 4
C355	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	N 2*
C356	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	М 5
C357	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	м 5
C358	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	B 9*
C360	130636-104K6	0.1UF 500V 10% X7R 1210 T/R	I 9*
C361	130636-103J5	0.01UF 500V 5% X7R 1206 T/R	I 9*
C363	130636-104K6	0.1UF 500V 10% X7R 1210 T/R	H 7*
C365	130636-104K6	0.1UF 500V 10% X7R 1210 T/R	I 7*
C366	130636-104K6	0.1UF 500V 10% X7R 1210 T/R	I 12*
C367	130636-103J5	0.01UF 500V 5% X7R 1206 T/R	I 12*
C369		0.1UF 500V 10% X7R 1210 T/R	I 10*
C371	130636-104K6	0.1UF 500V 10% X7R 1210 T/R	I 10*
C372	127483-1	6300UF 125V 9A LOW ESL 5 PIN	L 10
C373	127483-1	6300UF 125V 9A LOW ESL 5 PIN	L 12
C374		0.1UF 500V 10% X7R 1210 T/R	I 9*
C375		0.01UF 500V 5% X7R 1206 T/R	I 7*
C377		0.1UF 500V 10% X7R 1210 T/R	H 12*
C378		0.01UF 500V 5% X7R 1206 T/R	I 10*
C3B0		0.1UF 500V 10% X7R 1210 T/R	I 8*
C382		0.1UF 500V 10% X7R 1210 T/R	I 9*
C384	·	0.1UF 500V 10% X7R 1210 T/R	I 11*
C386		0.1UF 500V 10% X7R 1210 T/R	I 12*
C3B7		.1UF 50V 5% X7R 0805 T/R	J 9
C388		.1UF 50V 5% X7R 0805 T/R	J 9
C390		.1UF 50V 5% X7R 0805 T/R	J 11
C391		.1UF 50V 5% X7R 0805 T/R	J 11
C397		.01UF 250V 5%MTL POLY FILM T/A	N 10
C398		.1UF 50V 5% X7R 0805 T/R	I 5*
C400		0.1UF 500V 10% X7R 1210 T/R	1 5* I 4*
C401	1130222-10372	0.01UF 500V 5% X7R 1206 T/R	1 47
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INACTIVE

SIZE	DWG NO.	126218-13	REV A
SCALE	NONE	PROJ NO. MD425DØ SHEET 1B OF 4B	



		PARTS LIST	144 B 1 CC
REF DES	C. P. N.	DESCRIPTION	MAP LOC.
C403	130636-104K6	0.1UF 500V 10% X7R 1210 T/R	I 6*
C4Ø4	130636-104K6	0.1UF 500V 10% X7R 1210 T/R	H 6*
C407	130636-104K6	0.1UF 500V 10% X7R 1210 T/R	I 2*
C40B	130636-103J5	0.01UF 500V 5% X7R 1206 T/R	I 1*
C409	130636-104K6	0.1UF 500V 10% X7R 1210 T/R	I 3*
C410	130636-104K6	0.1UF 500V 10% X7R 1210 T/R	I 3*
C413		0.1UF 500V 10% X7R 1210 T/R	I 4*
C414	130636-103J5	0.01UF 500V 5% X7R 1206 T/R	I 6*
C416	126551-1	100UF 25V 5.5MM HIGH 5MD	K 6
C417	126551-1	100UF 25V 5.5MM HIGH SMD	К Б
C418	126551-1	100UF 25V 5.5MM HIGH SMD	K 6
	126551-1	100UF 25V 5.5MM HIGH SMD	K 6
C419	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	К б
C421	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	K 4
C422		.1UF 50V CHIP CAP 10% 0805 X7R	P 4*
C423	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	P 4*
C424	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	0.3*
C425	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	0.3
C426	A11427-104K2		P 3*
C427	A11427-104K2		P 3*
C428	A11427-104K2		м з*
C429	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	M 3*
C430	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	M 4*
C431	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	M 4*
C432	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	H 2*
C435		0.1UF 500V 10% X7R 1210 T/R	
C436		0.01UF 500V 5% X7R 1206 T/R	I 3*
C437		0.1UF 500V 10% X7R 1210 T/R	I 4*
C438	130636-104K6	0.1UF 500V 10% X7R 1210 T/R	I 5*
C440		0.1UF 500V 10% X7R 1210 T/R	I 1*
C441	130636-104K6	0.1UF 500V 10% X7R 1210 T/R	I 3*
C446	127483-1	6300UF 125V 9A LOW ESL 5 PIN	L 4
C447	127483-1	6300UF 125V 9A LOW ESL 5 PIN	L 2
C449	A11427-104J2	.1UF 50V 5% X7R 0805 T/R	J 5
C453	A11427-104J2	.1UF 50V 5% X7R 0805 T/R	J 5
C454	A11427-104J2	.1UF 50V 5% X7R 0805 T/R	J 3
C455	A11427-104J2	.1UF 50V 5% X7R 0805 T/R	J 3
C497	A10434-103JD	.01UF 250V 5%MTL POLY FILM T/A	0 10
C49B	A11427-104J2	2005 7 (5)	0 3*
C500	103191-1	Ø.47UF 50V Z5U 1210 T/R	N 1
C501	103191-1	0.47UF 50V Z5U 1210 T/R	D 1
C502		220.PF 50V 10% NPO MLC 0805	N 1
C600	103191-1	0.47UF 50V Z5U 1210 T/R	N 1
C601	103191-1	0.47UF 50V Z5U 1210 T/R	0 1
C602	A11369-221K2		N 1
C700	C 7099-2	0.47UF 250VAC 50-400HZ RFI CAP	E 1
	A11427-102K2		B B*
C701	ATTEL TOLKE	OPEN	€ 8*
C702	 	OI LIT	†
	 		
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RE FOR REF	ERENCE ONLY.	ATIONS ARE THE SIZE DWG ND. 126218-	13
TON LIAHS	E CROWN INTERNATI BE REPRODUCED. CO	PIED, OR USED	, ,
	IS FOR THE MANUFA	CTURE OR SALE SCALE NONE PROJ NO. MD425DØ SHEE	T 19 DF 48



		PARTS LIST	
REF DES	Г. Р. N.	DESCRIPTION	MAP LOC.
D1	G. 7 . 111	INSTALLED ON PREVIOUS ASSEMBLY	F 1
D2		INSTALLED ON PREVIOUS ASSEMBLY	F 5
D3		INSTALLED ON PREVIOUS ASSEMBLY	F 11
D4	 	INSTALLED ON PREVIOUS ASSEMBLY	F 10
D5		INSTALLED ON PREVIOUS ASSEMBLY	F 12
D6		INSTALLED ON PREVIOUS ASSEMBLY	F 12
D7	126549-1	DIODE, 30V 200MA SCHOTTKY SOT23	D 4
D8	126549-1	DIODE, 30V 200MA SCHOTTKY SOT23	D 3
D9	126549-1	DIODE, 30V 200MA SCHOTTKY SOT23	B 9
D10	126549-1	DIODE, 30V 200MA SCHOTTKY SOT23	B 9
	C 9283-0	DIODE, MMBD4148/914 SOT-23 SMT	E 4
D11	126549-1	DIODE, 30V 200MA SCHOTTKY SOT23	8 9
D12	126549-1	DIDDE.30V 200MA SCHOTTKY SOT23	B 9
D13	C 9283-0	DIODE, MMBD4148/914 SOT-23 SMT	L 3*
D14	126549-1	DIODE.30V 200MA SCHOTTKY SOT23	B 8
D15	120343 1	OPEN	B 11
D16		OPEN	A B
D17	126549-1	DIODE,30V 200MA SCHOTTKY SOT23	A 4
D1B	126549-1	DIODE, 30V 200MA SCHOTTKY SOT23	А З
D19	125255-1	DIODE, ULTRAFAST 200V 1A SMA	H 14
D22	C 9283-0	DIODE, MMBD4148/914 SOT-23 SMT	0 1
D24	C 9283-0	DIODE, MMBD4148/914 SOT-23 SMT	0 1
D25		DIODE, 30V 200MA SCHOTTKY SOT23	В 9
D26	126549-1 C 9283-0	DIODE, MMBD414B/914 SOT-23 SMT	B 9
D27	C 9283-0	DIODE, MMBD4148/914 SOT-23 SMT	С 2
D34	126549-1	DIODE,30V 200MA SCHOTTKY SOT23	L 6
D35	125593-1	DIODE, SCHOTTKY 40V 1A SMA	L 6
D36	125593-1	DIODE, SCHOTTKY 40V 1A SMA	L 7
D37	C 9929-B	TL431ACLP ADJ PREC RFNC T/A	м 3
D38	C 9929-B	TL431ACLP ADJ PREC RENC T/A	м з
D43	126549-1	DIODE, 30V 200MA SCHOTTKY SOT23	B 10
D44	126549-1	DIODE, 30V 200MA SCHOTTKY SOT23	B 7
D45	126549-1	DIODE, 30V 200MA SCHOTTKY SOT23	A 4
D100	C 92B3-Ø	DIODE, MMBD4148/914 SOT-23 SMT	N 13
D101	C 9283-0	DIODE, MMBD414B/914 SOT-23 SMT	N 13
D102	C 9283-0	DIODE, MMBD4148/914 SOT-23 SMT	N 12
D102	C 9283-0	DIODE, MMBD4148/914 SOT-23 SMT	N 12
D104	126549-1	DIODE.30V 200MA SCHOTTKY SOT23	P 5
D105	C 9283-0	DIODE, MMBD4148/914 SOT-23 SMT	P 6
D106	C 9283-0	DIODE, MMBD4148/914 SOT-23 SMT	P 6
D107	126549-1	DIODE, 30V 200MA SCHOTTKY SOT23	N 5*
D109	C 9929-8	TL431ACLP ADJ PREC RFNC T/A	N 7
D110	C 9283-0	DIODE, MMBD414B/914 SOT-23 SMT	P 5
D120	C 9283-0	DIODE, MMBD4148/914 SDT-23 SMT	M 5
D121	C 9283-0	DIODE, MMBD4148/914 SOT-23 SMT	М 5
D122	C 9283-0	DIODE, MMBD4148/914 SOT-23 SMT	N 2
D123	C 9283-0	DIODE, MMBD4148/914 SOT-23 SMT	L 7
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INACTIVE

size A	DWG	ND.			12621	8 - 1	3		REV A
SCAL	E NO	DNE	PROJ	NO.	MD425DØ	SHEET	20 0)F 48	



		PARTS LIST	MAP LOC.
REF DES	C.P.N	DESCRIPTION 33 SMT	L 8
D124	C 9283-0	DIODE, MMBD4148/914 SOT-23 SMT DIODE, MMBD4148/914 SOT-23 SMT	L B
D125	C 9283-0	THE ROLL OF THE PARTY OF THE PA	мв
D126	C 9283-0	THE STATE OF THE S	мв
D127	C 9283-0	THE STATE OF THE S	м 5
D128	C 9283-0	THE THEORY ARRY 1.A	N 10
D129	125620-1	THE STATE OF THE S	L B
D130	C 9283-0		K 7
D131	125593-1	DIODE, SCHOTTKY 40V 1A SMA	K 7
D132	125593-1	DIODE, SCHOTTKY 40V 1A SMA	м 5
D133	C 92B3-0	DIODE, MMBD4148/914 SOT-23 SMT	L 11
D134	C 9283-0	DIODE, MMBD4148/914 SOT-23 SMT	J B
D138		OPEN	J 9
D139	<u> </u>	OPEN	J 9
D140		INSTALLED ON PREVIOUS ASSEMBLY	J B
D141		INSTALLED ON PREVIOUS ASSEMBLY	J 11
D142		INSTALLED ON PREVIOUS ASSEMBLY	J 11
D143	<u> </u>	INSTALLED ON PREVIOUS ASSEMBLY	J 11
D144	<u> </u>	OPEN	J 11
D145	L	OPEN SOT 22 SMT	M 4
D146	C 9283-0	DIODE, MMBD414B/914 SOT-23 SMT	0 13
D200	C 9283-0	DIODE, MMBD414B/914 SOT-23 SMT	0 13
D201	C 92B3-0	DIODE, MMBD414B/914 SOT-23 SMT	0 13
D2Ø2	C 9283-0	DIODE, MMBD4148/914 SOT-23 SMT	0 12
D203	C 9283-0	DIODE, MMBD4148/914 SOT-23 SMT	P 3
D204	126549-1	DIODE.30V 200MA SCHOTTKY SOT23	P 4
D205	C 9283-0	DIODE, MMBD4148/914 SOT-23 SMT	P 4
D206	C 9283-0	DIODE, MMBD4148/914 SOT-23 SMT	N 4*
D207	126549-1	DIODE, 30V 200MA SCHOTTKY SOT23	P 7
D209	C 9929-8	TL431ACLP ADJ PREC RFNC T/A	P 3
D210	C 9283-0	DIODE, MMBD414B/914 SOT-23 SMT	N 2
D222	C 9283-0	DIODE, MMBD414B/914 SOT-23 SMT	L 7
D223	□ 9283-0	DIODE, MMBD4148/914 SOT-23 SMT	P 10
D229	125620-1	DIODE, FAST RECOVERY 400V 1A	КБ
D231	125593-1	DIODE, SCHOTTKY 40V 1A SMA	K 6
D232	125593-1	DIODE, SCHOTTKY 40V 1A SMA	J 6
D238		OPEN	J 5
D239		OPEN	J 5
D240		INSTALLED ON PREVIOUS ASSEMBLY	J 5
D241		INSTALLED ON PREVIOUS ASSEMBLY	J 2
D242		INSTALLED ON PREVIOUS ASSEMBLY	J 3
D243		INSTALLED ON PREVIOUS ASSEMBLY	J 2
D244		OPEN	J 3
D245		OPEN COLUMN COLU	м з
D246	C 9283-0	DIODE, MMBD4148/914 SOT-23 SMT	N 1
D500		OPEN	0 1
D600		OPEN SOTON	ВВ
D700	126549-1	DIODE, 30V 200MA SCHOTTKY SOT23	
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		PARTS LIST	
REF DES	C. P. N.	DESCRIPTION	MAP LOC.
Q1 Ø4	126616-1	XSISTOR, 100V 2A DRLNGTN DPAK	I 13
Q1Ø5	126616-1	XSISTOR, 100V 2A DRLNGTN DPAK	I 14
Q106		INSTALLED ON PREVIOUS ASSEMBLY	J 9
Q107		INSTALLED ON PREVIOUS ASSEMBLY	J B
Q10B		INSTALLED ON PREVIOUS ASSEMBLY	J 12
Q109	· · · · · · · · · · · · · · · · · · ·	INSTALLED ON PREVIOUS ASSEMBLY	J 11
Q110		INSTALLED ON PREVIOUS ASSEMBLY	J 7
Q111		INSTALLED ON PREVIOUS ASSEMBLY	J 9
Q112		INSTALLED ON PREVIOUS ASSEMBLY	J 12
Q113		INSTALLED ON PREVIOUS ASSEMBLY	J 10
Q115	C 7448-1	MMBT3904 CHIP NPN	M 4
0200	□ 7448-1	MMBT3904 CHIP NPN	P 4
Q2Ø1	125798-1	TRANSISTOR, MMBT3906LTI PNP SMT	P 4
Q2Ø3	C 744B-1	MMBT3904 CHIP NPN	N 2
Q205 Q206	<u> </u>	INSTALLED ON PREVIOUS ASSEMBLY	J 5
0207		INSTALLED ON PREVIOUS ASSEMBLY	J 6
0208		INSTALLED ON PREVIOUS ASSEMBLY	J 2
0209		INSTALLED ON PREVIOUS ASSEMBLY	J 3
Q21Ø		INSTALLED ON PREVIOUS ASSEMBLY	J 6
Q211		INSTALLED ON PREVIOUS ASSEMBLY	J 4
		INSTALLED ON PREVIOUS ASSEMBLY	J 1
0212	4.00	INSTALLED ON PREVIOUS ASSEMBLY	J 3
Q213	C 7448-1	MMBT3904 CHIP NPN	мэ
Q215	C 7448-1	MMBT3904 CHIP NPN	L 1
0500	C 7448-1	MMBT3904 CHIP NPN	L 1
Q5Ø1			N 1
0600	C 7448-1	MMBT3904 CHIP NPN	0 1
Q601	C 7448-1	MMBT3904 CHIP NPN	B 9
0700	C10421-3	FET, 60V N-CH 2N7002LT1 50T-23	A 9
Q7Ø1	C10421-3	FET, 60V N-CH 2N7002LT1 SOT-23	
0702	C 9258-2	BS170RLRM N-MOSFET 60V T/A	B 9
Q7Ø3	125798-1	TRANSISTOR, MMBT3906LTI PNP SMT	D 4
R1	101103-1	PTC, 6.0 OHM 265V	-
R2	101103-1	PTC, 6.0 OHM 265V	C 2
R3	C10450-2	.04 OHM 5W 3% WW VERT MNT	E 1
R4	C10450-2	.04 OHM 5W 3% WW VERT MNT	E 2
R5	C10450-2	.04 OHM 5W 3% WW VERT MNT	E 2
R6		10K 1/10W 1% SMD 0805 T/R	C 3
R7		10.5K .10W 1% MF 0805	E 3*
R8		10.5K .10W 1% MF 0805	E 4*
R9		274K .125W 1% CHIP RES T/R	C 3
R10		10.5K .10W 1% MF 0805	E 7*
R11		10.5K .10W 1% MF 0805	E 7*
R12		243KOHM .125W 1% CHIP RES T/R	A 3
R13		10.5K .10W 1% MF 0805	E 9*
R14		10.5K .10W 1% MF 0805	E 8*
R15	A11368-30112	3.01KOHM .125W 1% CHIP RES T/R	B 8
R16		OPEN	B 10

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For Reference Use Only

SIZE DWG NO. 126218-13 REV A

SCALE NONE PROJ NO. MD425DØ SHEET 24 OF 48



		PARTS LIST	1,45 : 55
REF DE	S C.P.N.	DESCRIPTION	MAP LOC.
D7@1	C 8369-8	1N747A 3.6V 5% ZENER .5W T/A	<u>C 9</u>
E 1	102476-1	LED, SMT R/A GREEN	L 1
2	102477-1	LED, SMT R/A RED	L 1
E 3	102477-1	LED, SMT R/A RED	M 1
- 4	102476-1	LED. SMT R/A GREEN	K 1
=5	102476-1	LED, SMT R/A GREEN	N 1
<u> </u>	102477-1	LED, SMT R/A RED	0 1
7	102477-1	LED, SMT R/A RED	0 1
B1	100868-1	FERRITE, 70 OHM 25% 1206 SMT	D 7*
=B2	100868-1	FERRITE, 70 OHM 25% 1206 SMT	E 4*
=B3	100868-1	FERRITE, 70 OHM 25% 1206 SMT	A 4*
HS 1	C 991B-1	TO220 VERT CLIP-ON HEATSINK	D 7
H52	128009-1	ASM, CE3000 PS PRIMARY HS	F 1
H53	128010-1	ASM, CE3000 PS DIODE HS	F 10
HS4	128011-1	ASM, CE3000 BCA OUTPUT HS	H 7
HS5	128011-1	ASM, CE3000 BCA OUTPUT HS	H 1
J 1	101031-1	.250 FASTON, AUTO INSERTABLE	D 1
J 2	101031-1	.250 FASTON, AUTO INSERTABLE	D 1
J3	101031-1	.250 FASTON, AUTO INSERTABLE	КВ
J 4	101571-1	HDR, 2 POS .1 CTR MTA SHRD	H 14
J5	127563-3	PWA, CE4000 POT BOARD	0.2
	130640-1	HEADER. 3M LATCH 26 PIN .1X.1	0 2
J 6	136046 1	OPEN	0.6
J 7		OPEN	K 14
<u> 1 B</u>	A10020-34	6-32 X .375 PCB CAPTIVE STUD	K 14
J9	101031-1	.250 FASTON, AUTO INSERTABLE	мв
J11	101031-1	.250 FASTON, AUTO INSERTABLE	N B
J12		.250 FASTON, AUTO INSERTABLE	K 11
J13	101031-1	.250 FASTON, AUTO INSERTABLE	K 5
J14	101031-1	.250 FASTON, AUTO INSERTABLE	0.8
J 15	101031-1	.250 FASTON, AUTO INSERTABLE	P 8
J16	101031-1	.250 FASTON, AUTO INSERTABLE	K 2
J17	101031-1	OPEN	M 14
J18	110000 04	6-32 X .375 PCB CAPTIVE STUD	L 14
J 19	A10020-34	OPEN	M 1
J20			0 1
J21	484834 4	.250 FASTON, AUTO INSERTABLE	E 4
J22	101031-1	.250 FASTON, AUTO INSERTABLE	D 2
J23	101031-1	CONN, 7 PIN RECEPTABLE	A 7
J24	127030-1		A 10
J25	127031-1	CONN, 15 PIN RECEPTACLE	C 2
J 26	101031-1	.250 FASTON, AUTO INSERTABLE	B 2
J27	101031-1	.250 FASTON, AUTO INSERTABLE	B 2
J28	101031-1	.250 FASTON, AUTO INSERTABLE	B 2
J29	101031-1	.250 FASTON, AUTO INSERTABLE	Q 5
J30		OPEN ASSESSMENT ASSESSMENT ASSESSMENT	C 2
K1	128135-1	RELAY, 30A 250V 12VCOIL PCB MT	
L1	127988-1	CHOKE.10UH < 0.10HM SMT .3" DIA	I 13
	1		

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INACTIVE

51ZE A	DWG NO.	126218-13	REV A
SCAL	E NONE	PROJ NO. MD425DØ SHEET 22 OF 48	



R17	A11371-5R12	DESCRIPTION 5.10HM 0.125W 5% 1206 T/R	MAP LOC.
R17 R18 R19	A11371-5R12	5 10HM 0 125W 5% 1206 T/R	l c 7*
R18 R19			<u> </u>
R19		24.9K 1/10W 1% SMD 0805 T/R	D 4
		510. KOHM .25W 5% CF T/R	D 2
		TO-220 XSISTOR HOLDER, PLASTIC	D 2
		510. KOHM .25W 5% CF T/R	E 3
		158KOHM .1W 1% 0805 T/R	E 3
	A10265-45331		D 2
R22	A10265-45331		E 3
		121KOHM . 125W 1% CHIP RES T/R	D 3*
		681KOHM . 25W 1% MF T/R	D 4
		681KOHM .25W 1% MF T/R	D 4
			C 4
R27	A10265-39231		C 4
R28	A10265-39231		С 3
		33.2 OHM 1% 0805 RES T/R	C 2
R2X		TO-220 XSISTOR HOLDER, PLASTIC	D 4*
R30		16.2KOHM .1W 1% 0805 T/R	C 4*
R31		10K 1/10W 1% SMD 0805 T/R	E 4
R32		10 OHM 0.25W 1% 1210 T/R	E 3*
R33		1 OHM 0.5W 1% 2010 T/R	E 4*
R34		1 OHM 0.5W 1% 2010 T/R	
R35		274K .125W 1% CHIP RES T/R	B 3
R36		374. OHM 1/10W 1% SMD 0805 T/R	D 4*
R37		10.OHM 1/BW 5% SMD 1206 T/R	D 4
R3B		4.02KOHM .125W 1% CHIP RES T/R	D 4*
R39		57.6KOHM 0.1W 1% 0805 T/R	D 4*
R40		4.02KOHM .125W 1% CHIP RES T/R	D 4
R41	A11368-20021	20.KOHM .1W 1% CHIP 0805	D 3
R42	126564-1	300HM 10W 5% VERT THICK FILM	I 14
R43	A11368-10001	100 OHM 1% 0805 RES T/R	м 6*
R44	A11371-5R12	5.10HM Ø.125W 5% 1206 T/R	E 7*
R45	A11371-5R12	5.10HM 0.125W 5% 1206 T/R	E B*
R46	A11371-5R12	5.10HM 0.125W 5% 1206 T/R	E 9*
R47	A1136B-10021	10K 1/10W 1% SMD 0805 T/R	A 8
R48	A11371-3005	30 OHM 1W 5% 2512 T/R	B 9
R49	A11368-82511	8.25KOHM .1W 1% CHIP 0805	B 8
R50		121KOHM, 0.10W 1% CHIP 0805	€ 8*
R51		90.9K, 0.10W 1% MF 0805	СВ
R52		15.4K 1/10W 1% SMD 0805 T/R	СВ
R53		15.4K 1/10W 1% SMD 0805 T/R	C 7
R54	A11371-3005	30 DHM 1W 5% 2512 T/R	СВ
R55	A11368-33821	33.2 OHM 1% 0805 RES T/R	В 3
	A11368-10021	10K 1/10W 1% SMD 0805 T/R	B 3*
R56	A11360-77422	274K .125W 1% CHIP RES T/R	B 4
R57		33.2 OHM 1% 0805 RES T/R	B 3
R58		100 OHM 1% 0805 RES T/R	D 8
R59		1 DHM .1W 1% 0805 T/R	D B
R60	A11368-1R001		B 3*
R61	A11368-33R21	33.2 DHM 1% Ø8Ø5 RES T/R	
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	<u> </u>		
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PROPERTY OF	NGS AND SPECIFICA CROWN INTERNATION E REPRODUCED, COR S FOR THE MANUFAC	DNAL, INC. AND A IZDZIB-	13



		PARTS LIST	
	[6 D N	DESCRIPTION	MAP LOC.
REF DES	C.P.N.	200K 0.1W 1% SMD CHIP 0805	A 8
R62		100 OHM 1% 0805 RES T/R	M 2*
R63		681KOHM .1W 1% 0805 T/R	B 7
R65		1.KOHM .1W 1% CHIP 0805	B 7
R66		3.92 KOHM, 1% MF .125W 1206	M 7*
R67		3.92 KOHM, 1% MF .125W 1206	N 7*
R68			0.7*
R69	A11368-39212	3.92 KOHM, 1% MF .125W 1206	P 7*
R70		3.92 KOHM, 1% MF .125W 1206	м 6*
R71		100 OHM 1% 0805 RES T/R	0 4
R72		100.KOHM .1W 1% CHIP 0805	A 3
R73		1M OHM .1W 1% CHIP 0805	L 3*
R74	A11368-60411	6.04KOHM .1W 1% 0805 T/R	A 11
R75		OPEN TO BE TO THE TOTAL TOTAL TO THE TOTAL THE TOTAL TO T	В 3
R76	A11368-10021	10K 1/10W 1% SMD 0805 T/R	A 3
R77		10K 1/10W 1% SMD 0805 T/R	A 2
R78		127 KOHM . 25W 1 MF T/R	
R79	A10265-12731	127 KOHM . 25W 1 MF T/R	A 2
R8Ø	A11371-8211	820 OHM .1W 5% 0805 T/R	D 4
R81		182 OHM .125W 1% 1206 T/R	B 7
RB2	A11368-24921	24.9K 1/10W 1% SMD 0805 T/R	83
R83	A10266-3902	39.0 OHM .5W 5% CF T/R	C 2
R84		715K 0.1W 1% 0805 T/R	L B
R85	A11368-49911	4.99K 1/10W 1% SMD 0805 T/R	B 8
R86	A11371-3905	39 OHM 1W 5% 2512 T/R	I 14*
R87	A11371-1052	1. MOHM .125W 5% CHIP RES T/R	H 13
R88		5.11KDHM .1W 1% 0805 T/R	H 13
R90		392 KOHM .1W 1% 0805 T/R	0 1*
R91		1.KOHM .1W 1% CHIP 0805	B 10
R92		499 OHM .1W 1% 0805 T/R	B 7
R93	A11368-10021	10K 1/10W 1% SMD 0805 T/R	D 1*
R94		1 KOHM .1W 1% CHIP 0805	C 7*
R95		10K 1/10W 1% SMD 0805 T/R	A 7
R98		301 OHM .1W 1% 0805 T/R	A 4*
R99		49.9KOHM .1W 1% CHIP 0805	B 4
R100		39.2K 0.5W 1% 2010 T/R	N 13
R101	A11368-17811	1.78K 0.1W 1% 0805 SMD T/R	P 5*
R102		1.KOHM .1W 1% CHIP 0805	P 5*
R103		11K 0.1W 1% 0805 T/R	P 5*
R104		10K 1/10W 1% SMD 0805 T/R	P 5*
R105	A11368-10021	10K 1/10W 1% SMD 0805 T/R	P 5*
R106	A11368-20011	2.0K, 0.10W 1% MF 0805	P 5*
R107	A11368-23221	23.2KOHM .1W 1% Ø8Ø5 T/R	0.6*
R10B	A1136B-24921	24.9K 1/10W 1% SMD 0805 T/R	P 6
R109		7.50K .10W 1% CHIP 0805	0.6
R110		2320HM .1W 1% 0805 T/R	N 7
R111	127681-1	24.9K 0.5% 1206 THIN FILM T/R	0.6*
R112	A11368-10011	1.KOHM .1W 1% CHIP 0805	0 6
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INACTIVE

SIZE DWG NO.	126218-13	REV A
SCALE NONE	PROJ NO. MD425DØ SHEET 26 DF 48	



		PARTS LIST	
REF DES	C.P.N.	DESCRIPTION	MAP LOC.
R62	A11368-20031	200K 0.1W 1% SMD CHIP 0805	A 8
R63		100 OHM 1% 0805 RES T/R	M 2*
R65	A11368-68131	681KOHM .1W 1% 0805 T/R	B 7
R66		1.KOHM .1W 1% CHIP 0805	B 7
R67	A11368-39212	3.92 KOHM, 1% MF .125W 1206	M 7*
R68	A1136B-39212	3.92 KOHM, 1% MF .125W 1206	N 7*
R69		3.92 KOHM, 1% MF .125W 1206	0.7*
R7Ø	A11368-39212	3.92 KOHM, 1% MF .125W 1206	P 7*
R71	A11368-10001	100 OHM 1% 0805 RES T/R	м 6*
R72		100.KOHM .1W 1% CHIP 0805	0 4
R73		1M OHM .1W 1% CHIP 0805	A 3
		6.04KOHM .1W 1% 0805 T/R	L 3*
R74	A11300 00411	OPEN	A 11
R75	A11359-10021	10K 1/10W 1% SMD 0805 T/R	В 3
R76		10K 1/10W 1% SMD 0805 T/R	А З
R77		127 KOHM . 25W 1 MF T/R	A 2
R78		127 KOHM . 25W 1 MF T/R	A 2
R79	A10265-12/31 A11371-8211	B20 OHM .1W 5% 0805 T/R	D 4
R80		182 OHM .125W 1% 1206 T/R	B 7
R81	A11368-16282	24.9K 1/10W 1% SMD 0805 T/R	B 3
RB2		39.0 OHM .5W 5% CF T/R	C 2
R83	A10266-3902	715K 0.1W 1% 0805 T/R	L B
R84			B 8
R85		4.99K 1/10W 1% SMD 0805 T/R	I 14*
R86	A11371-3905	39 OHM 1W 5% 2512 T/R	H 13
R87	A11371-1052	1. MOHM .125W 5% CHIP RES T/R	H 13
RBB		5.11KDHM .1W 1% 0805 T/R	0 1*
R90		392 KOHM .1W 1% ØBØ5 T/R	B 10
R91		1.KOHM .1W 1% CHIP 0805	B 7
R92		499 OHM .1W 1% 0805 T/R	D 1*
R93		10K 1/10W 1% SMD 0805 T/R	C 7*
R94		1.KOHM .1W 1% CHIP 0805	A 7
R95		10K 1/10W 1% SMD 0805 T/R	A 4*
R98		301 OHM .1W 1% 0B05 T/R	
R99		49.9KOHM .1W 1% CHIP 0805	B 4
R100		39.2K 0.5W 1% 2010 T/R	N 13
R101		1.78K 0.1W 1% 0805 SMD T/R	P 5*
R102		1.KOHM .1W 1% CHIP 0805	P 5*
R103		11K 0.1W 1% 0805 T/R	P 5*
R104		10K 1/10W 1% SMD 0805 T/R	P 5*
R105	A11368-10021	10K 1/10W 1% SMD 0805 T/R	P 5*
R106	A11368-20011	2.0K, 0.10W 1% MF 0805	P 5*
R107	A11368-23221	23.2KOHM .1W 1% 0805 T/R	0.6*
R108	A1136B-24921	24.9K 1/10W 1% SMD 0805 T/R	P 6
R109	A11368-75011	7.50K .10W 1% CHIP 0805	0.6
R110	A11368-23201	2320HM .1W 1% 0805 T/R	N 7
R111	127681-1	24.9K 0.5% 1206 THIN FILM T/R	0.6*
R112	A11368-10011	1.KOHM .1W 1% CHIP Ø805	0.6
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INACTIVE

SIZE DWG NO.	126218-13	REV A
SCALE NONE	PROJ NO. MD425DØ SHEET 26 OF 48	



		PARTS LIST	
REF DES	C. P. N.	DESCRIPTION	MAP LOC.
R113		1.KOHM .1W 1% CHIP 0805	0.5
R114		2.0K, 0.10W 1% MF 0805	N 6
R115	127682-1	4.99K 0.1% 1206 THIN FILM T/R	P 5*
R116	127682-1	4.99K Ø.1% 1206 THIN FILM T/R	P 5*
R117	127682-1	4.99K 0.1% 1206 THIN FILM T/R	0.6*
R11B		4.87K OHM .10W 1% 0805	0.5*
		8.45K 0.1W 1% 0805 T/R	0.5*
R119		8.45K Ø.1W 1% Ø8Ø5 T/R	0.5*
R120			P 6*
R121		1.KOHM .1W 1% CHIP 0805	
R122		1.KOHM .1W 1% CHIP 0805	P 6*
R123		1.KOHM .1W 1% CHIP 0805	P 6*
R124		1.KOHM .1W 1% CHIP 0805	P 6*
R125		10K 1/10W 1% SMD 0805 T/R	P 6*
R126		10K 1/10W 1% SMD 0805 T/R	P 6*
R127	A11368-10021	10K 1/10W 1% SMD 0805 T/R	P 6*
R128	A11368-10031	100.KOHM .1W 1% CHIP 0805	0 1*
R129	A11368-11011	RES, 1.1KOHM .1W 1% 0805	0.6*
R130	A11368-11011	RES, 1.1KOHM .1W 1% 0805	0 5*
R131	A11368-20011	2.0K, 0.10W 1% MF 0805	05*
R132	A11368-11011	RES, 1.1KOHM .1W 1% 0805	0 5*
R133	A11368-11011	RES. 1.1KOHM .1W 1% 0805	0.6*
R134	A11368-20011	2.0K, 0.10W 1% MF 0805	0.6*
R135	A11368-10001	100 OHM 1% 0805 RES T/R	0.5
R136	A11368-10001	100 OHM 1% 0805 RES T/R	0.5
R137	A11368-10001	100 OHM 1% 0805 RES T/R	0.6
R13B		100 OHM 1% 0805 RES T/R	0.6
R139		33.2 OHM 1% 0805 RES T/R	N 7
R140		1 OHM 0.5W 1% 2010 T/R	N 7
R141		1.07KOHM .1W 1% 0805 T/R	NΒ
R142	126538-1	18 OHM 5W5% VERT THICK FILM	M 11
R143	126538-1	18 OHM 5W5% VERT THICK FILM	M 11
			M 12*
R144	A11371-1105 A11371-1105		M 13*
R145			N 13*
R146	A11371-1105	11 OHM 1W 5% 2512 T/R	N 12*
R147	A11371-1105	11 OHM 1W 5% 2512 T/R	
R14B		1K Ø.25W 1% 1210 T/R	M 12
R149	126538-1	18 OHM 5W5% VERT THICK FILM	N 13
R150	126538-1	18 OHM 5W5% VERT THICK FILM	N 13
R151	A11368-10031	100.KOHM .1W 1% CHIP 0805	0 2*
R152		OPEN	N 12
R153		OPEN	N 12
R154	A11368-15031	150K 1/10W 1% SMD 0805 T/R	N B
R155	A11368-10001	100 OHM 1% 0805 RES T/R	N B
R156	A1136B-20031	200K 0.1W 1% SMD CHIP 0805	N 6
R157	A11368-20021	20.KOHM .1W 1% CHIP 0805	N 6
R158	A11368-12741	1.27MOHM .1W 1% 0805 T/R	N 6
R159	A11368-51111	5.11K 1/10W 1% SMD 0805 T/R	N 7
NTROLLED C	UNCONTROLLE WISE MARKED IN RE OPY, COPIES OF THE SOCIATED ELECTROM RENCE ONLY.	D INK BY CM AS A For Reference Use On	
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			ARTS LIST	
	5 B N	DESCRIPTION	ARIS EISI	MAP LOC.
REF DES	L.P.N.		JUST TRIMMER T/R	м 6
R160		2.0K, 0.10W 1%		M 7*
R161	A11368-20011	3.01K 1/10W 1%	SMD 0805 T/B	M 7*
R162	A11368-30111	4.75KDHM Ø.10W	1 1 CHIP 0805	M 7*
R163	A11368-4/511	5.62KOHM .1W 1	7 0805 T/B	N 7*
R164	A11368-56211	5.62KUMM . IW I	CHID MANE	N 7*
R165	A11368-10011	1. KOHM . 1W 1%	CHIP 8085	M 7*
R166		1.KOHM .1W 1%		N 7*
R167	A1136B-10011	1.KOHM .1W 1%	CHIF DODS	N 6*
R168	A1136B-44221	44.2K Ø.1W 1%	0805 1/8	N 6*
R169	A11368-26111	2.61K Ø.1W 1%	OROP 1/H	N 5
R170			RMET TRIM SMT TR	N 6*
R171	A1136B-10031	100.KOHM .1W 1	% CHIP 0805	N 6*
R172	A11368-10001	100 OHM 1% 080	05 RES 1/R	N 6*
R173	A11368-10001	100 OHM 1% 080	15 RES T/R	0 4*
R174	A11368-10531	105KOHM .1W 12	(0805 T/R	
R175	A11368-19111	1.91KOHM .1W 1	% 0805 T/R	0 4*
R176	A11368-19111	1.91KOHM .1W 1	% 0805 T/R	0 5*
R177	A1136B-10031	100.KOHM .1W 1	% CHIP 0805	0.5*
R178	C 9777-1	1 KOHM 4MM CEF	RMET TRIM SMT T/R	0.5
R179	A11368-13011	1.3KOHM .1W 17		0.5
R180		2.55KOHM .1W 1		0.5*
R181	A11368-15011	1.5K 1/10W 1%	SMD 0805 T/R	0 5*
R182	A11368-16221	16.2KOHM .1W 1	% 0805 T/R	0 5*
R183	A11368-22111	2.21KOHM .1W	% CHIP 0805	0.5*
R184	A11368-82511	B.25KOHM .1W	1% CHIP 0805	0 5*
R185	A11368-42211	4.22KOHM .1W	1% 0805 T/R	0 5*
R186	A11368-25511	2.55KDHM .1W	1% 0805 T/R	0 5*
R187	A11368-60411	6.04KDHM .1W	1% 0805 T/R	0 5*
	A11368-10021	10K 1/10W 1% 9	SMD 0805 T/R	P 6*
R188	A11368-10021	10K 1/10W 1% 5	SMD 0805 T/R	P 6*
R189	A11371-1842	180 KOHM 125	W 5% CHIP RES T/R	N 2*
R190		392 KOHM .1W		N 2*
R191	A1130B-33231	10K 1/10W 1%	SMD 0805 T/R	N 2
R192	A11300-10021	10K 1/10W 1%	SMD 0805 T/R	0 2
R193		20. KOHM . 1W 1		P 5*
R194			DE THIN FILM T/R	0.6*
R195	127681-1			0.6*
R196	127681-1		06 THIN FILM T/R	D 6*
R197	127681-1		06 THIN FILM T/R	N 12
R198		715K Ø.1W 1%		M 5*
R199	A1136B-10031	100.KOHM .1W	1% LHIP 0805	D 13
R200	A11368-39224	39.2K Ø.5W 1%	2010 T/R	
R201	A11368-17811	1.78K Ø.1W 1%	0805 SMD T/R	P 3*
R202	A11368-10011	1.KOHM .1W 1%	CHIP 0805	P 3*
R203	A11368-11021	11K Ø.1W 1% Ø	805 T/R	P 3*
R204	A11368-10021	10K 1/10W 1%	SMD 0805 T/R	P 3*
R205	A11368-10021	10K 1/10W 1%	SMD 0805 T/R	P 3*
R206	A11368-20011		% MF 0805	P 3*
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ONTROLLED NCLUDING A	COPY, COPIES OF T SSOCIATED ELECTRO	FD INK BY CM AS A	INACTIVE For Reference Use Only	
THESE DRAW	ERENCE ONLY. INGS AND SPECIFIC F CROWN INTERNATI	DNAL, INC. AND	SIZE DWG NO. 126218	-13
AS THE BAS	BE REPRODUCED, CO IS FOR THE MANUFA	CTURE OR SALE		ET 28 OF 48
OF APPARAT	US OR DEVICES WIT	HOUT PERMISSION.	SCALE NONE PROJ NO. MD425DØ SHE	



REF DES C.P.N. DESCRIPTION R207 A11368-23221 23.2KOMM .1W 1X 0805 T/R P.R R208 A11368-23221 24.9K 1/10W 1X SMD 0805 T/R P.R R209 A11368-23201 24.9K 1/10W 1X SMD 0805 T/R P. 4 R209 A11368-23201 23.2MM .1W 1X 0805 T/R O.7 R210 A11368-23201 23.2MM .1W 1X 0805 T/R O.7 R211 127681-1 24.9K 0.5X 1206 THIN FILM T/R O.4 R212 A11368-10011 1.KOHM .1W 1X CHIP 0805 O.4 R213 A11368-10011 1.KOHM .1W 1X CHIP 0805 O.4 R214 A11368-20011 2.0K 0.1W 1X MF 0805 N. 5 R215 127682-1 4.99K 0.1X 1206 THIN FILM T/R P.3 R216 127682-1 4.99K 0.1X 1206 THIN FILM T/R P.3 R217 127682-1 4.99K 0.1X 1206 THIN FILM T/R P.3 R218 A11368-84511 8.45K 0.1W 1X 0805 T/R O.3 R219 A11368-84511 8.45K 0.1W 1X 0805 T/R O.3 R221 A11368-10011 1.KOHM .1W 1X CHIP 0805 O.4 R219 A11368-10011 1.KOHM .1W 1X CHIP 0805 P.A R221 A11368-10011 1.KOHM .1W 1X CHIP 0805 P.A R221 A11368-10011 1.KOHM .1W 1X CHIP 0805 P.A R222 A11368-10011 1.KOHM .1W 1X CHIP 0805 P.A R223 A11368-10011 1.KOHM .1W 1X CHIP 0805 P.A R224 A11368-10011 1.KOHM .1W 1X CHIP 0805 P.A R225 A11368-10011 1.KOHM .1W 1X CHIP 0805 P.A R226 A11368-10011 1.KOHM .1W 1X CHIP 0805 P.A R227 A11368-10021 10K 1/10W 1X SMD 0805 T/R P.A R228 A11368-10011 1.KOHM .1W 1X CHIP 0805 P.A R229 A11368-10011 1.KOHM .1W 1X CHIP 0805 P.A R221 A11368-10011 1.KOHM .1W 1X CHIP 0805 P.A R223 A11368-10011 1.KOHM .1W 1X CHIP 0805 P.A R224 A11368-10021 10K 1/10W 1X SMD 0805 T/R P.A R225 A11368-10011 1.KOHM .1W 1X CHIP 0805 P.A R226 A11368-10011 1.KOHM .1W 1X CHIP 0805 P.A R227 A11368-10011 1.KOHM .1W 1X CHIP 0805 P.A R228 A11368-10011 1.KOHM .1W 1X CHIP 0805 P.A R229 A11368-11011 RES. 1.1KOHM .1W 1X CHIP 0805 P.A R224 A11368-11011 RES. 1.1KOHM .1W 1X 0805 P.A R230 A11368-11011 RES. 1.1KOHM .1W 1X 0805 P.A R231 A11368-11011 RES. 1.1KOHM .1W 1X 0805 P.A R231 A11368-10011 1.ROHM .1W 1X 0805 RES T/R D.A R231 A11368-10011 1.ROHM .1W 1X 0805 RES T/R D.A R234 A11368-10011 1.ROHM .1W 1X 0805 RES T/R D.A R235 A11368-10001 100 DHM 1X 0805 RES T/R D.A R244 A11371-1105 11 DHM .1W 5X 2512 T/R D.A R244 A11361-1001 100 DHM .1X 0805 RES T/R D.A R245 A113	DC.
R287	
R289	4
R210	4
R211	7
R212 A11368-10011 1.KOHM .1W 1X CHIP 0805	4*
R213	4
R214	4
R215 127682-1 4.99K 0.1% 1205 THIN FILM T/R R216 127682-1 4.99K 0.1% 1205 THIN FILM T/R R217 127692-1 4.99K 0.1% 1205 THIN FILM T/R R218 A11368-48711 4.97K 0.1M 12 0.005 R219 A11368-84511 8.45K 0.1W 1% 0.005 R219 A11368-84511 8.45K 0.1W 1% 0.005 R220 A11368-84511 1.KOHM .1W 1% 0.005 R221 A11368-10011 1.KOHM .1W 1% CHIP 0.005 R221 A11368-10011 1.KOHM .1W 1% CHIP 0.005 R222 A11368-10011 1.KOHM .1W 1% CHIP 0.005 R223 A11368-10011 1.KOHM .1W 1% CHIP 0.005 R224 A11368-10011 1.KOHM .1W 1% CHIP 0.005 R225 A11368-10011 1.KOHM .1W 1% CHIP 0.005 R226 A11368-10021 10K 1/10W 1% SMD 0.005 T/R R227 A11368-10021 10K 1/10W 1% SMD 0.005 T/R R228 A11368-10021 10K 1/10W 1% SMD 0.005 T/R R229 A11368-10021 10K 1/10W 1% SMD 0.005 T/R R229 A11368-10021 10K 1/10W 1% SMD 0.005 T/R R229 A11368-10021 10K 1/10W 1% SMD 0.005 T/R R230 A11368-10011 1.KOHM .1W 1% 0.005 R231 A11368-10011 1.RES, 1.1KOHM .1W 1% 0.005 R231 A11368-10011 2.00K, 0.10W 1% MF 0.005 R233 A11368-10011 2.00K, 0.10W 1% MF 0.005 R234 A11368-10011 2.00K, 0.10W 1% MF 0.005 R235 A11368-10011 1.00 OHM 1% 0.005 RES T/R R236 A11368-10001 100 OHM 1% 0.005 RES T/R R237 A11368-10001 100 OHM 1% 0.005 RES T/R R238 A11368-10001 100 OHM 1% 0.005 RES T/R R239 A11368-10001 100 OHM 1% 0.005 RES T/R R230 A11368-10001 100 OHM 1% 0.005 RES T/R R231 A11368-10001 100 OHM 1% 0.005 RES T/R R232 A11368-10001 100 OHM 1% 0.005 RES T/R R234 A11368-10001 100 OHM 1% 0.005 RES T/R R236 A11368-10001 100 OHM 1% 0.005 RES T/R R237 A11368-10001 100 OHM 1% 0.005 RES T/R R238 A11368-10001 100 OHM 1% 0.005 RES T/R R239 A11368-10001 100 OHM 1% 0.005 RES T/R R240 A11371-1105 11 OHM 1W 5% 2512 T/R R241 A11368-10011 RES CONTRACTOR T/R R243 A11368-10013 100 OHM 1% 0.005 RES T/	5
R216 127682-1 4.99K 0.1% 1206 THIN FILM T/R R217 127682-1 4.99K 0.1% 1206 THIN FILM T/R R218 A11368-48711 4.87K OHM .10W 1% 0805 R219 A11368-84511 8.45K 0.1W 1% 0805 T/R R220 A11368-84511 8.45K 0.1W 1% 0805 T/R R221 A11368-10011 1.KDHM .1W 1% CHIP 0805 R222 A11368-10011 1.KDHM .1W 1% CHIP 0805 R223 A11368-10011 1.KDHM .1W 1% CHIP 0805 R224 A11368-10011 1.KDHM .1W 1% CHIP 0805 R225 A11368-10011 1.KDHM .1W 1% CHIP 0805 R226 A11368-10011 1.KDHM .1W 1% CHIP 0805 R227 A11368-10011 1.KDHM .1W 1% CHIP 0805 R226 A11368-10011 1.KDHM .1W 1% SMD 0805 T/R R227 A11368-10011 10K 1/10W 1% SMD 0805 T/R R229 A11368-10011 10K 1/10W 1% SMD 0805 T/R R229 A11368-11011 RES. 1.1KDHM .1W 1% 0805 R230 A11368-11011 RES. 1.1KDHM .1W 1% 0805 R231 A11368-10011 2.0K. 0.10W 1% MF 0805 R232 A11368-11011 RES. 1.1KDHM .1W 1% 0805 CD R233 A11368-110011 RES. 1.1KDHM .1W 1% 0805 CD R234 A11368-10011 2.0K. 0.10W 1% MF 0805 CD R235 A11368-10001 100 OHM 1% 0805 RES T/R CD R237 A11368-10001 100 OHM 1% 0805 RES T/R CD R238 A11368-10001 100 OHM 1% 0805 RES T/R CD R239 A11368-10001 100 OHM 1% 0805 RES T/R CD R230 A11368-10001 100 OHM 1% 0805 RES T/R CD R231 A11368-10001 100 OHM 1% 0805 RES T/R CD R232 A11368-10001 100 OHM 1% 0805 RES T/R CD R233 A11368-10001 100 OHM 1% 0805 RES T/R CD R234 A11368-10001 100 OHM 1% 0805 RES T/R CD R235 A11368-10001 100 OHM 1% 0805 RES T/R CD R240 A11368-18004 1 OHM 0.5W 1% Z010 T/R CD R241 A11368-18004 1 OHM 0.5W 1% Z010 T/R CD R242 126538-1 18 OHM 5W5% VERT THICK FILM PC R243 126538-1 18 OHM 5W5% VERT THICK FILM PC R244 A11371-1105 11 OHM 1W 5% 2512 T/R CD R245 A11371-1105 11 OHM 1W 5% 2512 T/R CD R246 A11371-1105 11 OHM 1W 5% 2512 T/R CD R257 A11368-10013 150 NH 5W5% VERT THICK FILM CD R258 A11368-10013 150 NH 5W5% VERT THICK FILM CD R259 126538-1 18 OHM 5W5% VERT THICK FILM CD R250 126538-1 18 OHM 5W5% VERT THICK FILM CD R250 126538-1 18 OHM 5W5% VERT THICK FILM CD R254 A11368-15031 150K 1/10W 1% 80D 5805 T/R	3*
R217 1276B2-1 4.99K 0.1% 1206 THIN FILM T/R 0.4 R218 A11368-48711 4.87K OHM .10W 1% 0805 0.4 R219 A11368-84511 8.45K 0.1W 1% 0805 T/R 0.3 R220 A11368-84511 8.45K 0.1W 1% 0805 T/R 0.3 R221 A11368-10011 1.KOHM .1W 1% CHIP 0805 R222 A11368-10011 1.KOHM .1W 1% CHIP 0805 P.4 R222 A11368-10011 1.KOHM .1W 1% CHIP 0805 P.4 R223 A11368-10011 1.KOHM .1W 1% CHIP 0805 P.6 R224 A11368-10011 1.KOHM .1W 1% CHIP 0805 P.7 R225 A11368-10021 10K 1/10W 1% SMD 0805 T/R P.7 R226 A11368-10021 10K 1/10W 1% SMD 0805 T/R P.7 R227 A11368-10021 10K 1/10W 1% SMD 0805 T/R P.7 R228 A11368-10021 10K 1/10W 1% SMD 0805 T/R P.7 R229 A11368-110011 RES. 1.1KOHM .1W 1% 0805 R230 A11368-110011 RES. 1.1KOHM .1W 1% 0805 R231 A11368-110011 RES. 1.1KOHM .1W 1% 0805 R232 A11368-110011 RES. 1.1KOHM .1W 1% 0805 R233 A11368-110011 RES. 1.1KOHM .1W 1% 0805 R234 A11368-10001 10 RES. 1.1KOHM .1W 1% 0805 R235 A11368-10001 10 RES. 1.1KOHM .1W 1% 0805 R236 A11368-10001 10 RES. 1.1KOHM .1W 1% 0805 R237 A11368-10001 100 OHM 1% 0805 RES T/R R238 A11368-10001 100 OHM 1% 0805 RES T/R R239 A11368-10001 100 OHM 1% 0805 RES T/R R240 A11368-10001 100 OHM 1% 0805 RES T/R R240 A11368-10001 100 OHM 1% 0805 RES T/R R241 A11368-10001 100 OHM 1% 0805 RES T/R R242 126538-1 18 OHM 5W5% VERT THICK FILM PR243 126538-1 18 OHM 5W5% VERT THICK FILM PR244 A11371-1105 11 OHM 1W 5% 2512 T/R R247 A11371-1105 11 OHM 1W 5% 2512 T/R R248 A11371-1105 11 OHM 1W 5% 2512 T/R R249 126538-1 18 OHM 5W5% VERT THICK FILM PR249 126538-1 18 OHM 5W5% VERT THICK FILM PR250 126538-1 18 OHM 5W5% VERT THICK FILM PR250 126538-1 18 OHM 5W5% VERT THIC	3*
R218	4*
R219	4 *
R220	4 *
R221	3*
R222	4*
R222	4*
R223	
R224	4*
R225 A11368-10021 10K 1/10W 1% SMD 0805 T/R P R226 A11368-10021 10K 1/10W 1% SMD 0805 T/R P R227 A11368-10021 10K 1/10W 1% SMD 0805 T/R P R229 A11368-11011 RES. 1.1KOHM .1W 1% 0805 O R230 A11368-11011 RES. 1.1KOHM .1W 1% 0805 O R231 A11368-11011 RES. 1.1KOHM .1W 1% 0805 O R232 A11368-11011 RES. 1.1KOHM .1W 1% 0805 O R233 A11368-11011 RES. 1.1KOHM .1W 1% 0805 O R234 A11368-20011 2.0K .0.10W 1% MF 0805 O R235 A11368-10011 RES. 1.1KOHM .1W 1% 0805 O R236 A11368-10001 RES. 1.1KOHM .1W 1% 0805 O R237 A11368-10001 100 OHM 1% 0805 RES T/R O R236 A11368-10001 100 OHM 1% 0805 RES T/R O R237 A11368-10001 100 OHM 1% 0805 RES T/R O R238 A11368-10001 100 OHM 1% 0805 RES T/R O R240 A11368-10001 100 OHM 1% 0805 RES T/R	4*
R226	4*
R227 A11368-10021 10K 1/10W 1% SMD 0805 1/R R229 A11368-11011 RES. 1.1KOHM 1W 1% 0805 0 R230 A11368-11011 RES. 1.1KOHM 1W 1% 0805 0 R231 A11368-1011 RES. 1.1KOHM 1W 1% 0805 0 R232 A11368-11011 RES. 1.1KOHM 1W 1% 0805 0 R233 A11368-12011 RES. 1.1KOHM 1W 1% 0805 0 R234 A11368-20011 RES. 1.1KOHM 1W 1% 0805 0 R234 A11368-10001 100 0HM 1% 0805 RES T/R 0 R235 A11368-10001 100 0HM 1% 0805 RES T/R 0 R237 A11368-10001 100 0HM 1% 0805 RES T/R 0 R239 A11368-10001 100 0HM 1% 0805 RES <t< td=""><td>4*</td></t<>	4*
R229 A11368-11011 RES. 1.1KOHM .1W 1% 0805 O R230 A11368-11011 RES. 1.1KOHM .1W 1% 0805 O R231 A11368-20011 2.0K, 0.10W 1% MF 0805 O R232 A11368-11011 RES. 1.1KOHM .1W 1% 0805 O R233 A11368-10011 RES. 1.1KOHM .1W 1% 0805 O R234 A11368-20011 2.0K, 0.10W 1% MF 0805 O R235 A11368-10001 100 OHM 1% 0805 RES T/R O R236 A11368-10001 100 OHM 1% 0805 RES T/R O R237 A11368-10001 100 OHM 1% 0805 RES T/R O R238 A11368-10001 100 OHM 1% 0805 RES T/R O R239 A11368-33R21 33.2 OHM 1% 0805 RES T/R O R240 A11368-18004 1 OHM 0.5W 1% 2010 T/R O R241 A11368-18004 1 OHM 0.5W 1% 2010 T/R O R242 126538-1 18 OHM 5W5% VERT THICK FILM P R243 126538-1 18 OHM 5W5% VERT THICK FILM P R244 A11371-1105 11 OHM 1W 5% 2512 T/R P R245 A11371-1105 11	4*
R231	4*
R232	4*
R233	4*
R234	3*
R235 A11368-10001 100 OHM 1% 0805 RES T/R O R236 A11368-10001 100 OHM 1% 0805 RES T/R O R237 A11368-10001 100 OHM 1% 0805 RES T/R O R238 A11368-10001 100 OHM 1% 0805 RES T/R O R239 A11368-33R21 33.2 OHM 1% 0805 RES T/R O R240 A11368-18004 1 OHM 0.5W 1% 2010 T/R O R241 A11368-18711 1.07KOHM .1W 1% 0805 T/R O R242 126538-1 18 OHM 5W5% VERT THICK FILM P R243 126538-1 18 OHM 5W5% VERT THICK FILM P R244 A11371-1105 11 OHM 1W 5% 2512 T/R O R245 A11371-1105 11 OHM 1W 5% 2512 T/R O R246 A11371-1105 11 OHM 1W 5% 2512 T/R P R247 A11371-1105 11 OHM 1W 5% 2512 T/R O R248 A11368-10013 1K 0.25W 1% 1210 T/R O R249 126538-1 18 OHM 5W5% VERT THICK FILM O R250 126538-1 18 OHM 5W5% VERT THICK FILM O R253 OPEN O	3*
R236 A11368-10001 100 OHM 1% 0805 RES T/R O R237 A11368-10001 100 OHM 1% 0805 RES T/R O R238 A11368-10001 100 OHM 1% 0805 RES T/R O R239 A11368-33R21 33.2 OHM 1% 0805 RES T/R O R240 A11368-18004 1 OHM 0.5W 1% 2010 T/R O R241 A11368-18004 1 OHM 0.5W 1% 2010 T/R O R241 A11368-18004 1 OHM 0.5W 1% 2010 T/R O R241 A11368-10011 1 0HM 5W5% VERT THICK FILM P R242 126538-1 18 0HM 1W 5% 2512 T/R O R245 A11371-1105 11 0HM 1W 5% 2512 T/R P R246 A11371-1105 11 0HM	4
R237 A11368-10001 100 OHM 1% 0805 RES T/R O R238 A11368-10001 100 OHM 1% 0805 RES T/R O R239 A11368-33R21 33.2 OHM 1% 0805 RES T/R O R240 A11368-18004 1 OHM 0.5W 1% 2010 T/R O R241 A11368-10711 1.07KOHM .1W 1% 0805 T/R O R242 126538-1 18 OHM 5W5% VERT THICK FILM P R243 126538-1 18 OHM 5W5% VERT THICK FILM P R244 A11371-1105 11 OHM 1W 5% 2512 T/R O R245 A11371-1105 11 OHM 1W 5% 2512 T/R P R246 A11371-1105 11 OHM 1W 5% 2512 T/R P R247 A11371-1105 11 OHM 1W 5% 2512 T/R P R248 A11368-10013 1K 0.25W 1% 1210 T/R O R249 126538-1 18 OHM 5W5% VERT THICK FILM O R250 126538-1 18 OHM 5W5% VERT THICK FILM O R252 OPEN O R253 OPEN O R254 A11368-15031 150K 1/10W 1% SMD 0805 T/R O	4
R238 A1136B-10001 100 OHM 1% 0805 RES T/R O R239 A1136B-33R21 33.2 OHM 1% 0805 RES T/R O R240 A1136B-1R004 1 OHM 0.5W 1% 2010 T/R O R241 A1136B-10711 1.07KOHM .1W 1% 0805 T/R O R242 12653B-1 18 OHM 5W5% VERT THICK FILM P R243 12653B-1 18 OHM 5W5% VERT THICK FILM P R244 A11371-1105 11 OHM 1W 5% 2512 T/R O R245 A11371-1105 11 OHM 1W 5% 2512 T/R P R246 A11371-1105 11 OHM 1W 5% 2512 T/R P R247 A11371-1105 11 OHM 1W 5% 2512 T/R P R248 A1136B-10013 1K 0.25W 1% 1210 T/R O R249 12653B-1 18 OHM 5W5% VERT THICK FILM O R250 12653B-1 18 OHM 5W5% VERT THICK FILM O R252 OPEN O R253 OPEN O R254 A1136B-15031 150K 1/10W 1% SMD 0805 T/R O	3
R239 A11368-33R21 33.2 OHM 1% 0805 RES T/R O R240 A11368-1R004 1 OHM 0.5W 1% 2010 T/R O R241 A11368-10711 1.07KOHM .1W 1% 0805 T/R O R242 126538-1 18 OHM 5W5% VERT THICK FILM P R243 126538-1 18 OHM 5W5% VERT THICK FILM P R244 A11371-1105 11 OHM 1W 5% 2512 T/R O R245 A11371-1105 11 OHM 1W 5% 2512 T/R P R246 A11371-1105 11 OHM 1W 5% 2512 T/R P R247 A11371-1105 11 OHM 1W 5% 2512 T/R P R248 A11368-10013 1K 0.25W 1% 1210 T/R O R249 126538-1 18 OHM 5W5% VERT THICK FILM O R250 126538-1 18 OHM 5W5% VERT THICK FILM O R252 OPEN O R253 OPEN O R254 A11368-15031 150K 1/10W 1% SMD 0805 T/R O	3
R240 A11368-1R004 1 OHM 0.5W 1% 2010 T/R O R241 A11368-10711 1.07KOHM .1W 1% 0805 T/R O R242 126538-1 18 OHM 5W5% VERT THICK FILM P R243 126538-1 18 OHM 5W5% VERT THICK FILM P R244 A11371-1105 11 OHM 1W 5% 2512 T/R O R245 A11371-1105 11 OHM 1W 5% 2512 T/R P R246 A11371-1105 11 OHM 1W 5% 2512 T/R P R247 A11371-1105 11 OHM 1W 5% 2512 T/R P R248 A11368-10013 1K 0.25W 1% 1210 T/R O R249 126538-1 18 OHM 5W5% VERT THICK FILM O R250 126538-1 18 OHM 5W5% VERT THICK FILM O R252 OPEN O R253 OPEN O R254 A11368-15031 150K 1/10W 1% SMD 0805 T/R O R254 A11368-15031 150K 1/10W 1% SMD 0805 T/R O	7
R241 A1136B-10711 1.07KOHM .1W 1% 0805 T/R 0 R242 12653B-1 18 OHM 5W5% VERT THICK FILM P R243 12653B-1 18 OHM 5W5% VERT THICK FILM P R244 A11371-1105 11 OHM 1W 5% 2512 T/R O R245 A11371-1105 11 OHM 1W 5% 2512 T/R P R246 A11371-1105 11 OHM 1W 5% 2512 T/R P R247 A11371-1105 11 OHM 1W 5% 2512 T/R P R248 A1136B-10013 1K 0.25W 1% 1210 T/R O R249 12653B-1 18 OHM 5W5% VERT THICK FILM O R250 12653B-1 18 OHM 5W5% VERT THICK FILM O R252 OPEN O R253 OPEN O R254 A1136B-15031 150K 1/10W 1% SMD 0805 T/R O R254 A1136B-15031 150K 1/10W 1% SMD 0805 T/R O	7
R242 12653B-1 18 OHM 5W5% VERT THICK FILM F R243 12653B-1 18 OHM 5W5% VERT THICK FILM P R244 A11371-1105 11 OHM 1W 5% 2512 T/R O R245 A11371-1105 11 OHM 1W 5% 2512 T/R P R246 A11371-1105 11 OHM 1W 5% 2512 T/R P R247 A11371-1105 11 OHM 1W 5% 2512 T/R P R248 A11368-10013 1K 0.25W 1% 1210 T/R O R249 12653B-1 18 OHM 5W5% VERT THICK FILM O R250 12653B-1 18 OHM 5W5% VERT THICK FILM O R252 OPEN O R253 OPEN O R254 A1136B-15031 150K 1/10W 1% SMD 0805 T/R O	6
R243 12653B-1 18 OHM 5W5% VERT THICK FILM P R244 A11371-1105 11 OHM 1W 5% 2512 T/R O R245 A11371-1105 11 OHM 1W 5% 2512 T/R O R246 A11371-1105 11 OHM 1W 5% 2512 T/R P R247 A11371-1105 11 OHM 1W 5% 2512 T/R P R248 A1136B-10013 1K 0.25W 1% 1210 T/R O R249 12653B-1 18 OHM 5W5% VERT THICK FILM O R250 12653B-1 18 OHM 5W5% VERT THICK FILM O R252 OPEN OPEN O R253 OPEN OPEN O R254 A1136B-15031 150K 1/10W 1% SMD 0805 T/R O	11
R244 A11371-1105 11 OHM 1W 5% 2512 T/R R245 A11371-1105 11 OHM 1W 5% 2512 T/R R246 A11371-1105 11 OHM 1W 5% 2512 T/R R247 A11371-1105 11 OHM 1W 5% 2512 T/R R248 A11368-10013 1K 0.25W 1% 1210 T/R R249 126538-1 18 OHM 5W5% VERT THICK FILM CR250 126538-1 18 OHM 5W5% VERT THICK FILM CR252 OPEN CR253 OPEN CR254 A11368-15031 150K 1/10W 1% SMD 0805 T/R CR255 OPEN CR256 OPEN CR257 OPEN CR257 OPEN CR258 OPEN CR258 OPEN CR259 OP	11
R245 A11371-1105 11 OHM 1W 5% 2512 T/R P R246 A11371-1105 11 OHM 1W 5% 2512 T/R P R247 A11371-1105 11 OHM 1W 5% 2512 T/R P R248 A11368-10013 1K 0.25W 1% 1210 T/R O R249 126538-1 18 OHM 5W5% VERT THICK FILM O R250 126538-1 18 OHM 5W5% VERT THICK FILM O R252 OPEN OPEN OPEN OPEN OPEN OPEN OPEN OPEN	12*
R246 A11371-1105 11 OHM 1W 5% 2512 T/R R247 A11371-1105 11 OHM 1W 5% 2512 T/R R248 A11368-10013 1K 0.25W 1% 1210 T/R R249 126538-1 18 OHM 5W5% VERT THICK FILM OR250 126538-1 18 OHM 5W5% VERT THICK FILM OR252 OPEN R253 OPEN R254 A11368-15031 150K 1/10W 1% SMD 0805 T/R OR254 OPEN	13*
R247 A11371-1105 11 DHM 1W 5% 2512 T/R R248 A11368-10013 1K 0.25W 1% 1210 T/R R249 126538-1 18 DHM 5W5% VERT THICK FILM CR250 126538-1 18 DHM 5W5% VERT THICK FILM CR252 OPEN CR253 OPEN CR254 A11368-15031 150K 1/10W 1% SMD 0805 T/R CR254 CR255 OPEN CR255 OPEN CR255 OPEN CR256 OPEN CR257 OPEN CR257 OPEN CR258 OPEN CR258 OPEN CR259 OPEN CR	13*
R24B A1136B-10013 1K 0.25W 1% 1210 T/R 0 R249 12653B-1 18 0HM 5W5% VERT THICK FILM 0 R250 12653B-1 18 0HM 5W5% VERT THICK FILM 0 R252 OPEN 0 R253 OPEN 0 R254 A1136B-15031 150K 1/10W 1% SMD 0805 T/R 0 R254 A1136B-15031 150K 1/10W 1% SMD 0805 T/R 0	12*
R249 126538-1 18 OHM 5W5% VERT THICK FILM 0 R250 126538-1 18 OHM 5W5% VERT THICK FILM 0 R252 OPEN 0 R253 OPEN 0 R254 A11368-15031 150K 1/10W 1% SMD 0805 T/R 0 R254 A11368-15031 150K 1/10W 1% SMD 0805 T/R 0	12
R250 126538-1 18 OHM 5W5% VERT THICK FILM 0 R252 OPEN 0 R253 OPEN 0 R254 A11368-15031 150K 1/10W 1% SMD 0805 T/R 0 R254 A11368-15031 150K 1/10W 1% SMD 0805 T/R 0	13
R252 OPEN O R253 OPEN O R254 A11368-15031 150K 1/10W 1% SMD 0805 T/R O R254 OPEN OPEN OPEN OPEN OPEN OPEN OPEN OPEN	13
R253 OPEN D R254 A11368-15031 150K 1/10W 1% SMD 0805 T/R O R254 A11368-15031 150K 1/10W 1% SMD 0805 T/R O	12
R254 A11368-15031 150K 1/10W 1% SMD 0805 T/R D	12
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R255 A1136B-10001 100 UHM 12 0005 RES 1211	D 6
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		PARTS LIST	1
REF DES	C. P. N.	DESCRIPTION	MAP LOC.
R256		200K 0.1W 1% SMD CHIP 0805	0.6
R257		20.KOHM .1W 1% CHIP 0805	0.6
R258		1.27MOHM .1W 1% 0805 T/R	0.6
R259	A11368-51111	5.11K 1/10W 1% SMD 0805 T/R 10.KOHM TOP ADJUST TRIMMER T/R	0 7
R260	C10540-0	P 6	
R261		2.0K, 0.10W 1% MF 0805	P 7*
R262		3.01K 1/10W 1% SMD 0805 T/R	0.7*
R263	A11368-47511	4.75KOHM 0.10W 1% CHIP 0805	0 7*
R264		5.62KOHM .1W 1% 0805 T/R	P 7*
R265	A11368-10011	1.KOHM .1W 1% CHIP 0805	P 7*
R266	A11368-10011	1.KOHM .1W 1% CHIP 0805	0.7*
R267	A1136B-10011	1.KOHM .1W 1% CHIP 0805	P 7*
R26B		44.2K 0.1W 1% 0805 T/R	N 4*
R269	A11368-26111	2.61K 0.1W 1% 0805 T/R	N 4*
R270	C 9779-7	100KOHM 4MM CERMET TRIM SMT TR	N 3
R271	A11368-10031	100.KOHM .1W 1% CHIP 0805	N 4*
R272	A11368-10001	100 OHM 1% 0805 RES T/R	N 4*
R273	A11368-10001	100 DHM 1% 0805 RES T/R	N 4*
R274	A1136B-10531	105KOHM .1W 1% 0805 T/R	0 3*
R275	A11368-19111	1.91KOHM .1W 1% 0805 T/R	D 3*
R276	A11368-19111	1.91KOHM .1W 1% 0805 T/R	D 3*
R277	A11368-10031	100.KOHM .1W 1% CHIP 0805	0.3*
R27B	C 9777-1	1 KOHM 4MM CERMET TRIM SMT T/R	0.3
R279	A11368-13011	1.3KOHM .1W 1% 0805 T/R	0.3
R280	A11368-25511	2.55KOHM .1W 1% 0805 T/R	0.3*
R281	A11368-15011	1.5K 1/10W 1% SMD 0805 T/R	0.3*
R282		16.2KOHM .1W 1% 0B05 T/R	0 3*
R283	A1136B-22111	2.21KOHM .1W 1% CHIP 0805	0.3*
R284	A11368-82511	8.25KOHM .1W 1% CHIP 0805	0 3*
R285	A11368-42211	4.22KOHM .1W 1% 0805 T/R	0 3*
R2B6	A11368-25511	2.55KOHM .1W 1% 0805 T/R	0.3*
R2B7	A1136B-60411	6.04KDHM .1W 1% 0805 T/R	0.3*
R288	A1136B-10021	10K 1/10W 1% SMD 0805 T/R	P 4*
R289		10K 1/10W 1% SMD 0805 T/R	P 4*
R290	A11368-49921	49.9KOHM .1W 1% CHIP 0805	0 1
R291	A11368-10021	10K 1/10W 1% SMD 0805 T/R	D 1*
R292	A11371-6814	680 OHM .5W 5% 2010 T/R	M 1
R293		10K 1/10W 1% 5MD 0805 T/R	0 1*
R294	A11368-20021	20.KOHM .1W 1% CHIP 0805	P 3*
R295	127681-1	24.9K 0.5% 1206 THIN FILM T/R	D 4*
R296	1276B1-1	24.9K 0.5% 1206 THIN FILM T/R	0 4*
R297	127681-1	24.9K 0.5% 1206 THIN FILM T/R	0 4*
R29B		715K 0.1W 1% 0805 T/R	D 12
R299	A11368-10031	100.KOHM .1W 1% CHIP 0805	N 3*
R300	A11368-49911	4.99K 1/10W 1% SMD 0805 T/R	∟ 3*
R301		OPEN	P 5*
R302	A11368-49911	4.99K 1/10W 1% SMD 0805 T/R	L 3*

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INACTIVE

SIZE DV	VG NO.		12621	8-13	REV A
SCALE	NONE	PROJ NO.	MD425D0	SHEET 30 OF 48	



		Р	ARTS LIST					
REF DES	ГРИ	DESCRIPTION					MAP LOC.	
R303		619 OHM .125W	1% CHIP RES	5 T/R			м 5*	
R304	A11368-49911	4.99K 1/10W 12	SMD 0805	T/R			м 5*	
R305		4.99K 1/10W 1%			·		м 5*	
	A11368-49921	49.9KOHM .1W 1	% CHIP 080	5			0 1	
R307	A11360-13021	10K 1/10W 1% S	MD 0805 T/I	3			0 1*	
R308	A11368-10021	75K OHM . 25W 1	7 1210	·			M 4*	
R309	A11368-75023	1.3KOHM .1W 12	ABAS T/R				M 4*	
R310	A11368-13011	33.2KDHM Ø.25V	/ 12 1210 T	/R			M 4*	
R311	A11368-33223	B2.5K Ø.1@W 1%	CUID BOOK				M 4*	
R312							0 1*	
R313	A11368-39231	392 KOHM .1W 1	7. 0003 T/T	T /B			M 4	_
R314		4.99K 1/10W 17		1711			м э*	
R315		75K DHM . 25W 1				-	м э*	_
R316		1.3KOHM .1W 12	MBM2 17H				L B	—
R317		300.KOHM .1W 5					L 8	
R31B	A11368-30121	30.1K, 0.10W 1	% MF 0805	····			M 3*	
R319		6.34K 0.10W 17					M 4*	
R320	A11368-75023	75K OHM . 25W 1	% 1210					
R321		10K 1/10W 1% 9					<u>L B</u>	
R322	A11368-11021	11K Ø.1W 1% Ø8	805 T/R				LB	
R323	A1136B-20031	200K 0.1W 1% 9	SMD CHIP 08	2 5		+	L_8	_
R324	A1136B-56211	5.62KOHM .1W 1	% 0805 T/R				I 13	
R325	126564-1	300HM 10W 5% \					I 14	
R326		10K 1/10W 1% 9					A 4	_
R327	A11368-10021	10K 1/10W 1% 9	MD 0805 T/	R			A 3	
R328		OPEN					м в	_
R329		10K 1/10W 1% 5					<u> </u>	
R330		200K 0.1W 1% 5		<u> </u>			_ L 8	
R331		B.45K Ø.1W 1%					L B	
R332	A11368-56211	5.62KOHM .1W	1% 0805 T/R				I 13	
R333	A11371-3905	39 OHM 1W 5% 2	2512 T/R				I 14*	
R334	A11371-3905	39 DHM 1W 5% 2	2512 T/R				I 14*	
R335	A11368-20031	200K 0.1W 1% 9	SMD CHIP 08	Ø5			L 8	
R336	A11368-19621	19.6K DHM .1W	1% 0805 T/	R			L B	
R337	A11368-10021	10K 1/10W 1%	SMD Ø8Ø5 T/	R			LB	
R338		7.50K .10W 1%					B 8	
R339		6.04KDHM .1W					L 11*	
R340		100.KOHM .1W					M 4*	
R341		1.KOHM .1W 1%					N 4*	
R342		20.KOHM .1W 1					N 4*	
R343		619.0HM 1/10W					N 2*	
		1M DHM . 1W 1%					N 2*	
R344	A11368-10041						N 2*	
R345		510.KOHM .1W		5			N 2*	
R346	A11371-5141						D 2*	_
R347	A11368-33231			5			P 2	
R34B	A1136B-22111						P 2	
R349	A11368-14031	140KOHM . 1W 1		E			P 2	
R350	A1136B-22111	2.21KDHM .1W	IV FUTE ARE				· -	_
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		PARTS LIST	
REF DES	C.P.N.	DESCRIPTION	MAP LOC.
R351	A11368-14031	140KOHM .1W 1% 0805 T/R	P 2
R352	A11368-75RØ1	75.0HM 1/10W 1% SMD 0805 T/R	K 9
R353	A11368-75R01	75. OHM 1/10W 1% SMD 0805 T/R	K 9
R354		1.KOHM .1W 1% CHIP 0805	K 9
R355	A11371-3005	30 OHM 1W 5% 2512 T/R	K B*
R356	A11371-3005	30 OHM 1W 5% 2512 T/R	К В*
R357	A11371-1104	RES 11.0 OHM .5W SMT	J 9
R358	A11371-3005	30 OHM 1W 5% 2512 T/R	K 9*
R359	A11371-3005	30 OHM 1W 5% 2512 T/R	K 9*
	A11371-1104	RES 11.0 OHM .5W SMT	J 8
R360	126901-1	RES, .02 DHM 5W 3% VERTICAL	мв
R361		RES, .02 DHM 5W 3% VERTICAL	N B
R362	126901-1	300HM 10W 5% VERT THICK FILM	N 10
R363	126564-1	· · · · · · · · · · · · · · · · · · ·	И 9
R364	126564-1	300HM 10W 5% VERT THICK FILM	J 12
R365	A11371-1104	RES 11.0 OHM .5W SMT	
R366	A11371-3005	30 OHM 1W 5% 2512 T/R	K 12*
R367	A11371-3005	30 OHM 1W 5% 2512 T/R	K 12*
R368	A11371-1104	RES 11.0 OHM .5W SMT	J 10
R369	A11371-3005	30 OHM 1W 5% 2512 T/R	K 11*
R370	A11371-3005	30 OHM 1W 5% 2512 T/R	K 11*
R371		1.KOHM .1W 1% CHIP 0805	K 11
R372	A11371-1104	RES 11.0 OHM .5W SMT	K 12
R373	A1136B-75R01	75.OHM 1/10W 1% SMD 0805 T/R	K 11
R374	A11368-75R01	75.OHM 1/10W 1% SMD 0805 T/R	K 11
R375	125539-1	1 OHM 0.25W 5% 1206	H 9*
R376	125539-1	1 OHM 0.25W 5% 1206	H 7*
R377	125539-1	1 OHM Ø.25W 5% 12Ø6	H 12*
R378	125539-1	1 OHM Ø.25W 5% 12Ø6	H 10*
R379	125539-1	1 OHM 0.25W 5% 1206	H 9*
R38Ø	125539-1	1 OHM 0.25W 5% 1206	H 12*
R381	125539-1	1 OHM 0.25W 5% 1206	н в*
R382	125539-1	1 OHM 0.25W 5% 1206	H 11*
R383	126901-1	RES02 OHM 5W 3% VERTICAL	мв
R384	126901-1	RES, .02 OHM 5W 3% VERTICAL	N B
R385		1M OHM .1W 1% CHIP 0805	N 6*
R386	A11368-10031	100.KOHM .1W 1% CHIP 0805	N 6*
R387	A11371-1104	RES 11.0 OHM .5W SMT	J 7
R388	ATTOT TOO	OPEN	P 5*
	A11350-75001	75.0HM 1/10W 1% SMD 0805 T/R	N 6*
R389		75.0HM 1/10W 1% SMD 0805 T/R	N 6*
R390		75.0HM 1/10W 1% SMD 0805 1/R	N 5*
R391		1	N 5*
R392		75. OHM 1/10W 1% SMD 0805 T/R	M 7
R393	A11371-1104	RES 11.0 DHM .5W SMT	
R394	A11371-1104	RES 11.0 DHM .5W SMT	M 7
R395	A11368-10021	10K 1/10W 1% SMD 0805 T/R	N B*
R396	A1136B-44221	44.2K 0.1W 1% 0805 T/R	P 5*
R397	A11368-10021	10K 1/10W 1% SMD 0805 T/R	P 6*
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CC DEC	CBN	DESCRIPTION	MAP LOC.
	C.P.N.	2.80KOHM .10W 1% MF 0805	P 5*
R398		23.2KOHM .1W 1% 0805 T/R	0.5*
R400		100.KOHM .1W 1% CHIP 0805	0 1*
R401	A11371-6814	680 OHM .5W 5% 2010 T/R	0 1
R403		10K 1/10W 1% SMD 0805 T/R	СВ
R404		20.KOHM .1W 1% CHIP 0805	A 7
R4 Ø 5		100.KOHM .1W 1% CHIP 0805	A B
R407		1.5KOHM .25W 1% 1210 T/R	K 1
1408		10K 1/10W 1% SMD 0805 T/R	A 4*
R409	A11300 18021	OPEN	В 9
R410	A11358-49901	499 OHM .1W 1% 0805 T/R	N 2
R411		33.2KDHM 0.25W 1% 1210 T/R	M 2*
R412		82.5K 0.10W 1%CHIP 0805	M 2*
R414		4.99K 1/10W 1% SMD 0805 T/R	M 2
R415	A11300 +3311	OPEN	P 4*
R417	A11371-3041	300.KOHM .1W 5% CHIP 0805	м з*
R41B		30.1K, 0.10W 1% MF 0805	N 3*
		10K 1/10W 1% SMD 0805 T/R	A 8
3419		2.0K, 0.10W 1% MF 0805	B 8
7420	A11366-20011	OPEN	P 4*
3422	A11260-22621	22.6K OHM .1W 1% 0805 T/R	D 4
7424		49.9KOHM .1W 1% CHIP 0805	A 4
3425	A11308-49921	OPEN	A 10
7426			B 10
3427	<u> </u>	DPEN	B 10
3428		OPEN	B 10
7429		OPEN	B 11
7430		OPEN	B 11
7431		OPEN OPEN	B 11
3432		OPEN	B 11
7433	A44360-10031	10K 1/10W 1% SMD 0805 T/R	A 7
7434		2.0K, 0.10W 1% MF 0805	A 7
7435		499 DHM .1W 1% 0805 T/R	0 2
7436		100 OHM 1% 0805 RES T/R	C 3*
7437		100 OHM 1% 0805 RES T/R	D 3*
7438		100 OHM 1% 0805 RES T/R	C 7*
7439		100.KOHM .1W 1% CHIP 0805	м з*
7440		1.KOHM .1W 1% CHIP 0805	N 3*
7441		20.KOHM .1W 1% CHIP 0805	N 3*
7442		1M OHM .1W 1% CHIP 0805	N 2*
3443			N 2*
7444		619.0HM 1/10W 1% SMD 0805 T/R	N 2*
R445		90.9K, 0.10W 1% MF 0805 510.KOHM .1W 5% CHIP 0805	N 2*
R446	A11371-5141		0 2*
R447	A11368-33231	332K 0.1W 1% 0805 T/R	C 7
R448	A1136B-10021		СВ
R449	A11368-42211	4.22KOHM .1W 1% Ø8Ø5 T/R	СВ
R450	A11368-10011	1.KOHM .1W 1% CHIP 0805	<u> </u>

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SIZE DWG NO. REV 126218-13 Α SHEET 33 OF 48 SCALE NONE PROJ NO. MD425DØ



		PARTS LIST	
REF DES	C. P. N.	DESCRIPTION	MAP LOC.
R451	A10266-3041	300.KOHM .25W 5% CF T/R	A 2
R452	A11368-75RØ1	75.OHM 1/10W 1% SMD 0805 T/R	K 5
R453		75.0HM 1/10W 1% SMD 0805 T/R	K 5
R454		1.KOHM .1W 1% CHIP 0805	K 5
R455	A11371-3005	30 OHM 1W 5% 2512 T/R	K 6*
	A11371-3005	30 OHM 1W 5% 2512 T/R	K 6*
R456	A11371-1104	RES 11.0 OHM .5W SMT	J 4
R457	A11371-1104 A11371-3005	30 OHM 1W 5% 2512 T/R	K 5*
R458		30 OHM 1W 5% 2512 T/R	K 5*
R459	A11371-3005	RES 11.0 DHM .5W SMT	J 6
R460	A11371-1104	RES, .02 OHM 5W 3% VERTICAL	ОВ
R461	126901-1	RES, .02 OHM 5W 3% VERTICAL	P 8
R462	126901-1	300HM 10W 5% VERT THICK FILM	0 10
R463	126564-1		0 9
R464	126564-1	300HM 10W 5% VERT THICK FILM	J 2
R465	A11371-1104	RES 11.0 OHM .5W 5MT	K 2*
R466	A11371-3005	30 OHM 1W 5% 2512 T/R	K 2*
R467	A11371-3005	30 OHM 1W 5% 2512 T/R	J 3
R468	A11371-1104	RES 11.0 DHM .5W SMT	K 3*
R469	A11371-3005	30 OHM 1W 5% 2512 T/R	K 3*
R470	A11371-3005	30 OHM 1W 5% 2512 T/R	K 2
R471		1.KOHM .1W 1% CHIP 0805	
R472	A11371-1104	RES 11.0 OHM .5W SMT	K 1
R473		75. OHM 1/10W 1% SMD 0805 T/R	
R474	A11368-75R01	75.0HM 1/10W 1% SMD 0805 T/R	K 3
R475	125539-1	1 OHM 0.25W 5% 1206	H 5*
R476	125539-1	1 OHM 0.25W 5% 1206	H 6*
R477	125539-1	1 DHM 0.25W 5% 1206	H 2*
R47B	125539-1	1 OHM 0.25W 5% 1206	H 3*
R479	125539-1	1 OHM 0.25W 5% 1206	H 4*
R4B0	125539-1	1 OHM 0.25W 5% 1206	H 2*
R4B1	125539-1	1 OHM 0.25W 5% 1206	H 5*
R4B2	125539-1	1 OHM 0.25W 5% 1206	H 3*
R483	126901-1	RES, .02 DHM 5W 3% VERTICAL	0 B
R484	126901-1	RES, .02 OHM 5W 3% VERTICAL	P B
R4B5		1M OHM .1W 1% CHIP 0805	N 4*
R486	A1136B-10031	100.KOHM .1W 1% CHIP 0805	N 4*
R4B7	A10256-3041	300.KOHM .25W 5% CF T/R	B 6
R488		1.78K 0.1W 1% 0805 SMD T/R	B 9
R489		75.0HM 1/10W 1% SMD 0805 T/R	N 4*
R490	A11368-75RØ1	75.0HM 1/10W 1% SMD 0805 T/R	N 3*
R491	A11368-75RØ1	75.0HM 1/10W 1% SMD 0805 T/R	N 4*
R492	A1136B-75RØ1	75.0HM 1/10W 1% SMD 0805 T/R	N 4*
R493	A11371-1104	RES 11.0 OHM .5W SMT	M 7
R494	A11371-1104	RES 11.0 OHM .5W SMT	M 7
R495		10K 1/10W 1% SMD 0B05 T/R	N 4*
R496	A11368-44221	44.2K Ø.1W 1% Ø8Ø5 T/R	P 3*
R497	A11368-10021		P 4*

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SIZE DWG NO.	126218-13	REV A
SCALE NONE	PROJ NO. MD425DØ SHEET 34 OF 48	



		PARTS LIST	MAR LOC
REF DES		DESCRIPTION	MAP LOC.
R498		2.80KOHM .10W 1% MF 0805	0 4*
R499		23.2KOHM .1W 1% 0805 T/R	C 8*
R500		499KOHM .1W 1% 0805 T/R	E 7
R501	A11371-0R02	0. OHM .125W 5% CHIP RES T/R	D 2
R502	A10266-5141	510. KOHM .25W 5% CF T/R	D 2
R503	A10266-5141	510. KOHM .25W 5% CF T/R	D 3
R504		OPEN	
R505	A10266-2751	2.7 MOHM .25W 5% CF T/R	B 5
R5Ø6	A10266-2441	240. KOHM . 25W 5% CF T/R	D 14
R507	A10266-2441	240. KOHM . 25W 5% CF T/R	C 14
R508	A11371-3905	39 DHM 1W 5% 2512 T/R	J 14*
R509	A11371-3905	39 OHM 1W 5% 2512 T/R	J 14*
R510	A11368-20011	2.0K, 0.10W 1% MF 0805	D 4
R511	A11368-78711	7.87K OHM 0.10W 1% 0805 T/R	D 4
R512		1.2KOHM 1/8W 5% SMD 1206 T/R	D 4
R513		20.KOHM .1W 1% CHIP 0805	D 4
R514		13KOHM .1W 5% 0805 T/R	D 4
R515		3.01K 1/10W 1% SMD 0805 T/R	D 4
R516		OPEN	D 4*
R517	A11368-20021	20.KOHM .1W 1% CHIP 0805	M 4
R517	A11368-30111	3.01K 1/10W 1% SMD 0805 T/R	M 4
		20.KOHM .1W 1% CHIP 0805	М б
R519		20.KOHM .1W 1% CHIP 0805	N 5
R522		20.KOHM .1W 1% CHIP 0805	A 9*
R523		20.KOHM .1W 1% CHIP 0805	A 9*
R524	A11368-20021	274K .125W 1% CHIP RES T/R	A 9*
R525			A 9
R526	A1136B-39212		B 9*
R527		1.78K 0.1W 1% 0805 SMD T/R	B 9
R528		1.KOHM .1W 1% CHIP 0805	B 9*
R529		1.KOHM .1W 1% CHIP 0805	B 9*
R530		3.01K 1/10W 1% SMD 0805 T/R	C 8*
R531		30.1K, 0.10W 1% MF 0805	
R532	A1136B-10001	100 OHM 1% 0805 RES T/R	A 3
R533		OPEN	
R534		49.9KOHM .1W 1% CHIP 0805	A 3
R535		20.KOHM .1W 1% CHIP 0805	M 5
R536		5.62KOHM .1W 1% 0805 T/R	M 5*
R537		5.62KOHM .1W 1% 0B05 T/R	M 5*
R538		20.KOHM .1W 1% CHIP 0805	M 5
R539	A11368-49911	4.99K 1/10W 1% SMD 0805 T/R	D B
R540	A1136B-15021	15.0K, 0.10W 1% MF 0805	D B*
R541	A11368-10021	10K 1/10W 1% SMD 0805 T/R	D B
R542	1	DPEN	D 8*
R543	A11368-20031	200K 0.1W 1% SMD CHIP 0805	D 8*
R544	A11368-56211	5.62KOHM .1W 1% 0805 T/R	СВ
R545	A11368-12121		C B
	A11368-49911		DВ
R546	1011300 43311		
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		PARTS LIST	
REF DES	C.P.N.	DESCRIPTION	MAP LOC.
R547	A11371-0R02	0. OHM .125W 5% CHIP RES T/R	E 7
R548	A11371-0R02	0. OHM .125W 5% CHIP RES T/R	E 9
R549	A11371-0R02	0. OHM .125W 5% CHIP RES T/R	E B
R550	A11368-10021	10K 1/10W 1% SMD 0805 T/R	M 2*
R557	A11368-20021	20.KOHM .1W 1% CHIP 0805	N 1
R558	A1136B-39231	392 KOHM .1W 1% Ø8Ø5 T/R	N 1 *
R559	A11368-49902	499 OHM .125W 1% 1206 T/R	N 1*
R560		OPEN	N 1*
R561	A11368-20021	20.KOHM .1W 1% CHIP 0805	L 1*
R562		2.7 KOHM .5W 5% 2010 T/R	L 1
R563		10K 1/10W 1% SMD 0805 T/R	0 1*
R564		OPEN	N 1*
R565	A11368-20021	20.KOHM .1W 1% CHIP 0805	N 2*
R566		20.KOHM .1W 1% CHIP 0805	L 1*
R567	A11371-2724	2.7 KDHM .5W 5% 2010 T/R	L 1
R657		20.KOHM .1W 1% CHIP 0805	N 1
R658		392 KOHM .1W 1% Ø8Ø5 T/R	N 1*
R659		499 OHM .125W 1% 1206 T/R	N 1*
R660	7111300 10002	OPEN	N 1*
R661	A11368-20021	20.KOHM .1W 1% CHIP 0805	N 1*
R662	A11371-2724	2.7 KOHM .5W 5% 2010 T/R	N 1
R663		10K 1/10W 1% SMD 0805 T/R	N 1*
R664	X11300 10021	OPEN	D 1*
R665	A11358-20021	20.KDHM .1W 1% CHIP 0805	0.2*
R666		20.KOHM .1W 1% CHIP 0805	0 1*
R667	A11371-2724	2.7 KOHM .5W 5% 2010 T/R	0 1
R700		1.5KOHM .25W 1% 1210 T/R	B 9
R7Ø1		100 OHM 1% 0805 RES T/R	B 8*
R702	A11371-4741	470KOHM .1W 5% CHIP 0805	B 8*
R703		12.1KOHM .1W 1% Ø8Ø5 T/R	B 8
R704		200K 0.1W 1% SMD CHIP 0805	B B*
R705	A11371-2023	2K DHM .25W 5% 1210 T/R	B 9
R706	A11371-2023	2K OHM .25W 5% 1210 T/R	B 9
R707	A11371-0R04	0 DHM 1/2W 5% 2010 T/R	J B
R708	A11371-0R04	0 DHM 1/2W 5% 2010 T/R	J 9
R709		10 DHM 0.25W 1% 1210 T/R	L 6
R710		10 OHM 0.25W 1% 1210 T/R	L B
R711	128184-1	NTC. 20K #8 PRI SEC ISO	E 13
R712		10K 1/10W 1% SMD 0805 T/R	E 12
R713	127517-1	PTC, 20K J 10%	C 13
R714		4.87K OHM .10W 1% 0805	C 12
		221 KOHM .1W 1% ØBØ5 T/R	D 3*
R715 R716		36.5K OHM 0.1W 1% 0805 T/R	D 3*
R710		3.57KOHM .125W 1% CHIP RES T/R	B 6
	A11366-35/12 A11371-0R04	0 OHM 1/2W 5% 2010 T/R	J 12
R71B	A11371-0R04	0 OHM 1/2W 5% 2010 T/R	J 11
R719			J 10
R720	A11371-1104	RES 11.0 OHM .5W SMT	J 12
R721	A11371-1104	THE TILE UNIN . SW SMIT	J 12

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REV SIZE DWG NO. 126218-13 Α SHEET 36 DF 48 SCALE NONE PROJ NO. MD425DØ



		PARTS LIST	TAMB LOC
REF DES		DESCRIPTION	MAP LOC.
R722	A11371-1104	RES 11.0 OHM .5W SMT	J 9
R723	A11371-0R01	0 OHM 0.1W CHIP 0805	C 8*
R724		OPEN	
R73Ø	A1136B-10031	100.KOHM .1W 1% CHIP 0805	0.5*
R731		2.21KOHM .1W 1% CHIP 0805	M 4
R732	A11368-10041	1M OHM .1W 1% CHIP 0805	N 5
R798	A11368-10021	10K 1/10W 1% SMD 0805 T/R	P 5*
R799	A11368-26721	26.7KOHM .1W 1% 0805 T/R	P 5*
R800	A11368-10021	10K 1/10W 1% 5MD 0805 T/R	B 3
R801	A11368-49911	4.99K 1/10W 1% SMD 0805 T/R	B 3
R802	A11368-49911	4.99K 1/10W 1% SMD 0805 T/R	В 3
R805	A11368-10021	10K 1/10W 1% SMD 0805 T/R	C 7
RBØ7	A11371-0R04	Ø OHM 1/2W 5% 2010 T/R	J 6
R8Ø8	A11371-0R04	0 OHM 1/2W 5% 2010 T/R	J 5
RBØ9	A11371-1104	RES 11.0 DHM .5W SMT	J 4
RB10	A11371-1104	RES 11.0 OHM .5W SMT	J 6
R811	A11371-1104	RES 11.0 OHM .5W SMT	J 1
RB12	A11371-1104	RES 11.0 OHM .5W SMT	J 3
RB13	A11371-0R04	Ø OHM 1/2W 5% 2010 T/R	J 2
	A11371-0R04	Ø OHM 1/2W 5% 2010 T/R	J 3
R814 R830		100.KOHM .1W 1% CHIP 0805	D 3*
	A11368-22111	2.21KOHM .1W 1% CHIP 0805	М 2
R831		1M OHM .1W 1% CHIP 0805	N 4
R832		10K 1/10W 1% SMD 0805 T/R	P 3*
R889		26.7KOHM .1W 1% 0805 T/R	P 3*
R899		NTC 20K J 10% #8 RING	K 11
RT1	127518-3	NTC 20K J 10% #B RING	К 3
RT2	127518-3	The state of the s	D 11
T1	126012-1	XFMR, 400V/150V CT	E 7
T2	127522-2	XFMR, 125KHZ 15V GATE DRIVE	E 9
T3	127522-2	XFMR, 125KHZ 15V GATE DRIVE	C B
T4	126072-1	XFMR, CURRENT SENSE	C 9
T4X	101128-1	WIRE, K2 CURRENT SENSE	N 11
T100	H43628-9	XFMR D350 100:1 CURRENT SENSE	N 11
T100X	10112B-1	WIRE, K2 CURRENT SENSE	K 7
T101	126863-1	XFMR, BCA GATE SUPPLY	K 7
T101X	10112B-1	WIRE, K2 CURRENT SENSE	
T200	H43628-9	XFMR D350 100:1 CURRENT SENSE	P 11
T201	126863-1	XFMR, BCA GATE SUPPLY	K 7
TP1	127064-1	TEST POINT, SMT 1206	N 6
TP2	127064-1	TEST POINT, SMT 1206	<u> </u>
TP3	127054-1	TEST POINT, SMT 1206	L B
TP5	127064-1	TEST POINT, SMT 1206	E 3
TP6	127064-1	TEST POINT, SMT 1206	A 4
TP7	127064-1	TEST POINT, SMT 1206	D 7
TPB	127064-1	TEST POINT, SMT 1206	E 4
TP9	127064-1	TEST POINT, SMT 1206	C B
TP10	127064-1	TEST POINT, SMT 1206	N B
TP11	127064-1	TEST POINT, SMT 1206	C B
			
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		PARTS LIST	
REF DES	C.P.N.	DESCRIPTION	MAP LOC.
TP12	127064-1	TEST POINT, SMT 1206	C 7
TP13	127064-1	TEST POINT, SMT 1206	D 8
TP14	127064-1	TEST POINT, 5MT 1206	E B
TP15	127064-1	TEST POINT, SMT 1206	E 7
TP16	127064-1	TEST POINT, SMT 1206	D 9
TP17	127064-1	TEST POINT, SMT 1206	E 8
TP27	127064-1	TEST POINT, SMT 1206	E 7
TP2B	127064-1	TEST POINT, SMT 1206	E 7
TP29	127064-1	TEST POINT, SMT 1206	E 7
TP30	127064-1	TEST POINT, SMT 1206	E 9
TP31	127064-1	TEST POINT, SMT 1206	E 8
	127064-1	TEST POINT, SMT 1206	E B
TP32	127064-1	TEST POINT, SMT 1206	B 7
TP33			C 7
TP34	127064-1		C 7
TP35	127064-1		C B
TP36	127064-1		J 7
TP37	127064-1	TEST POINT, SMT 1206	
TP38	127064-1	TEST POINT, SMT 1206	K 11
TP39	127064-1	TEST POINT, SMT 1206	A 3
TP40	127064-1	TEST POINT, SMT 1206	B 3
TP41	127064-1	TEST POINT, SMT 1206	<u>C 3</u>
TP43	127064-1	TEST POINT, SMT 1206	B 3
TP45	127064-1	TEST POINT, SMT 1206	B 2
TP46	127064-1	TEST POINT, SMT 1206	B 3
TP47	127064-1	TEST POINT, SMT 1206	H 13
TP4B	127064-1	TEST POINT, SMT 1206	B 11
TP49	127064-1	TEST POINT, SMT 1206	A 8
TP50	127064-1	TEST POINT, SMT 1206	E 8
TP91	127064-1	TEST POINT, SMT 1206	B 8
TP100	127064-1	TEST POINT, SMT 1206	P 6
TP101	127054-1	TEST POINT, SMT 1206	P 5
TP102	127064-1	TEST POINT, SMT 1206	N 6
TP103	127064-1	TEST POINT, SMT 1206	M 10
TP104	127064-1	TEST POINT, SMT 1206	0.5
TP105	127064-1	TEST POINT, SMT 1206	P 6
TP143	127064-1	TEST POINT, SMT 1206	A B
TP162	127064-1	TEST POINT, SMT 1206	B 9
TP200	127064-1	TEST POINT, SMT 1206	P 4
TP201	127064-1	TEST POINT, SMT 1206	P 3
TP202	127064-1	TEST POINT, SMT 1206	N 4
TP203	127064-1	TEST POINT, SMT 1206	P 10
TP204	127064-1	TEST POINT, SMT 1206	0.3
TP205	127064-1	TEST POINT, SMT 1206	P 4
TP243	127064-1	TEST POINT, SMT 1206	К 2
TP244	127064-1	TEST POINT, SMT 1206	J 7
TP245	127064-1	TEST POINT, SMT 1206	0.6
TP247	127064-1	TEST POINT, SMT 1206	мб
		TEST POINT, 5MT 1206	м з
TP24B	127064-1	LIEST FUINT, SMI 1200	IVI 3

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size A	DWG NO.		12621	8-13		REV A
SCAL	E NONE	PROJ NO	. MD425D0	SHEET 38 OF	48	



		PARTS LIST	T
REF DES	C.P.N.	DESCRIPTION	MAP LOC.
TP249	127064-1	TEST POINT, SMT 1206	A 2
TP251	127064-1	TEST POINT, SMT 1206	B 6
TP252	127064-1	TEST POINT, SMT 1206	A 4
TP253	127064-1	TEST POINT, SMT 1206	C 8
TP254	127064-1	TEST POINT, SMT 1206	0.3
TP255	127064-1	TEST POINT, SMT 1206	P 2
TP256	127064-1	TEST POINT, SMT 1206	C 7
TP257	127064-1	TEST POINT, SMT 1206	N 5
U1	C 9038-8	COMPARATOR, QUAD LM339D SO-14	N 1
U2	128279-1	IC, SGSL4981B PFC CONTROL	D 3
	C 8262-5	MC33078D LOW NOISE DUAL OP AMP	0 1
U3	126681-1	IC, PWN CONT PHASE SHIFT	D B
U4	C 9929-8	TL431ACLP ADJ PREC RENC T/A	C 8
U5		OP AMP TLØ74CD SMT	ОБ
<u>U6</u>	125868-1	COMPARATOR, LM393 SO-B DUAL	B 7
<u>U7</u>	126559-1		N 3
N8	126561-1	REG. +5V LOW POWER 50-8	E 3
U9	127145-1	DVR, 1.5A DUAL SO-8 MOSFET	A 3
U10	126559-1	COMPARATOR, LM393 SO-B DUAL	A 3
U11	126559-1	COMPARATOR, LM393 50-B DUAL	A 4
U12	126633-1	REGULATOR, 15V SO-B	C 3
บ13	126559-1	COMPARATOR, LM393 SO-8 DUAL	
⊔14	126561-1	REG. +5V LOW POWER SO-8	G 14
U15	126653-1	SGL 2 INPUT NOR GATE SOT-23-5	H 14
U16	125867-1	MC74HC4024D 7 STAGE COUNTER SM	H 13
U17	127145-1	DVR, 1.5A DUAL SO-8 MOSFET	E 7
U1B	128383-1	OPTO HCNW2211 IEC65 COMPLIANT	B 10
U19	126561-1	REG. +5V LOW POWER SO-8	C 7
U2Ø	12B3B2-1	OPTO SFH615A-2 IEC65 COMPLIANT	A 10
U21	126559-1	COMPARATOR, LM393 SO-8 DUAL	A 9
U22	125541-1	DRVR, 600V IR2104 HALF BRIDGE	L 6
U23	126553-1	IC, 20V 0.1350HM SOB DUAL NMOS	L 6
U24	126559-1	COMPARATOR, LM393 SO-8 DUAL	A 4
U25	C 9929-8	TL431ACLP ADJ PREC RENC T/A	С 3
U26	127145-1	DVR, 1.5A DUAL SO-B MOSFET	E 3
U27	126633-1	REGULATOR, 15V SO-8	E 4
U2B	C 5095-2	MC7B15CT +15V. REG	D 7
U29	127145-1	DVR, 1.5A DUAL SO-B MOSFET	E 9
	128382-1	OPTO SFH615A-2 IEC65 COMPLIANT	A 9
U30		DVR, 1.5A DUAL SO-8 MOSFET	E 7
U31	127145-1	DVR, 1.5A DUAL SO-8 MOSFET	E 8
U32	127145-1		A 10
Π33		OPEN	B 10
U34		OPEN DIA DELLA ELOR SOLO	C 7
U35	C10344-7	74HC74AD DUAL D FLIP FLOP SOIC	A 10
U36	128382-1	OPTO SFH615A-2 IEC65 COMPLIANT	D 8
U37	126559-1	COMPARATOR, LM393 SO-B DUAL	B B
N33	C 903B-B	COMPARATOR, QUAD LM339D SO-14	
U100	C 9012-3	OP AMP, QUAD LO NOISE MC33079D	P 5
U101	126548-1	COMPARATOR, LM361 HI SPD SO-14	N 5
NTROLLED O	COPY, COPIES OF	LED RED INK BY CM AS A THESE DOCUMENTS ONIC REPRODUCTIONS INACTIVE For Reference Use Only	
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S THE BASI	S FOR THE MANUF	ACTUDE OD SALE	T 39 DF 48



		PARTS LIST	Y
REF DES	C.P.N.	DESCRIPTION	MAP LOC.
U102	126561-1	REG, +5V LOW POWER SO-8	N 5
U103	126548-1	COMPARATOR, LM361 HI SPD SO-14	NB
U104	126561-1	REG, +5V LOW POWER SO-8	N 6
U105	125869-1	OP AMP LM31BM SMT	N 6
U106	126540-1	IC, QUAD 2 INPUT NOR GATE SO-14	м 6
U107	125545-1	HCPL0601 HI SPEED OPTO	М 7
U108	126559-1	COMPARATOR, LM393 SO-8 DUAL	N 7
U110	C 8262-5	MC3307BD LOW NOISE DUAL OP AMP	P 5
⊔111	C 9012-3	OP AMP, QUAD LO NOISE MC33079D	0 5
U112	C 9038-8	COMPARATOR, QUAD LM339D SO-14	0 2
บ113	C 9038-B	COMPARATOR, QUAD LM339D SO-14	М 5
U114	C 9038-B	COMPARATOR, QUAD LM339D SO-14	M 4
U115	C 903B-B	COMPARATOR, QUAD LM339D SO-14	L 8
U116	C 903B-8	COMPARATOR, QUAD LM339D SO-14	M 4
U117	C 9038-8	COMPARATOR, QUAD LM339D SO-14	0 2
U11B	126561-1	REG, +5V LOW POWER SO-8	K B
U119	125546-1	HCPL0611 HI SPEED OPTO	K 9
U120	125544-1	MC34151D HISPD DUAL MOSFET DVR	J 9
U121	125544-1	MC34151D HISPD DUAL MOSFET DVR	J 11
U122	126561-1	REG, +5V LOW POWER SO-B	K 11
U123	125545-1	HCPLØ601 HI SPEED OPTO	K 11
U124	C10344-7	74HC74AD DUAL D FLIP FLOP SOIC	L 6
U125	C 9012-3	OP AMP, QUAD LO NOISE MC33079D	N 2
U200	C 9012-3	OP AMP, QUAD LO NOISE MC33079D	P 4
U201	126548-1	COMPARATOR, LM361 HI SPD SO-14	N 4
U202	126561-1	REG, +5V LOW POWER SO-8	N 4
U203	126548-1	COMPARATOR, LM361 HI SPD SO-14	N 3
U204	126561-1	REG, +5V LOW POWER SO-8	N 3
U205	125869-1	OP AMP LM318M SMT	N 4
U207	125545-1	HCPLØ601 HI SPEED OPTO	P 7
U20B	126559-1	COMPARATOR, LM393 SO-8 DUAL	P 7
U210	C 8262-5	MC3307BD LOW NOISE DUAL OP AMP	P 3
U211	C 9012-3	OP AMP, QUAD LO NOISE MC33079D	0.3
	C 9038-8	COMPARATOR, QUAD LM339D SO-14	M 4
U213	C 9038-8	COMPARATOR, QUAD LM339D SO-14	м з
U214		REG, +5V LOW POWER SO-8	K 4
U218	126561-1	HCPLØ611 HI SPEED OPTO	K 5
U219	125546-1		J 5
U220	125544-1	MC34151D HISPD DUAL MOSFET DVR	J 3
U221	125544-1	MC34151D HISPD DUAL MOSFET DVR	K 2
U222	126561-1	REG, +5V LOW POWER 50-8	K 3
U223	125545-1	HCPL0601 HI SPEED OPTO	
U224	C10344-7	74HC74AD DUAL D FLIP FLOP SOIC	N 5
Y1	C10476-7	CRYSTAL, 4 MHZ HC49U SERIES	G 13
1	126583-8	PWB, CE4000 MAIN	
3	103415-10805	SCREW, 8-32X.312 TORX PNHD SEM	-
4	126923-4	INSULATOR, CE4K HEATSINK NOMEX	
5	128130-1	RIVET, CE4000 INS RET PLASTIC	

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INACTIVE

A	DWG NO.	126218-13	REV A
SCALE	NONE	PROJ NO. MD425DØ SHEET 40 OF 48	



CE4000 MAIN PWA NUMBER: 126218-13 DRAWING SHEET: 41

CE4000 MAIN PWA NUMBER: 126218-13 DRAWING SHEET: 41



			REVISION HISTORY		
		REV	DESCRIPTION	DATE	
BONDOOD IN THE DOOR TON THE DOOR TON	00N0838	Α	RELEASE FOR PRODUCTION	10-02-00	KBZ JUNING IM

UNLESS OTHERWISE SPECIFIED, THIS PRINTED WIRING ASSEMBLY SHALL MEET THE SPECIFICATION DESCRIBED IN IPC-A-610_ CLASS 2 STANDARDS. NOTES:

- 1. PRINTED WIRING BOARD PART NUMBER 126583-8.
- ALL LEADS SHALL BE TRIMMED TO 0.093" OR LESS.
- 3. POSITION COMPONENTS AS SHOWN ON COMPONENT MAPS.
- 4. THE PRINTED WIRING ASSEMBLY PART NUMBER FOR THIS ASSEMBLY SHALL BE MARKED ON THE PRINTED WIRING BOARD AND SHALL BE PERMANENT.
- 5. REMOVE SOLDER OR PREVENT SOLDER FROM ACCUMULATING IN HOLES INDICATED ON COMPONENT MAP.
- 6. MAP LOCATIONS DENOTED BY AN ASTERISK (*), INDICATE COMPONENTS MOUNTED ON THE BOTTOM SIDE OF THE PRINTED WIRING BOARD.
- 7. THE VENT HOLE ON TOP OF THE RELAY K1 MUST BE OPENED AFTER THE CLEANING PROCESS, BY EITHER REMOVING THE SEALING TAPE OR CUTTING OFF THE CIRCULAR TAB WITH AN "EXACTO" KNIFE OR SIMILAR CUTTING TOOL, WARNING, THIS STEP MUST BE DONE AFTER THE CLEANING PROCESS NOT BEFORE!! WATER OR CLEANING SOLVENTS ENTERING THE RELAY VENT HOLE WILL DAMAGE THE RELAY.
- B. APPLY HOT MELT ADHESIVE(125647-1) FOR SUPPORT TO THE FOLLOWING COMPONENTS: C2.C700.R42,R142,R143,R149,R150,R242,R243,R249.R250,R325,R363,R364,R463, AND R464. ADHESIVE MUST HAVE A MINIMUM CONTACT AREA OF 1/4" X 1/2" ON BOTH THE DESIGNATED PART AND EITHER THE PWB OR ANY ADJACENT SOLID COMPONENT.
- 9. ATTACH R713 TO THE SIDE OF T1 WITH LOCTITE ADHESIVE(125482-1)
 AND ACTIVATOR(125483-1). NO MORE THAN Ø.1" GAP ALLOWED BETWEEN
 BODY OF R713 AND SIDE OF T1. ANY GAP MUST BE FILLED WITH ADHESIVE
 (NO AIR BETWEEN R713 & T1).
- 10. THIS PWA MUST MEET ALL SPECIFICATIONS AS LISTED IN 128315 SPECS, CE4000 MAIN PWA.
- 11. ADD 1/4" SQ. PIECE OF KAPTON TAPE(S 6285-1) UNDER R260 AS SHOWN.



CAUTION

STATIC CAN DAMAGE COMPONENTS!

DO NOT HANDLE

UNLESS WRIST STRAP IS WORN

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FILENAME	СМ	mmg	1013100	TITLE		NATI	ONAL, INC.	WWW. EITOMINITE, EOW	
12621B-14_A_01.PCB	PE	mo	10 3/60				CE 1005		
TOLERANCE UNLESS OTHERWISE SPECIFIED		U	,		PW/	Δ,	CE4000	MAIN	
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.000 - ±.010" DRILLS - ±.003"				A	DWG NO.		126218	3 – 1 4	A REV
DO NOT SCALE DRAWING				SCAL	E NDNE	PROJ	ND. MD425DØ	SHEET SHEET 1 0	F 48



		PARTS LIST	
REF DES	C. P. N.	DESCRIPTION	MAP LOC.
C1	127046-1	CAP, 940UF 450V HIGH RIPPLE	D 6
C2	C10094-8	1.5UF 630V 5% RADIAL POLY CAP	E 5
C3	126542-1	2.2UF 50V 5.5MM HIGH SMD	D B
C4	126542-1	2.2UF 50V 5.5MM HIGH SMD	E 4
C5		OPEN	B 10
C6	127046-1	CAP, 940UF 450V HIGH RIPPLE	B 4
C7	127047-1	CAP, 820UF 150V HIGH RIPPLE	D 13
CB	127047-1	CAP. 820UF 150V HIGH RIPPLE	C 13
C9	A11427-334J6	.33UF 50V 5% CHIP X7R 1210	E 3
C10	A11427-334J6	.33UF 50V 5% CHIP X7R 1210	D 4
C11	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	D 4*
C12	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	D 3*
C13	A11427-104J2	.1UF 50V 5% X7R 0805 T/R	DЗ
C14	A11427-103K2	.01 UF 50V 10% X7R MLC 0805	DЗ
C15	A11369-221J5	220PF 50V 5% NPO 1206 SMD	M 6*
C16	126551-1	100UF 25V 5.5MM HIGH SMD	СЗ
C17	C10090-6	4.7UF 400V 10% AXIAL FILM	D 9
C18	126551-1	100UF 25V 5.5MM HIGH SMD	D 7
C19	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	Д З
C20	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	D 3*
C21	A11369-561F2	560PF 50V 1% NPO MLC 0805	D 4
C22	A11369-152J2	1500PF 50V 5% NPO MLC 0805 T/R	Д З
C23	126539-1	10UF 16V 5.5MM HIGH SMD	Д З
C24	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	C 4
C25	C 7091-9	.33 UF 50V Z5U CHIP CAP	D 4*
C26	A11427-102K2	.001UF 50V 10% X7R CER CHIP	C 8
C27	C 4253-8	4.7UF 63V 20% VERT ELECT T/R	E 4
C28	C B26B-2	220UF 35V 20% VERT	B 8
C29	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	B 8*
C30	126551-1	100UF 25V 5.5MM HIGH SMD	M 7
C31	126551-1	100UF 25V 5.5MM HIGH SMD	N 7
C32	126551-1	100UF 25V 5.5MM HIGH SMD	0 7
C33	A11369-222K5	2200PF 50V 10% CHIP NPO 1206	C 8*
C34	A11427-103K2	.01 UF 50V 10% X7R MLC 0805	В 3
C35	A11369-471K2	470PF 50V 10% NPO 0805 T/R	C B
C36	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	DВ
C37	126551-1	100UF 25V 5.5MM HIGH SMD	DΒ
C38	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	D B
C39	126539-1	10UF 16V 5.5MM HIGH SMD	DВ
C40		OPEN	A 7
C41	126551-1	100UF 25V 5.5MM HIGH SMD	P 7
C42	A11369-101J2	100 PF 50V 5% NPO MLC 0805 T/R	м б*
C43		.001UF 50V 5% NPO MLC 0805 T/R	C 9*
C44	A11369-102J2	.001UF 50V 5% NPO MLC 0805 T/R	A B
C45	126551-1	100UF 25V 5.5MM HIGH SMD	E 4
C46		.1UF 50V CHIP CAP 10% 0805 X7R	E 9*
C47	C 9465-3	10UF 50V 20% VERT ELECT T/A	B 4

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-	SIZE	DWG NO.	126218-14	REV A
	SCAL	E NONE	PROJ NO. MD425DØ SHEET 11 OF 48	



		PARTS LIST	
REF DES	C.P.N.	DESCRIPTION	MAP LOC.
C48	C 7091-9	.33 UF 50V Z5U CHIP CAP	A 3
C49	103191-1	0.47UF 50V Z5U 1210 T/R	В 3
C50	126542-1	2.2UF 50V 5.5MM HIGH SMD	A 4
C51	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	м в*
C52	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	м в*
C53	A11427-103K2	.01 UF 50V 10% X7R MLC 0805	M 8
C54	126630-1	CAP, 470UF 25V RAD ELECT	I 13
C56	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	0 1*
C57	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	O 1*
C58	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	0 1*
C59	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	N 1*
C60	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	D 1
C61	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	0 1
C62	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	C 8*
C63	A11427-334J6	.33UF 50V 5% CHIP X7R 1210	H 14
C64	125508-1	10UF 50V 20% SMT AL ELECT T/R	G 14
C65	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	G 14
C66		56PF 200V 10% NPO 0805 T/R	H 14
C67	102438-550K2	56PF 200V 10% NPO 0805 T/R	H 13
C68	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	H 14
C69		.1UF 50V CHIP CAP 10% 0805 X7R	D 5
C7Ø	126542-1	2.2UF 50V 5.5MM HIGH SMD	C 7
C71		.1UF 50V CHIP CAP 10% 0805 X7R	B 9*
C72	103191-1	0.47UF 50V Z5U 1210 T/R	B 3
C73	126551-1	100UF 25V 5.5MM HIGH SMD	A 4
C74	* *	.1UF 50V CHIP CAP 10% 0805 X7R	E 7*
C75		.047UF 50V CHIP CAPACITOR X7R	В 3
C76	126542-1	2.2UF 50V 5.5MM HIGH SMD	С 3
C78		.001UF 50V 10% X7R CER CHIP	B 3
C79	126551-1	100UF 25V 5.5MM HIGH SMD	E 7
CBØ	126551-1	100UF 25V 5.5MM HIGH SMD	E 8
CB1	126551-1	100UF 25V 5.5MM HIGH SMD	D 1
CB2	126551-1	100UF 25V 5.5MM HIGH SMD	М 5
CB3		.1UF 50V CHIP CAP 10% 0805 X7R	L 6*
CB4	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	L 6*
	126551-1	100UF 25V 5.5MM HIGH SMD	L 5
CB5		100UF 25V 5.5MM HIGH SMD	L 5
CB6	126551-1		
C87	C10516-0	470.UF 10V 20% LOW ESR RDL T/R	L 6
C88	C10516-0	470.UF 10V 20% LOW ESR RDL T/R	L 7
C89		.01 UF 50V 10% X7R MLC 0805	B 7
C90	103191-1	0.47UF 50V Z5U 1210 T/R	N 3*
C91	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	N 5
C92	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	N 3*
C93	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	C 3*
C94		.1UF 50V CHIP CAP 10% 0805 X7R	A 3*
C95	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	A 3*
C96	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	E 3*
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SIZE A	DWG	NO.			12621	8-14		REV A
SCAL	E N	DNE	PROJ	ND.	MD425D0	SHEET 12 OF	48	



		PARTS LIST	
REF DES	C. P. N.	DESCRIPTION	MAP LOC.
C97		.1UF 50V CHIP CAP 10% 0805 X7R	E 12
C98		.1UF 50V CHIP CAP 10% 0805 X7R	D 12
C99		.1UF 50V CHIP CAP 10% 0805 X7R	C 7*
C100		.001UF 50V 5% NPO MLC 0805 T/R	N 13
C101		OPEN	P 5*
C102	103191-1	0.47UF 50V Z5U 1210 T/R	P 5
C103		100PF 200V NPO 0805 T/R	0.6
C104		220PF 200V 1% NPO 0805	0 0
			0.6*
C105		1000PF 200V 5% 1210 NPO	
C106		330PF 250V 10% NPO 0805 T/R	0.6*
C107		220PF 200V 1% NPO 0805	P 6
C108		.047UF 50V CHIP CAPACITOR X7R	0.6
C109		0.01UF 500V 5% X7R 1206 T/R	0 6
C110		12PF 50V 10% NPO 0805 T/R	P 5*
C111		12PF 50V 10% NPO 0805 T/R	0.5*
C112		470.PF 50V 1% NPO MLC 0805	0 5*
C113	A11369-101J2	100 PF 50V 5% NPO MLC 0805 T/R	0 5*
C114	A11369-332F5	3300.PF 50V 1% NPO MLC 1206	0.5
C115	A11369-332F5	3300.PF 50V 1% NPO MLC 1206	P 6*
C116	A11369-120K2	12PF 50V 10% NPD 0805 T/R	P 6*
E117	A11369-120K2	12PF 50V 10% NPO 0805 T/R	P 6*
C11B	A11369-470K2	47PF 50V 10% NPO 0805 T/R	N 5*
C119	A11369-470K2	47PF 50V 10% NPO 0805 T/R	N 6*
C120	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	0 5
C121		.1UF 50V CHIP CAP 10% 0805 X7R	05
C122		.1UF 50V CHIP CAP 10% 0805 X7R	N 5*
C123	103191-1	0.47UF 50V Z5U 1210 T/R	0 5
C124		.1UF 50V CHIP CAP 10% 0805 X7R	0.6
C125	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	0.6
C126		.1UF 50V CHIP CAP 10% 0805 X7R	N 6*
C127	103191-1	0.47UF 50V Z5U 1210 T/R	0.6
C128	C10466-8	.22UF 50V 5% MTL FILM RDL T/A	м 9
C129		.1UF 250V 5% MTL POLY FILM T/A	M 10
C130		0.01UF 50V 10% X7R SMD 1206	N 7
C131		.1UF 250V 5% MTL POLY FILM T/A	M 10
C132		.1UF 250V 5% MTL POLY FILM T/A	N 12
C133		.047UF 250VDC 5% MET POLY T/A	N 12
C134		Ø.22UF 5ØV 5% X7R 1206 T/R	M 12
		.047UF 250VDC 5% MET POLY T/A	M 12
C135		.1UF 250V 5% MTL POLY FILM T/A	N 13
C136		.1UF 250V 5% MTL POLY FILM T/A	N 13
C137		.1UF 250V 5% MTL POLY FILM 1/A	N 13
C13B			N 13
C139		.1UF 250V 5% MTL POLY FILM T/A	0 13
C140		.1UF 250V 5% MTL POLY FILM T/A	E 4
C141		12PF 50V 10% NPO 0805 T/R	
C142	103191-1	0.47UF 50V Z5U 1210 T/R	A 9
C143	A11369-221J5	220PF 50V 5% NPO 1206 SMD	B 9
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APPARATU	S OR DEVICES WITH	OUT PERMISSION. SCALE NONE PROJ NO. MD425DØ SHEE	T 13 OF 48

Parts 5-48



		PARTS LIST	
REF DES	C.P.N.	DESCRIPTION	MAP LOC.
C144	A11427-473K5	.047UF 50V CHIP CAPACITOR X7R	A 4*
C145	A11427-334J6	.33UF 50V 5% CHIP X7R 1210	N 6
C146	A11427-103K5	0.01UF 50V 10% X7R SMD 1206	N 6
C147	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	м 6
C14B	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	M 7*
C149	130561-1	10UF 25V 20% ALUM ELEC SMT T/R	M 7
C150	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	N 7*
C151	A11369-102K5	1000PF 50V 10% NPO 1206 SMD	М 7*
C152	A11369-102K5	1000PF 50V 10% NPO 1206 SMD	N 7*
C153	C 6995-2	022UF 100V CHIP CAPACITOR X7R	N 6*
C154	A11369-221J5	220PF 50V 5% NPO 1206 SMD	N 6*
C155		.1UF 50V CHIP CAP 10% 0805 X7R	N 6*
C156		.1UF 50V CHIP CAP 10% 0805 X7R	N 5*
C157	126539-1	10UF 16V 5.5MM HIGH SMD	Nδ
C158	126539-1	10UF 16V 5.5MM HIGH SMD	N 6
C159		220.PF 50V 10% NPO MLC 0805	N B
C160		.0047UF 5% 16V 0805 FILM SMT	0 4*
C161	127684-1	.0047UF 5% 16V 0805 FILM SMT	0.4*
C162		.1UF 50V 5% X7R 0805 T/R	0.5*
C163		220PF 50V 5% NPO 1206 SMD	0.5*
C164		.001UF 50V 5% NPO MLC 0805 T/R	0.5*
C165		220PF 50V 5% NPO 1206 SMD	0.5*
C166		.001UF 50V 5% NPO MLC 0805 T/R	0.5*
C167		.001UF 50V 5% NPO MLC 0805 T/R	N 5*
C168		220PF 50V 5% NPO 1206 SMD	0.5*
		.001UF 50V 5% NPO MLC 0805 T/R	N 5*
C169			
C170	126623-1	47UF 16V 6.3X5.5MM 20% SMT	0 5 L 3*
C171		1000PF 50V 10% NPO 1206 5MD	
C172	126539-1	10UF 16V 5.5MM HIGH SMD	M 6
C173	126539-1	10UF 16V 5.5MM HIGH SMD	P 5
C174	126539-1	10UF 16V 5.5MM HIGH SMD	0.5
C175	126543-1	2.2UF 50V 5.5MM HIGH NP SMD	N 5
C176	103191-1	0.47UF 50V Z5U 1210 T/R	M 4*
C177	A1142/-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	L 3*
C17B		OPEN	L B
C179		0.18UF 50V 5% X7R 1206 T/R	N 2*
C180		100UF 25V 5.5MM HIGH SMD	N 3
C1B1	126551-1	100UF 25V 5.5MM HIGH 5MD	M 5
C182		.1UF 50V CHIP CAP 10% 0805 X7R	L 8
C183		.1UF 50V CHIP CAP 10% 0805 X7R	L B
C1B4		.1UF 50V CHIP CAP 10% 0805 X7R	L 11*
C185		.1UF 50V CHIP CAP 10% 0805 X7R	LB
C186		.1UF 50V CHIP CAP 10% 0805 X7R	KB
C187		.1UF 50V CHIP CAP 10% 0805 X7R	K B
C188	103430-151K2	150PF 250V 10% NPO 0805 T/R	K 8*
C189		150PF 250V 10% NPO 0805 T/R	K 8*
C190	A10434-473JD	.047UF 250VDC 5% MET POLY T/A	N 9

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51ZE A	DWG N	Ο.		,	12621	8 - 1	4		REV A
SCAL	E NON	E	PROJ	NO.	MD425D0	SHEET	14 OF	48	



		PARTS LIST	· · · · · · · · · · · · · · · · · · ·
REF DES	C.P.N.	DESCRIPTION	MAP LOC.
C191	A10434-104JD	.1UF 250V 5% MTL POLY FILM T/A	N 9
C192	A10434-473JD	.047UF 250VDC 5% MET POLY T/A	И 9
C193	103430-151K2	150PF 250V 10% NPO 0805 T/R	K 11*
C194		150PF 250V 10% NPO 0805 T/R	K 11*
C195		100UF 25V 5.5MM HIGH SMD	K 12
C196		.1UF 50V CHIP CAP 10% 0805 X7R	K 11
C197			K 12
C198		.1UF 50V CHIP CAP 10% 0805 X7R	м 6*
C199		470PF 50V 10% CHIP NPO 1206	P 6*
		.001UF 50V 5% NPO MLC 0805 T/R	D 13
C200	A11303 10232	DPEN SX 144 9 MIZE SSEE	P 3*
C201	103191-1	0.47UF 50V Z5U 1210 T/R	Р3
C202		100PF 200V NPO 0805 T/R	0 4
C203		220PF 200V 1% NPO 0805	D 4
C204		1000PF 200V 5% 1210 NPO	D 4*
C205		330PF 250V 10% NPO 0805 T/R	0.4*
C206			P 4
C207		220PF 200V 1% NPO 0805	D 4
C20B		.047UF 50V CHIP CAPACITOR X7R	0 4
C209		0.01UF 500V 5% X7R 1206 T/R	P 3*
C210		12PF 50V 10% NPO 0805 T/R	D 4*
C211		12PF 50V 10% NPO 0805 T/R	0 4*
C212		470.PF 50V 1% NPO MLC 0805	
C213		100 PF 50V 5% NPO MLC 0805 T/R	0 4*
C214		3300.PF 50V 1% NPO MLC 1206	D 4
C215		3300.PF 50V 1% NPO MLC 1206	P 4*
C216		12PF 50V 10% NPO 0805 T/R	P 4*
C217		12PF 50V 10% NPO 0805 T/R	P 4*
C218	A11369-470K2	47PF 50V 10% NPO 0805 T/R	N 4*
C219		47PF 50V 10% NPO 0805 T/R	N 3*
C220		.1UF 50V CHIP CAP 10% 0805 X7R	0 4
C221	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	0 4
C222	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	N 4*
C223	103191-1	0.47UF 50V Z5U 1210 T/R	0 4
C224	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	0 3
C225	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	D 4
C226	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	N 3*
C227	103191-1	0.47UF 50V Z5U 1210 T/R	0 3
C228	C10466-8	.22UF 50V 5% MTL FILM RDL T/A	P 9
C229		.1UF 250V 5% MTL POLY FILM T/A	P 10
C230		0.01UF 50V 10% X7R SMD 1206	0.7
C231		.1UF 250V 5% MTL POLY FILM T/A	P 10
C232		.1UF 250V 5% MTL POLY FILM T/A	P 12
C233		.047UF 250VDC 5% MET POLY T/A	P 12
C234		0.22UF 50V 5% X7R 1206 T/R	D 12
		.047UF 250VDC 5% MET POLY T/A	0 12
C235			D 13
C236	A10434-104JD		0 13
C237	A10434-104JD	. TOP 230V 3% MIL FOLT FILM 1/A	1 0 , 5
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C THE DACT	S FOR THE MANUFAC	TURE OR SALE	r 15 DF 48



DEE DEC	6 B N	PARTS LIST	140
	C.P.N.	DESCRIPTION	MAP LOC.
C23B		.1UF 250V 5% MTL POLY FILM T/A	P 13
C239		.1UF 250V 5% MTL POLY FILM T/A	P 13
C240		.1UF 250V 5% MTL POLY FILM T/A	D 13
C241	126542-1	2.2UF 50V 5.5MM HIGH SMD	CB
C242	126542-1	2.2UF 50V 5.5MM HIGH SMD	D B
C245	A11427-334J6	.33UF 50V 5% CHIP X7R 1210	<u> </u>
C246	A11427-103K5	0.01UF 50V 10% X7R SMD 1206	O 6
C247	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	м 5
C24B	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	0 7*
C249	130551-1	10UF 25V 20% ALUM ELEC SMT T/R	0 7
C250	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	P 7*
C251	A11369-102K5	1000PF 50V 10% NPO 1206 SMD	0 7*
C252	A11369-102K5	1000PF 50V 10% NPO 1206 SMD	P 7*
C253	C 6995-2	022UF 100V CHIP CAPACITOR X7R	N 4*
C254		220PF 50V 5% NPO 1206 SMD	N 4*
C255		.1UF 50V CHIP CAP 10% 0805 X7R	N 4*
C256		.1UF 50V CHIP CAP 10% 0805 X7R	N 4*
	126539-1	10UF 16V 5.5MM HIGH SMD	N 4
C257			N 4
C25B	126539-1	10UF 16V 5.5MM HIGH SMD	
C259		220.PF 50V 10% NPO MLC 0805	N 4
C260	127684-1	.0047UF 5% 16V 0805 FILM SMT	
C261	127684-1	.0047UF 5% 16V 0805 FILM SMT	0 3*
C262		.1UF 50V 5% X7R 0805 T/R	0.3*
C263		220PF 50V 5% NPO 1206 SMD	0 3*
C264		.001UF 50V 5% NPD MLC 0805 T/R	0 3*
C265	A11369-221J5	220PF 50V 5% NPD 1206 SMD	0.3*
C266	A11369-102J2	.001UF 50V 5% NPO MLC 0805 T/R	0 3*
C267	A11369-102J2	.001UF 50V 5% NPO MLC 0805 T/R	N 3*
C268	A11369-221J5	220PF 50V 5% NPO 1206 SMD	0 3*
C269	A11369-102J2	.001UF 50V 5% NPO MLC 0805 T/R	И 3*
C27Ø	126623-1	47UF 16V 6.3X5.5MM 20% SMT	0 3
C271	A11369-471K5	470PF 50V 10% CHIP NPO 1206	P 4*
C272	126539-1	10UF 16V 5.5MM HIGH SMD	N 5
C273	126539-1	10UF 16V 5.5MM HIGH SMD	P 4
C274	126539-1	10UF 16V 5.5MM HIGH SMD	0 4
C275	126543-1	2.2UF 50V 5.5MM HIGH NP SMD	N 4
C276	103191-1	0.47UF 50V Z5U 1210 T/R	M 2*
C277		.1UF 50V CHIP CAP 10% 0805 X7R	E 3*
C278	ATTTE TOTAL	OPEN	N 3*
C279	A11427-1041E	0.18UF 50V 5% X7R 1206 T/R	N 2*
			B 7
C2B1	126623-1	47UF 16V 6.3X5.5MM 20% SMT	
C2B2		470PF 50V 10% CHIP NPO 1206	0 4
C2B3		.1UF 50V CHIP CAP 10% 0805 X7R	E 8*
C284		.1UF 50V CHIP CAP 10% 0805 X7R	B 7*
C285	126551-1	100UF 25V 5.5MM HIGH SMD	N 3
C286		.1UF 50V CHIP CAP 10% 0805 X7R	K 4
C287	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	K 5
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REF DES	C. P. N.	DESCRIPTION	MAP LOC.
C288	103430-151K2	150PF 250V 10% NPO 0805 T/R	K 5*
C289	103430-151K2	150PF 250V 10% NPO 0805 T/R	K 5*
C29Ø	A10434-473JD	.047UF 250VDC 5% MET POLY T/A	0 9
C291	A10434-104JD	.1UF 250V 5% MTL POLY FILM T/A	0 9
C292	A10434-473JD	.047UF 250VDC 5% MET POLY T/A	0 9
C293	103430-151K2	150PF 250V 10% NPO 0805 T/R	K 2*
C294	103430-151K2	150PF 250V 10% NPO 0805 T/R	K 2*
C295	126551-1	100UF 25V 5.5MM HIGH SMD	K 2
C296	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	K 2
C297	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	K 2
C29B	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	B 7
C299	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	A 4*
C300	A11369-102K5	1000PF 50V 10% NPO 1206 5MD	L 3*
C3Ø1	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	E 7*
C302	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	A 4*
C303	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	A 4*
C3Ø4		OPEN	A 10
C3Ø5		OPEN	B 10
C306	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	A 7
C307		.1UF 50V CHIP CAP 10% 0805 X7R	H 14
C308		.1UF 50V CHIP CAP 10% 0805 X7R	В 8
C309		.1UF 50V CHIP CAP 10% 0805 X7R	8 8
C310	125508-1	10UF 50V 20% SMT AL ELECT T/R	м 3
C313	126542-1	2.2UF 50V 5.5MM HIGH SMD	м 9
C314		0.01UF 50V 10% X7R SMD 1206	D 3*
C315		470PF 50V 10% CHIP NPO 1206	0.5
C316	126551-1	100UF 25V 5.5MM HIGH SMD	K 8
C317	126551-1	100UF 25V 5.5MM HIGH SMD	K 8
C317	126551-1	100UF 25V 5.5MM HIGH SMD	K 8
C319	126551-1	100UF 25V 5.5MM HIGH SMD	K 8
C320	126539-1	10UF 16V 5.5MM HIGH SMD	р 3
C321		.1UF 50V CHIP CAP 10% 0805 X7R	K 7
C322	A11427-104K2		K 8
			0.5*
C323	A11427-104K2		0.5
C324		.1UF 50V CHIP CAP 10% 0805 X7R	P 5*
C325		.1UF 50V CHIP CAP 10% 0805 X7R	P 5*
C326		.1UF 50V CHIP CAP 10% 0805 X7R	P 5*
C327		.1UF 50V CHIP CAP 10% 0805 X7R	
C32B		.1UF 50V CHIP CAP 10% 0805 X7R	P 5*
C329	A11427-104K2		
C330		.1UF 50V CHIP CAP 10% 0805 X7R	D 2*
C332	126539-1	10UF 16V 5.5MM HIGH SMD	D B
C333		.01 UF 50V 10% X7R MLC 0805	C 3*
C334	A11427-103K2		C 7*
C335	A11427-103K2	.01 UF 50V 10% X7R MLC 0805	C 3*
C336	126539-1	10UF 16V 5.5MM HIGH SMD	M 5
C337	A11427-103K2	.01 UF 50V 10% X7R MLC 0805	A 10

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SIZE	DWG NO.	126218-14					
SCAL	E NONE	PROJ NO. MD425DØ SHEET 17 OF 48					



		PARTS LIST	
REF DES	C.P.N.	DESCRIPTION	MAP LOC.
C338	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	A 9
C339	A11427-224J5	0.22UF 50V 5% X7R 1206 T/R	N 2*
C34Ø	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	M 4*
C341	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	M 4*
C342	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	M 5*
C343	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	M 5*
C344	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	0 2*
C345	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	0 2*
C346	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	L B
C347	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	L 8
C348	C10325-6	2200.PF 250VAC 20% FILM Y2	□ 11
C349	126539-1	10UF 16V 5.5MM HIGH SMD	M 4
C350		.1UF 50V CHIP CAP 10% 0805 X7R	N 6*
C351	A11427-104K2		0.6*
C352	A11427-104K2		м 6*
C353	A11427-104K2		0.2*
C354	126551-1	100UF 25V 5.5MM HIGH SMD	N 4
C355		.1UF 50V CHIP CAP 10% 0805 X7R	N 2*
C356		.1UF 50V CHIP CAP 10% 0805 X7R	M 5
C357	A11427-104K2		M 5
C35B	A11427-104K2		B 9*
C360		0.1UF 500V 10% X7R 1210 T/R	1 9*
C361		0.01UF 500V 5% X7R 1206 T/R	I 9*
C363		0.1UF 500V 10% X7R 1210 T/R	H 7*
C365		0.1UF 500V 10% X7R 1210 T/R	1 7*
C366		0.1UF 500V 10% X7R 1210 T/R	I 12*
C367		0.01UF 500V 5% X7R 1206 T/R	I 12*
C369		0.1UF 500V 10% X7R 1210 T/R	I 10*
C371		0.1UF 500V 10% X7R 1210 1/R	I 10*
C371	127483-1	6300UF 125V 9A LOW ESL 5 PIN	L 10
		6300UF 125V 9A LOW ESL 5 PIN	L 12
C373	1274B3-1		1 9*
C374		0.1UF 500V 10% X7R 1210 T/R	
C375		0.01UF 500V 5% X7R 1206 T/R	I 7*
C377		0.1UF 500V 10% X7R 1210 T/R	H 12*
C37B		0.01UF 500V 5% X7R 1206 T/R	I 10*
C380		0.1UF 500V 10% X7R 1210 T/R	I 8*
C382		0.1UF 500V 10% X7R 1210 T/R	I 9*
C3B4		0.1UF 500V 10% X7R 1210 T/R	I 11*
C386		0.1UF 500V 10% X7R 1210 T/R	I 12*
C387		.1UF 50V 5% X7R 0805 T/R	J 9
C38B		.1UF 50V 5% X7R 0805 T/R	J 9
C390		.1UF 50V 5% X7R 0805 T/R	J 11
C391		.1UF 50V 5% X7R 0805 T/R	J 11
C397		.01UF 250V 5%MTL POLY FILM T/A	N 10
C398		.1UF 50V 5% X7R 0805 T/R	0.5*
C400		0.1UF 500V 10% X7R 1210 T/R	I 5*
C401	130636-103J5	0.01UF 500V 5% X7R 1206 T/R	I 4*
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SCALE NONE

SIZE DWG NO.

126218-14

PROJ NO. MD425DØ SHEET 18 DF 48 REV

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		PARTS LIST	
REF DES	C. P. N.	DESCRIPTION	MAP LOC.
C33B		.1UF 50V CHIP CAP 10% 0805 X7R	A 9
C339		0.22UF 50V 5% X7R 1206 T/R	N 2*
C340	A11427-104K2		M 4*
C341		.1UF 50V CHIP CAP 10% 0805 X7R	M 4*
C342		.1UF 50V CHIP CAP 10% 0805 X7R	M 5*
C343	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	M 5*
C344		.1UF 50V CHIP CAP 10% 0805 X7R	0.2*
C345		.1UF 50V CHIP CAP 10% 0805 X7R	0 2*
C346		.1UF 50V CHIP CAP 10% 0805 X7R	LB
C347	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	L 8
C34B	C10325-6	2200.PF 250VAC 20% FILM Y2	C 11
C349	126539-1	10UF 16V 5.5MM HIGH SMD	M 4
C350		.1UF 50V CHIP CAP 10% 0805 X7R	N 6*
C351		.1UF 50V CHIP CAP 10% 0805 X7R	0.6*
C352		.1UF 50V CHIP CAP 10% 0805 X7R	M 6*
C353	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	0 2*
C354	126551-1	100UF 25V 5.5MM HIGH SMD	N 4
C355		.1UF 50V CHIP CAP 10% 0805 X7R	N 2*
C356		.1UF 50V CHIP CAP 10% 0805 X7R	M 5
C357	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	M 5
C358		.1UF 50V CHIP CAP 10% 0805 X7R	B 9*
C360		0.1UF 500V 10% X7R 1210 T/R	I 9*
C361		0.01UF 500V 5% X7R 1206 T/R	I 9*
C363		0.1UF 500V 10% X7R 1210 T/R	H 7*
C365		0.1UF 500V 10% X7R 1210 T/R	I 7*
C366		0.1UF 500V 10% X7R 1210 T/R	I 12*
C367	-	0.01UF 500V 5% X7R 1206 T/R	I 12*
C369		0.1UF 500V 10% X7R 1210 T/R	I 10*
C371		0.1UF 500V 10% X7R 1210 T/R	I 10*
C372	127483-1	6300UF 125V 9A LOW ESL 5 PIN	L 10
C373	127483-1	6300UF 125V 9A LOW ESL 5 PIN	L 12
C374		0.1UF 500V 10% X7R 1210 T/R	I 9*
C375		0.01UF 500V 5% X7R 1206 T/R	I 7*
C377		0.1UF 500V 10% X7R 1210 T/R	H 12*
C378		0.01UF 500V 5% X7R 1206 T/R	I 10*
C380		0.1UF 500V 10% X7R 1210 T/R	I 8*
C382	130636-104K6	0.1UF 500V 10% X7R 1210 T/R	I 9*
C3B4		0.1UF 500V 10% X7R 1210 T/R	I 11*
C3B6		0.1UF 500V 10% X7R 1210 T/R	I 12*
C3B7		.1UF 50V 5% X7R 0805 T/R	J 9
C388		.1UF 50V 5% X7R 0805 T/R	J 9
C390		.1UF 50V 5% X7R 0805 T/R	J 11
C391		.1UF 50V 5% X7R 0805 T/R	J 11
C397		.01UF 250V 5%MTL POLY FILM T/A	N 10
C398		.1UF 50V 5% X7R 0805 T/R	0.5*
C400		0.1UF 500V 10% X7R 1210 T/R	I 5*
C4Ø1		0.01UF 500V 5% X7R 1206 T/R	I 4*
	100000 10000	0.010/ 000V 0/4 /W/1 / 200 T/	
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51ZE A	DWG	ND.		1	2621	8 - 1	4		REV A
SCAL	E NO	DNE	PROJ	NO.	MD425DØ	SHEET	18 DF	48	



		PARTS LIST	
REF DES	C. P. N.	DESCRIPTION	MAP LOC.
C403		0.1UF 500V 10% X7R 1210 T/R	I 6*
C404	130636-104K6	0.1UF 500V 10% X7R 1210 T/R	H 6*
C407	130636-104K6	0.1UF 500V 10% X7R 1210 T/R	I 2*
C408	130636-103J5	0.01UF 500V 5% X7R 1206 T/R	I 1*
C409	130636-104K6	0.1UF 500V 10% X7R 1210 T/R	I 3*
C410	130636-104K6	0.1UF 500V 10% X7R 1210 T/R	I 3*
C413	130636-104K6	0.1UF 500V 10% X7R 1210 T/R	I 4*
C414	130636-103J5	0.01UF 500V 5% X7R 1206 T/R	I 6*
C416	126551-1	100UF 25V 5.5MM HIGH SMD	КБ
C417	126551-1	100UF 25V 5.5MM HIGH SMD	K 6
C418	126551-1	100UF 25V 5.5MM HIGH SMD	K 6
C419	126551-1	100UF 25V 5.5MM HIGH SMD	K 6
C421	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	K 6
C422	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	K 4
C423	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	P 4*
C424	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	P 4*
C425	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	0.3*
C426	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	0 3
□427	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	P 3*
C428	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	P 3*
C429	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	м 3*
C430	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	м 3*
C431	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	M 4*
C432	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	M 4*
C435	130636-104K6	0.1UF 500V 10% X7R 1210 T/R	H 2*
C436	130636-103J5	0.01UF 500V 5% X7R 1206 T/R	I 3*
C437	130636-104K6	0.1UF 500V 10% X7R 1210 T/R	I 4*
C438	130636-104K6	0.1UF 500V 10% X7R 1210 T/R	I 5*
C440	130636-104K6	0.1UF 500V 10% X7R 1210 T/R	I 1*
C441	130636-104K6	0.1UF 500V 10% X7R 1210 T/R	I 3*
C446	127483-1	6300UF 125V 9A LOW ESL 5 PIN	L 4
□447	127483-1	6300UF 125V 9A LOW ESL 5 PIN	L 2
C449	A11427-104J2	.1UF 50V 5% X7R 0805 T/R	J 5
C453	A11427-104J2	.1UF 50V 5% X7R 0805 T/R	J 5
C454	A11427-104J2	.1UF 50V 5% X7R 0805 T/R	J 3
C455	A11427-104J2	.1UF 50V 5% X7R 0805 T/R	J 3
C497	A10434-103JD	.01UF 250V 5%MTL POLY FILM T/A	0 10
C49B	A11427-104J2	.1UF 50V 5% X7R 0805 T/R	D 3*
C500	103191-1	0.47UF 50V Z5U 1210 T/R	N 1
C501	103191-1	0.47UF 50V Z5U 1210 T/R	0 1
C502	A11369-221K2	220.PF 50V 10% NPO MLC 0805	N 1
C600	103191-1	0.47UF 50V Z5U 1210 T/R	N 1
C601	103191-1	0.47UF 50V Z5U 1210 T/R	D 1
C602	A11369-221K2	220.PF 50V 10% NPO MLC 0805	N 1
C700	C 7099-2	0.47UF 250VAC 50-400HZ RFI CAP	E 1
C701	A11427-102K2	.001UF 50V 10% X7R CER CHIP	B B*
C702		OPEN	C 8*

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A	DWG	NO.		,	12621	8 - 1	4		REV A
SCALI	E NO	DNE	PROJ	ND.	MD425D0	SHEET	19 OF	48	



		PARTS LIST	
REF DES	C.P.N.	DESCRIPTION	MAP LOC.
D1		INSTALLED ON PREVIOUS ASSEMBLY	F 1
D2		INSTALLED ON PREVIOUS ASSEMBLY	F 5
DЗ		INSTALLED ON PREVIOUS ASSEMBLY	F 11
D4		INSTALLED ON PREVIOUS ASSEMBLY	F 10
D5		INSTALLED ON PREVIOUS ASSEMBLY	F 12
D6		INSTALLED ON PREVIOUS ASSEMBLY	F 12
D7	126549-1	DIODE,30V 200MA SCHOTTKY SOT23	D 4
D8	126549-1	DIODE,30V 200MA SCHOTTKY SOT23	D 3
D9	126549-1	DIODE, 30V 200MA SCHOTTKY SOT23	B 9
D10	126549-1	DIODE,30V 200MA SCHOTTKY SOT23	B 9
D11	C 9283-0	DIODE, MMBD4148/914 SOT-23 SMT	E 4
D12	126549-1	DIODE, 30V 200MA SCHOTTKY SOT23	B 9
D13	126549-1	DIODE, 30V 200MA SCHOTTKY SOT23	B 9
	C 9283-0	DIODE, MMBD4148/914 SOT-23 SMT	L 3*
D14 D15	126549-1	DIODE, 30V 200MA SCHOTTKY SOT23	В 8
D16	120373 1	OPEN SSINE THE STATE OF THE STA	B 11
D17		OPEN	A 8
D18	126549-1	DIODE,30V 200MA SCHOTTKY SOT23	A 4
	126549-1	DIODE, 30V 200MA SCHOTTKY SOT23	А З
D19 D22	125255-1	DIODE, ULTRAFAST 200V 1A SMA	H 14
	C 9283-0	DIODE, MMBD4148/914 SOT-23 SMT	0 1
D24	C 9283-0	DIODE, MMBD4148/914 SOT-23 SMT	0 1
D25		DIODE. 30V 200MA SCHOTTKY SOT23	B 9
D26	126549-1 C 9283-0	DIODE, MMBD4148/914 SOT-23 SMT	B 9
D27	C 9283-0	DIODE, MMBD4148/914 SOT-23 SMT	C 2
D33	126549-1	DIODE, 30V 200MA SCHOTTKY SOT23	L 6
D34		DIODE, SCHOTTKY 40V 1A SMA	L 6
D35	125593-1	DIODE, SCHOTTKY 40V 1A SMA	L 7
D36	125593-1	TL431ACLP ADJ PREC RENC T/A	м з
D37	C 9929-8	TL431ACLP ADJ PREC RENC T/A	М 3
D38	C 9929-8	DIODE, 30V 200MA SCHOTTKY SOT23	B 10
D43	126549-1	DIODE,30V 200MA SCHOTTKY SOT23	B 7
D44	126549-1	DIODE,30V 200MA SCHOTTKY SOT23	A 4
D45	126549-1	DIODE, MMBD4148/914 SOT-23 SMT	N 13
D100	C 9283-0	DIODE, MMBD4148/914 SOT-23 SMT	N 13
D101	C 9283-0	DIODE, MMBD4148/914 SOT-23 SMT	N 12
D102	C 9283-0 C 9283-0	DIODE, MMBD4148/914 SOT-23 SMT	N 12
D103		DIODE, MMBD41487514 301-23 3M1 DIODE, 30V 200MA SCHOTTKY SOT23	P 5
D104	126549~1	DIODE, MMBD4148/914 SOT-23 SMT	P 6
D105	C 9283-0	DIODE, MMBD4148/914 SOT-23 SMT	P 6
D106	C 9283-0		, b N 5*
	126549-1	DIODE, 30V 200MA SCHOTTKY SDT23	N 7
D109	C 9929-8	TL431ACLP ADJ PREC RFNC T/A	P 5
D110	C 9283-0	DIODE, MMBD4148/914 SOT-23 SMT	M 5
D120	C 9283-0	DIODE, MMBD4148/914 SOT-23 SMT	
D121	C 9283-0	DIODE, MMBD4148/914 SOT-23 SMT	M 5
D122	C 92B3-0	DIODE, MMBD4148/914 SOT-23 SMT	N 2
D123	C 9283-0	DIODE, MMBD4148/914 SOT-23 SMT	L 7
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SIZE	DWG NO.	126218-14			
SCAL	E NONE	PROJ NO.	MD425DØ	SHEET 20 OF 48	



		PARTS LIST	
REF DES	C. P. N.	DESCRIPTION	MAP LOC.
D124	C 9283-0	DIODE, MMBD414B/914 SOT-23 SMT	L B
D125	C 9283-0	DIODE, MMBD4148/914 SOT-23 SMT	LB
D126	C 9283-0	DIODE, MMBD4148/914 SOT-23 SMT	мв
D127	C 9283-0	DIODE, MMBD4148/914 SOT-23 SMT	мв
D128	€ 9283-0	DIODE, MMBD4148/914 SOT-23 SMT	M 5
D129	125620-1	DIODE, FAST RECOVERY 400V 1A	N 10
D130	C 9283-0	DIODE, MMBD4148/914 SOT-23 SMT	L B
D131	125593-1	DIODE, SCHOTTKY 40V 1A SMA	K 7
D132	125593-1	DIODE, SCHOTTKY 40V 1A SMA	K 7
D133	C 9283-0	DIODE, MMBD4148/914 SOT-23 SMT	M 5
D134	C 9283-0	DIODE, MMBD4148/914 SOT-23 SMT	L 11
D138		OPEN	J B
D139		OPEN	J 9
D140		INSTALLED ON PREVIOUS ASSEMBLY	J 9
D141		INSTALLED ON PREVIOUS ASSEMBLY	J B
D142		INSTALLED ON PREVIOUS ASSEMBLY	J 11
D143		INSTALLED ON PREVIOUS ASSEMBLY	J 11
D144		OPEN	J 11
D145		OPEN	J 11
D146	C 9283-0	DIODE, MMBD4148/914 SOT-23 SMT	M 4
D200	C 9283-0	DIODE, MMBD4148/914 SOT-23 SMT	0 13
D2Ø1	C 9283-0	DIODE, MMBD4148/914 SOT-23 SMT	0 13
D202	C 9283-0	DIDDE, MMBD4148/914 SDT-23 SMT	0 12
D203	C 9283-0	DIODE, MMBD4148/914 SOT-23 SMT	D 12
D204	126549-1	DIODE, 30V 200MA SCHOTTKY SOT23	Р 3
D205	C 9283-0	DIODE, MMBD4148/914 SOT-23 SMT	P 4
D206	C 9283-0	DIODE, MMBD4148/914 SOT-23 SMT	P 4
D207	126549-1	DIODE,30V 200MA SCHOTTKY SOT23	N 4*
D209	C 9929-8	TL431ACLP ADJ PREC RFNC T/A	P 7
D210	C 9283-0	DIODE, MMBD4148/914 SOT-23 SMT	Р 3
D222	C 9283-0	DIODE, MMBD4148/914 SOT-23 SMT	N 2
D223	C 9283-0	DIODE, MMBD4148/914 SOT-23 SMT	L 7
D229	125620-1	DIODE, FAST RECOVERY 400V 1A	P 10
D231	125593-1	DIODE, SCHOTTKY 40V 1A SMA	K 6
D232	125593-1	DIODE, SCHOTTKY 40V 1A SMA	K 6
D23B		OPEN	J 6
D239		OPEN	J 5
D240		INSTALLED ON PREVIOUS ASSEMBLY	J 5
D241		INSTALLED ON PREVIOUS ASSEMBLY	J 5
D242		INSTALLED ON PREVIOUS ASSEMBLY	J 2
D243		INSTALLED ON PREVIOUS ASSEMBLY	J 3
D244		OPEN	J 2
D245		OPEN	J 3
D246	C 9283-Ø	DIODE, MMBD4148/914 SOT-23 SMT	м з
D500		OPEN	N 1
D600		OPEN	D 1
D700	126549-1	DIODE, 30V 200MA SCHOTTKY SOT23	ВВ
	1 200 . 0 .		
			

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SIZE	DWG NO.	126218-14	REV A
SCAL	E NONE	PROJ NO. MD425DØ SHEET 21 OF 48	



		PARTS LIST	
REF DES		DESCRIPTION	MAP LOC.
D701	C 8369-8	1N747A 3.6V 5% ZENER .5W T/A	C 9
E1	102476-1	LED, SMT R/A GREEN	L 1
E2	102477-1	LED, SMT R/A RED	L 1
E3	102477-1	LED, SMT R/A RED	M 1
E4	102476-1	LED, SMT R/A GREEN	K 1
E5	102476-1	LED, SMT R/A GREEN	N 1
E6	102477-1	LED, SMT R/A RED	D 1
E7	102477-1	LED, SMT R/A RED	0 1
FB1	100868-1	FERRITE, 70 OHM 25% 1206 SMT	D 7*
FB2	100868-1	FERRITE, 70 OHM 25% 1206 SMT	E 4*
FB3	100868-1	FERRITE, 70 OHM 25% 1206 SMT	A 4*
HS1	C 9918-1	TO220 VERT CLIP-ON HEATSINK	D 7
HS2	128009-1	ASM, CE3000 PS PRIMARY HS	F 1
H53	128010-1	ASM, CE3000 PS DIODE HS	F 10
HS4	128011-1	ASM, CE3000 BCA OUTPUT HS	H 7
HS5	128011-1	ASM, CE3000 BCA OUTPUT HS	H 1
J 1	101031-1	.250 FASTON, AUTO INSERTABLE	D 1
J 2	101031-1	.250 FASTON, AUTO INSERTABLE	D 1
J3	101031-1	.250 FASTON, AUTO INSERTABLE	K 8
J 4	101571-1	HDR, 2 POS .1 CTR MTA SHRD	H 14
J5	127563-3	PWA, CE4000 POT BOARD	0.2
J6	130640-1	HEADER, 3M LATCH 26 PIN .1X.1	0.2
J7		OPEN	Q 6
JB		OPEN	K 14
J9	A10020-34	6-32 X .375 PCB CAPTIVE STUD	K 14
J11	101031-1	.250 FASTON, AUTO INSERTABLE	мв
J12	101031-1	.250 FASTON, AUTO INSERTABLE	N B
J13	101031-1	.250 FASTON, AUTO INSERTABLE	K 11
J14	101031-1	.250 FASTON, AUTO INSERTABLE	K 5
J15	101031-1	.250 FASTON, AUTO INSERTABLE	O B
J16	101031-1	.250 FASTON, AUTO INSERTABLE	P 8
J17	101031-1	.250 FASTON, AUTO INSERTABLE	K 2
J18		OPEN	M 14
J19	A10020-34	6-32 X .375 PCB CAPTIVE STUD	L 14
J20		OPEN	M 1
J21		OPEN	0 1
J22	101031-1	.250 FASTON, AUTO INSERTABLE	E 4
J23	101031-1	.250 FASTON, AUTO INSERTABLE	D 2
J24	127030-1	CONN, 7 PIN RECEPTACLE	A 7
J25	127031-1	CONN, 15 PIN RECEPTACLE	A 10
J26	101031-1	.250 FASTON, AUTO INSERTABLE	C 2
J27	101031-1	.250 FASTON, AUTO INSERTABLE	B 2
J28	101031-1	.250 FASTON, AUTO INSERTABLE	B 2
J28	101031-1	.250 FASTON, AUTO INSERTABLE	B 2
J30		OPEN	0.5
K1	128135-1	RELAY, 30A 250V 12VCOIL PCB MT	C 2
<u>L1</u>	127988-1	CHOKE, 10UH < 0, 10HM SMT , 3" DIA	I 13
<u> </u>	12/300 1	CHERTIFOR TO TOTAL SMIT TO DAY	

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51ZE A	DWG	NO.	126218-14					
SCALI	= N0	DNE	PROJ	ND.	MD425DØ	SHEET 22 OF	48	



		PARTS LIST	
REF DES	C.P.N.	DESCRIPTION	MAP LOC.
L2	128179-1	WIRE, 12AWG JUMPER Ø.8"	E 13
L3	127988-1	CHOKE, 10UH < 0.10HM SMT .3" DIA	M 2
L 4	127988-1	CHOKE, 10UH < 0.10HM SMT .3" DIA	L 5
L5	128179-1	WIRE, 12AWG JUMPER Ø.8"	F 13
L6	128179-1	WIRE, 12AWG JUMPER Ø.8"	F 13
L7	127988-1	CHOKE, 10UH < 0.10HM SMT .3" DIA	M 2
	127988-1	CHOKE, 10UH < 0.10HM SMT .3" DIA	L 5
LB			
L9	128179-1	WIRE, 12AWG JUMPER Ø.8"	E 13
L10	128179-1	WIRE, 12AWG JUMPER 0.8"	E 13
L11	128179-1	WIRE, 12AWG JUMPER Ø.8"	E 13
L100	C 5644-7	CHOKE, 33 UH 10% T/R	0.6
L101	131286-1	COIL, 2UH ADJUSTABLE	M 9
L102	131285-1	COIL, 1UH ADJUSTABLE	N 10
L103	125600-1	INDUCTOR, 1.01UH 30A AIRCORE	L 13
L104	125600-1	INDUCTOR, 1.01UH 30A AIRCORE	N 13
L105	127988-1	CHOKE, 10UH < 0.10HM SMT .3" DIA	K 12
L200	C 5644-7	CHOKE, 33 UH 10% T/R	0.4
L201	131286-1	COIL, 2UH ADJUSTABLE	P 9
L202	131285-1	COIL, 1UH ADJUSTABLE	P 10
L203	125600-1	INDUCTOR, 1.01UH 30A AIRCORE	0 14
L204	125600-1	INDUCTOR, 1.01UH 30A AIRCORE	P 13
L205	127988-1	CHOKE, 10UH < 0.10HM SMT .3" DIA	K 1
Q1	127300	INSTALLED ON PREVIOUS ASSEMBLY	F 3
02		INSTALLED ON PREVIOUS ASSEMBLY	F 4
	127169-1	MOSFET, P-CH 50V 150MA SOT-23	С 3
Q3	12/109-1		F 7
Q4 Q=		INSTALLED ON PREVIOUS ASSEMBLY	
Q5		INSTALLED ON PREVIOUS ASSEMBLY	F 7
06		INSTALLED ON PREVIOUS ASSEMBLY	F 9
Q 7		INSTALLED ON PREVIOUS ASSEMBLY	F 8
Q8	C10421-3	FET, 60V N-CH 2N7002LT1 SOT-23	В 3
09	C10421-3	FET, 60V N-CH 2N7002LT1 SOT-23	C 3
010	C 7448-1	MMBT3904 CHIP NPN	C 8
Q1 1	C10421-3	FET, 60V N-CH 2N7002LT1 SOT-23	B 3
Q12	C 7448-1	MMBT3904 CHIP NPN	C 8
Q13	C 7448-1	MMBT3904 CHIP NPN	D 1
Q14	C10421-3	FET, 60V N-CH 2N7002LT1 SOT-23	C 3
Q15	C10421-3	FET, 60V N-CH 2N7002LT1 SOT-23	□ 7
Q16	125798-1	TRANSISTOR, MMBT3906LTI PNP SMT	C B
Q1 <i>7</i>	C 744B-1	MMBT3904 CHIP NPN	D 4
Q18	C 744B-1	MMBT3904 CHIP NPN	D 4
Q19		OPEN	D 4
020	C 744B-1	MMBT3904 CHIP NPN	D 1
021	125798-1	TRANSISTOR, MMBT3906LTI PNP SMT	B 9
022	C10421-3	FET, 60V N-CH 2N7002LT1 50T-23	C 8
Q100	C 744B-1	MMBT3904 CHIP NPN	P 6
	125798-1	TRANSISTOR, MMBT3906LTI PNP SMT	P 6
0101		MMBT3904 CHIP NPN	N 2
0103	C 744B-1	ININITI 19984 CUTE INCIN	14 2
			
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Parts 5-59



		PARTS LIST	
REF DES	C.P.N.	DESCRIPTION	MAP LOC.
Q104	126616-1	XSISTOR, 100V 2A DRLNGTN DPAK	I 13
Q105	126616-1	XSISTOR, 100V 2A DRLNGTN DPAK	I 14
Q106		INSTALLED ON PREVIOUS ASSEMBLY	J 9
Q107		INSTALLED ON PREVIOUS ASSEMBLY	78
Q108		INSTALLED ON PREVIOUS ASSEMBLY	J 12
Q109		INSTALLED ON PREVIOUS ASSEMBLY	J 11
Q11Ø		INSTALLED ON PREVIOUS ASSEMBLY	J 7
Q111		INSTALLED ON PREVIOUS ASSEMBLY	J 9
Q112		INSTALLED ON PREVIOUS ASSEMBLY	J 12
0113		INSTALLED ON PREVIOUS ASSEMBLY	J 10
Q115	C 744B-1	MMBT3904 CHIP NPN	M 4
0200	C 744B-1	MMBT3904 CHIP NPN	P 4
0201	125798-1	TRANSISTOR, MMBT3906LTI PNP SMT	P 4
Q203	C 7448-1	MMBT3904 CHIP NPN	N 2
0206	<u> </u>	INSTALLED ON PREVIOUS ASSEMBLY	J 5
Q207		INSTALLED ON PREVIOUS ASSEMBLY	J 6
Q207 Q208		INSTALLED ON PREVIOUS ASSEMBLY	J 2
		INSTALLED ON PREVIOUS ASSEMBLY	J 3
0209		INSTALLED ON PREVIOUS ASSEMBLY	J 5
0210			J 4
Q211		INSTALLED ON PREVIOUS ASSEMBLY	J 4
0212		INSTALLED ON PREVIOUS ASSEMBLY	
0213		INSTALLED ON PREVIOUS ASSEMBLY	J 3
0215	C 744B-1	MMBT3904 CHIP NPN	М 3
Q500	C 7448-1	MMBT3904 CHIP NPN	L 1
Q5Ø1	C 7448-1	MMBT3904 CHIP NPN	L 1
0600	C 744B-1	MMBT3904 CHIP NPN	N 1
Q6Ø1	C 744B-1	MMBT3904 CHIP NPN	D 1
0700	C10421-3	FET, 60V N-CH 2N7002LT1 SOT-23	B 9
Q7Ø1	C10421-3	FET, 60V N-CH 2N7002LT1 SQT-23	A 9
Q7Ø2	C 925B-2	BS170RLRM N-MOSFET 60V T/A	B 9
Q7Ø3	125798-1	TRANSISTOR, MMBT3906LTI PNP SMT	D 4
R1	101103-1	PTC, 6.0 OHM 265V	D 2
R2	101103-1	PTC, 6.0 OHM 265V	С 2
R3	C10450-2	.04 OHM 5W 3% WW VERT MNT	E 1
R4	C10450-2	.04 OHM 5W 3% WW VERT MNT	E 2
R5	C10450-2	.04 OHM 5W 3% WW VERT MNT	E 2
R6	A11368-10021	10K 1/10W 1% SMD 0805 T/R	С 3
R7	A11368-10521	10.5K .10W 1% MF 0805	E 3*
RB	A11368-10521	10.5K .10W 1% MF 0805	E 4*
R9	A11368-27432	274K .125W 1% CHIP RES T/R	С 3
R1Ø	A11368-10521	10.5K .10W 1% MF 0805	E 7*
R11		10.5K .10W 1% MF 0805	E 7*
R12		243KOHM .125W 1% CHIP RES T/R	А З
R13		10.5K .10W 1% MF 0805	E 9*
R14		10.5K .10W 1% MF 0805	E 8*
R15		3.01KOHM .125W 1% CHIP RES T/R	B B
R16	117.000 00112	OPEN	B 10
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	<u> </u>	PARTS LIST	
REF DES	C.P.N.	DESCRIPTION	MAP LOC.
R17	A11371-5R12	5.10HM 0.125W 5% 1206 T/R	E 7*
R18	A11368-24921	24.9K 1/10W 1% SMD 0805 T/R	D 4
R19	A10266-5141	510. KDHM .25W 5% CF T/R	D 2
R1X	C 8982-8	TO-220 XSISTOR HOLDER, PLASTIC	D 2
R20	A10266-5141	510. KOHM .25W 5% CF T/R	E 3
R21		158KOHM .1W 1% 0805 T/R	E 3
R22	A10265-45331		D 2
R23	A10265-45331		E 3
R24		121KOHM .125W 1% CHIP RES T/R	D 3*
R25		681KOHM .25W 1% MF T/R	D 4
R26		681KOHM .25W 1% MF T/R	D 4
R27	A10265-39231		С 4
R28	A10265-39231		С 4
R29		33.2 OHM 1% 0805 RES T/R	С 3
R2X	C 8982-8	TO-220 XSISTOR HOLDER, PLASTIC	С 2
R3Ø		16.2KOHM .1W 1% 0805 T/R	D 4*
R31		10K 1/10W 1% SMD 0805 T/R	□ 4*
R32		10 OHM 0.25W 1% 1210 T/R	E 4
R33		1 DHM 0.5W 1% 2010 T/R	E 3*
R34		1 OHM 0.5W 1% 2010 T/R	E 4*
R35		274K .125W 1% CHIP RES T/R	B 3
R36		374. OHM 1/10W 1% SMD 0805 T/R	D 4*
R37	A11371-1002	10.0HM 1/BW 5% SMD 1206 T/R	D 4
R38		4.02KOHM .125W 1% CHIP RES T/R	D 4*
R39		57.6KOHM 0.1W 1% 0805 T/R	D 4*
R40		4.02KOHM .125W 1% CHIP RES T/R	D 4
R41		20.KOHM .1W 1% CHIP 0805	р з
R42	126564-1	300HM 10W 5% VERT THICK FILM	I 14
R43		100 OHM 1% 0805 RES T/R	м 6*
R44	A11371-5R12	5.10HM 0.125W 5% 1206 T/R	E 7*
R45	A11371-5R12	5.10HM 0.125W 5% 1206 T/R	E 8*
R46	A11371-5R12	5.10HM 0.125W 5% 1206 T/R	E 9*
R47		10K 1/10W 1% SMD 0805 T/R	A B
R48	A11371-3005	30 OHM 1W 5% 2512 T/R	B 9
R49	A11368-82511	8.25KOHM .1W 1% CHIP 0805	B B
R5Ø		121KOHM, 0.10W 1% CHIP 0805	C B*
R51		90.9K, 0.10W 1% MF 0805	СВ
R52		15.4K 1/10W 1% SMD 0805 T/R	C 8
R53	A11368-15421		C 7
R54	A11388-13421 A11371-3005	30 OHM 1W 5% 2512 T/R	СВ
		33.2 OHM 1% 0805 RES T/R	B 3
R55 R56		10K 1/10W 1% SMD 0805 T/R	B 3*
		274K .125W 1% CHIP RES T/R	B 4
R57	A11368-27432	33.2 OHM 1% 0805 RES T/R	B 3
R58		100 OHM 1% 0805 RES T/R	D B
R59	A11368-10001	1 OHM .1W 1% 0805 T/R	D B
R60	A11368-1R001	33.2 OHM 1% 0805 RES T/R	B 3*
R61	A1136B-33R21	33.2 GINW 17 BOBS NES 1711	
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		PARTS LIST	
REF DES	C. P. N.	DESCRIPTION	MAP LOC.
R62		200K 0.1W 1% SMD CHIP 0805	АВ
R63		100 OHM 1% 0805 RES T/R	M 2*
R65		681KOHM .1W 1% 0805 T/R	B 7
R66		1.KOHM .1W 1% CHIP 0805	B 7
R67		3.92 KOHM, 1% MF .125W 1206	M 7*
R68		3.92 KOHM, 1% MF .125W 1206	N 7*
R69		3.92 KOHM, 1% MF .125W 1206	D 7*
R7Ø		3.92 KOHM, 1% MF .125W 1206	P 7*
R71		100 OHM 1% 0805 RES T/R	м 6*
R72		100.KOHM .1W 1% CHIP 0805	0 4
R73		1M OHM .1W 1% CHIP 0805	A 3
R74		6.04KOHM .1W 1% 0805 T/R	L 3*
R75	ATTOO SE	OPEN	A 11
R76	411368-10021	10K 1/10W 1% SMD 0805 T/R	B 3
R77		10K 1/10W 1% SMD 0805 T/R	A 3
R7B		127 KOHM .25W 1 MF T/R	A 2
R79		127 KOHM .25W 1 MF 1/R	A 2
	A10265-12/31 A11371-8211	820 OHM .1W 5% 0805 T/R	D 4
RBØ RB1		182 OHM .125W 1% 1206 T/R	B 7
		24.9K 1/10W 1% SMD 0805 T/R	B 3
RB2		39.0 OHM .5W 5% CF T/R	C 2
RB3	A10266-3902	715K Ø.1W 1% Ø8Ø5 T/R	L Z
RB4			B 8
R85		4.99K 1/10W 1% SMD 0805 T/R	I 14*
R86	A11371-3905	39 OHM 1W 5% 2512 T/R	H 13
R87	A11371-1052	1. MOHM .125W 5% CHIP RES T/R 5.11KOHM .1W 1% 0805 T/R	H 13
R88			O 1*
R90		392 KOHM .1W 1% 0805 T/R	B 10
R91		1.KOHM .1W 1% CHIP 0805	B 7
R92		499 OHM .1W 1% 0805 T/R	
R93		10K 1/10W 1% SMD 0805 T/R	0 1* C 7*
R94	-	1.KOHM .1W 1% CHIP 0805	
R95		10K 1/10W 1% SMD 0805 T/R	A 7
R98		301 OHM .1W 1% 0805 T/R	A 4*
R99	-	49.9KOHM .1W 1% CHIP 0805	B 4
R100		39.2K 0.5W 1% 2010 T/R	N 13
R101		1.78K 0.1W 1% 0805 SMD T/R	P 5*
R102	***************************************	1.KOHM .1W 1% CHIP 0805	P 5*
R103		11K 0.1W 1% 0805 T/R	P 5*
R104	· · · · · · · · · · · · · · · · · · ·	10K 1/10W 1% SMD 0805 T/R	P 5*
R105		10K 1/10W 1% SMD 0805 T/R	P 5*
R106		2.0K, 0.10W 1% MF 0805	
R107		23.2KOHM .1W 1% 0805 T/R 24.9K 1/10W 1% SMD 0805 T/R	0 6* P 6
R108			
R109		7.50K .10W 1% CHIP 0805	0.6
R110	A11368-23201		N 7
R111	1276B1-1	24.9K 0.5% 1206 THIN FILM T/R	0.6*
R112	A11368-10011	1.KDHM .1W 1% CHIP 0805	0.6
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SIZE	DWG NO.	126218-14					
SCAL	E NONE	PROJ	NO.	MD425DØ	SHEET 26 OF	48	



			PARTS LIST			т		
REF DES		DESCRIPTION					MAP LOC.	_
7113	A11368-10011	1,KQHM .1W 1%	CHIP 0805				05	_
3114	A11368-20011	2.0K, 0.10W 1					N 6	_
7115	127682-1	4.99K 0.1% 120					P 5*	_
₹116	127682-1	4.99K Ø.1% 120					P 5*	
₹117	127682-1	4.99K 0.1% 120		M T/R			0.6*	_
R11B		4.87K OHM .10					0 5*	
R119	A11368-84511	8.45K 0.1W 1%	0805 T/R				0 5*	
R120		8.45K Ø.1W 1%					05*	
7121		1.KOHM .1W 1%					P 6*	_
R122		1.KOHM .1W 1%					P 6*	
R123		1.KDHM .1W 1%					P 6*	_
R124		1.KOHM .1W 1%					P 6*	
3125		10K 1/10W 1% 5					P 6*	_
7126		10K 1/10W 1% 9					P 6*	_
R127		10K 1/10W 1% 9				+	D 1*	-
7128		100.KOHM .1W					0 6*	-
7129		RES, 1.1KOHM					0.5*	
7130		RES, 1.1KOHM					D 5*	_
R131		2.0K, 0.10W 1.					0.5*	_
R132		RES, 1.1KOHM				+	0 6*	
R133		RES, 1.1KDHM 2.0K, 0.10W 1.				+	0.6*	
R134		100 OHM 1% 0B					0.5	_
R135		100 OHM 1% 08		· · · · · ·			0.5	_
R136		100 OHM 1% 0B					0.6	-
R137		100 OHM 1% 0B			· ·	1	0.6	-
R138 R139		33.2 OHM 1% 0		1			N 7	-
R140		1 OHM 0.5W 1%					N 7	_
R140		1.07KOHM .1W		1			N δ	_
R141	126538-1	18 OHM 5W5% V					M 11	
R143	126538-1	18 OHM 5W5% V					M 11	_
R144	A11371-1105	11 OHM 1W 5%					M 12*	<u>-</u>
R145	A11371-1105	11 OHM 1W 5%					М 13*	F
R146	A11371-1105	11 OHM 1W 5%					N 13*	ŀ
R147	A11371-1105	11 OHM 1W 5%					N 12*	F
R14B	A11368-10013	1K Ø.25W 1% 1	210 T/R				M 12	
R149	126538-1	18 OHM 5W5% V	ERT THICK F	ILM	-		N 13	
R150	126538-1	18 OHM 5W5% V	ERT THICK F	ILM			N 13	
R151	A11368-10031	100.KOHM .1W	1% CHIP 080	15			0 2*	
R152		OPEN					N 12	
R153		OPEN					N 12	
R154	A11368-15031	150K 1/10W 1%	SMD 0805	/R			N 6	
R155	A1136B-10001	100 OHM 1% 0B	05 RES T/R				N_6	
R156	A11368-20031	200K 0.1W 1%	SMD CHIP 08	805			N 6	_
R157	A1136B-20021	20.KOHM .1W 1					N B	_
R158	A11368-12741	1.27MOHM .1W					N 6	_
R159	A11368-51111	5.11K 1/10W 1	% SMD 0805	T/R			N 7	
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l .		PARTS LIST	
REF DES	L B N	DESCRIPTION	MAP LOC.
R160	C10540-0	10.KOHM TOP ADJUST TRIMMER T/R	M 6
R161		2.0K, 0.10W 1% MF 0805	M 7*
		3.01K 1/10W 1% SMD 0805 T/R	M 7*
R162			M 7*
R163		4.75KOHM 0.10W 1% CHIP 0805	N 7*
R164		5.62KOHM .1W 1% 0805 T/R	N 7*
R165		1.KOHM .1W 1% CHIP 0805	M 7*
R166		1.KOHM .1W 1% CHIP 0805	N 7*
R167		1.KOHM .1W 1% CHIP 0805	N 6*
R168		44.2K 0.1W 1% 0805 T/R	N 6*
R169		2.61K 0.1W 1% 0805 T/R	N 5
R17Ø	C 9779-7	100KOHM 4MM CERMET TRIM SMT TR	
R171		100.KOHM .1W 1% CHIP 0805	N 6*
R172		100 OHM 1% 0805 RES T/R	N 6*
R173		100 OHM 1% 0805 RES T/R	N 6*
R174		105KOHM .1W 1% 0805 T/R	0 4*
R175		1.91KOHM .1W 1% 0805 T/R	0 4*
R176	A11368-19111	1.91KOHM .1W 1% 0805 T/R	0.5*
R177	A11368-10031	100.KOHM .1W 1% CHIP 0805	05*
R17B	C 9777-1	1 KOHM 4MM CERMET TRIM SMT T/R	05
R179	A11368-13011	1.3KOHM .1W 1% 0805 T/R	0.5
R180	A11368-25511	2.55KOHM .1W 1% 0805 T/R	0 5*
R181	A1136B-15011	1.5K 1/10W 1% SMD 0805 T/R	0.5*
R182	A11368-16221	16.2KDHM .1W 1% ØBØ5 T/R	0 5*
R183	A11368-22111	2.21KOHM .1W 1% CHIP 0805	0_5*
R184		8.25KOHM .1W 1% CHIP 0805	0.5*
R185	A11368-42211	4.22KOHM .1W 1% 0805 T/R	0 5*
R186	A11368-25511	2.55KOHM .1W 1% 0805 T/R	0.5*
R187	A11368-60411	6.04KOHM .1W 1% 0805 T/R	0.5*
R188	A1136B-10021	10K 1/10W 1% SMD 0805 T/R	P 6*
R189	A11368-10021	10K 1/10W 1% 5MD 0805 T/R	P 6*
R190	A11371-1842	180.KOHM .125W 5% CHIP RES T/R	N 2*
R191	A11368-39231		N 2*
R192	A11368-10021	10K 1/10W 1% SMD 0805 T/R	N 2
R193		10K 1/10W 1% SMD 0805 T/R	0 2
R194	A11368-20021	20.KOHM .1W 1% CHIP 0805	P 5*
R195	127681-1	24.9K 0.5% 1206 THIN FILM T/R	0.6*
R196	127681-1	24.9K 0.5% 1206 THIN FILM T/R	0.6*
R197	127681-1	24.9K 0.5% 1206 THIN FILM T/R	О Б*
R198		715K 0.1W 1% 0805 T/R	N 12
R199		100.KOHM .1W 1% CHIP 0805	M 5*
R200		39.2K 0.5W 1% 2010 T/R	D 13
R201		1.78K Ø.1W 1% Ø8Ø5 SMD T/R	P 3*
R2Ø2		1.KOHM .1W 1% CHIP 0805	P 3*
R203		11K 0.1W 1% 0805 T/R	P 3*
R204		10K 1/10W 1% SMD 0805 T/R	P 3*
		10K 1/10W 1% SMD 0805 T/R	P 3*
R205 R206	A11368-70021		P 3*
17200	VIIODO ZEELI	2.00, 0.10, 17, 11, 0000	
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SIZE	DWG NO.	126218-14	REV A
SCAL	E NONE	PROJ NO. MD425DØ SHEET 28 OF 48	



DEE	[PARTS LIST	TMAR LOC
REF DES		DESCRIPTION	MAP LOC.
R207		23.2KOHM .1W 1% 0805 T/R 24.9K 1/10W 1% SMD 0805 T/R	P 4
R208			0 4
R209		7.50K .10W 1% CHIP 0805	0 7
R210		2320HM .1W 1% 0805 T/R	0 4*
R211	127681-1	24.9K 0.5% 1206 THIN FILM T/R	0 4
R212		1.KOHM .1W 1% CHIP 0805	0 4
R213		1.KOHM .1W 1% CHIP 0805 2.0K, 0.10W 1% MF 0805	N 5
R214	127682-1	4.99K 0.1% 1206 THIN FILM T/R	P 3*
R215	127682-1	4.99K 0.1% 1206 THIN FILM T/R	P 3*
R216	127682-1	4.99K 0.1% 1206 THIN FILM T/R	0.4*
R217		4.87K DHM .10W 1% 0805	0 4*
R21B		8.45K 0.1W 1% 0805 T/R	0.4*
R219 R220		8.45K 0.1W 1% 0805 T/R	0.3*
		1.KOHM .1W 1% CHIP 0805	P 4*
R221		1.KOHM .1W 1% CHIP 0805	P 4*
R222 R223		1.KOHM .1W 1% CHIP 0805	P 4*
R223		1.KOHM .1W 1% CHIP 0805	P 4*
		10K 1/10W 1% SMD 0805 T/R	P 4*
R225 R226		10K 1/10W 1% SMD 0805 T/R	P 4*
R227		10K 1/10W 1% SMD 0805 T/R	P 4*
R229		RES, 1.1KOHM .1W 1% 0805	0.4*
R230		RES, 1.1KOHM .1W 1% 0805	D 4*
R231		2.0K, 0.10W 1% MF 0805	D 4*
R232		RES, 1.1KOHM .1W 1% 0805	D 4*
R233	A11368-11011	RES, 1.1KOHM .1W 1% 0805	0.3*
R234		2.0K, 0.10W 1% MF 0805	0 3*
R235		100 OHM 1% 0805 RES T/R	0 4
R236	A11368-10001	100 OHM 1% 0805 RES T/R	0 4
R237	A11368-10001	100 OHM 1% 0805 RES T/R	0.3
R238		100 OHM 1% 0805 RES T/R	0 3
R239		33.2 OHM 1% 0805 RES T/R	0.7
R240	<u> </u>	1 OHM 0.5W 1% 2010 T/R	0.7
R241		1.07KOHM .1W 1% 0805 T/R	0.6
R242	126538-1	18 OHM 5W5% VERT THICK FILM	P 11
R243	126538-1	18 OHM 5W5% VERT THICK FILM	P 11
R244	A11371-1105	11 DHM 1W 5% 2512 T/R	0 12*
R245	A11371-1105	11 OHM 1W 5% 2512 T/R	0 13*
R246	A11371-1105	11 OHM 1W 5% 2512 T/R	P 13*
R240	A11371-1105	11 OHM 1W 5% 2512 T/R	P 12*
R247		1K 0.25W 1% 1210 T/R	0 12
R248		18 OHM 5W5% VERT THICK FILM	0 13
R250	126538-1	18 OHM 5W5% VERT THICK FILM	0 13
	120330-1	OPEN	0 12
R252		OPEN	0 12
R253	A112E0-1E021	150K 1/10W 1% SMD 0805 T/R	0 12
R254		100 OHM 1% 0805 RES T/R	0.6
R255	A1136B-10001	אווט ששון אווט ששון אווא אווא אוווט ששון אוויט ששון	1 0 0
	 		
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REE DES	C. P. N.	PARTS LIST DESCRIPTION	MAP LOC.
		200K 0.1W 1% SMD CHIP 0805	0.6
R256			0.6
R257		20.KOHM .1W 1% CHIP 0805 1.27MOHM .1W 1% 0805 T/R	0.6
7258		5.11K 1/10W 1% SMD 0805 T/R	0.7
7259		10.KOHM TOP ADJUST TRIMMER T/R	P 6
7260	C10540-0		P 7*
R261		2.0K, 0.10W 1% MF 0805	0.7*
R262		3.01K 1/10W 1% SMD 0805 T/R	0 7*
7263		4.75KOHM 0.10W 1% CHIP 0805	P 7*
R264		5.62KOHM .1W 1% 0805 T/R	P 7*
R265		1.KOHM .1W 1% CHIP 0805	0.7*
7266		1. KOHM .1W 1% CHIP 0805	P 7*
7267		1. KOHM .1W 1% CHIP 0805	N 4*
7268		44.2K 0.1W 1% 0805 T/R	N 4*
R269		2.61K 0.1W 1% 0805 T/R	N 3
R27Ø		100KOHM 4MM CERMET TRIM SMT TR	N 4*
R271		100.KOHM .1W 1% CHIP 0805	N 4*
R272		100 OHM 1% 0805 RES T/R	N 4*
R273		100 OHM 1% 0805 RES T/R	0.3*
R274		105KOHM .1W 1% 0805 T/R	
R275		1.91KOHM .1W 1% 0805 T/R	0 3*
R276		1.91KOHM .1W 1% 0805 T/R	0 3*
R277		100.KOHM .1W 1% CHIP 0805	0.3*
R278	C 9777-1	1 KOHM 4MM CERMET TRIM SMT T/R	03
R279		1.3KOHM .1W 1% 0805 T/R	0 3
R2BØ		2.55KOHM .1W 1% 0805 T/R	0 3*
R2B1		1.5K 1/10W 1% SMD 0805 T/R	0.3*
R282		16.2KOHM .1W 1% 0805 T/R	0 3*
R2B3		2.21KDHM .1W 1% CHIP 0805	0 3*
R2B4		B.25KOHM .1W 1% CHIP 0805	0 3*
R285		4.22KOHM .1W 1% Ø8Ø5 T/R	0 3*
R286		2.55KOHM .1W 1% 0B05 T/R	0.3*
R287		6.04KOHM .1W 1% 0805 T/R	0 3*
R288		10K 1/10W 1% SMD 0805 T/R	P 4*
R289		10K 1/10W 1% SMD 0805 T/R	P 4*
R290		49.9KDHM .1W 1% CHIP 0805	0 1
R291		10K 1/10W 1% SMD 0805 T/R	0 1*
R292	A11371-6B14	680 OHM .5W 5% 2010 T/R	M 1
R293		10K 1/10W 1% SMD 0805 T/R	0 1*
R294		20.KOHM .1W 1% CHIP 0805	P 3*
R295	127681-1	24.9K 0.5% 1206 THIN FILM T/R	D 4*
R296	127681-1	24.9K 0.5% 1206 THIN FILM T/R	D 4*
R297	127681-1	24.9K 0.5% 1206 THIN FILM T/R	0 4*
R29B	A11368-71531	715K 0.1W 1% 0805 T/R	0 12
R299		100.KOHM .1W 1% CHIP 0805	N 3*
R300	A11368-49911	4.99K 1/10W 1% SMD 0805 T/R	L 3*
R301		OPEN	P 5*
R302	A11368-49911	4.99K 1/10W 1% SMD 0805 T/R	L 3*
			<u> </u>
NTROLLED C	OPY, COPIES OF THE	ED INK BY CM AS A	
ESE DRAWI	NGS AND SPECIFICA CROWN INTERNATION RE REPRODUCED, COR	DNAL, INC. AND A ZDZ B =	1 4



DEE DEC	E D N	PARTS LIST	TAMP LOC
REF DES	C.P.N.	DESCRIPTION 619 OHM .125W 1% CHIP RES T/R	MAP LOC.
R303			M 5*
R304		4.99K 1/10W 1% SMD 0805 T/R	M 5*
R305		4.99K 1/10W 1% SMD 0805 T/R 49.9KOHM .1W 1% CHIP 0805	0 1
R307	A11368-49921		0 1*
R308		10K 1/10W 1% 5MD 0805 T/R	M 4*
R309		75K OHM .25W 1% 1210	M 4*
R310	A11368-13011		M 4*
R311		33.2KOHM 0.25W 1% 1210 T/R	M 4*
R312	A11368-82521		
R313	A11368-39231		0 1*
R314		4.99K 1/10W 1% SMD 0805 T/R	M 4
R315		75K OHM . 25W 1% 1210	M 3*
R316		1.3KOHM .1W 1% Ø8Ø5 T/R	M 3*
R317	A11371-3041	300.KOHM .1W 5% CHIP 0805	L B
R318	A11368-30121	30.1K, 0.10W 1% MF 0805	L B
R319	A11368-63411		M 3*
R320		75K OHM .25W 1% 1210	M 4*
R321		10K 1/10W 1% SMD 0805 T/R	L 8
R322		11K 0.1W 1% 0805 T/R	L B
R323		200K 0.1W 1% SMD CHIP 0805	L B
R324	A1136B-56211	5.62KOHM .1W 1% 0805 T/R	I 13
R325	126564-1	300HM 10W 5% VERT THICK FILM	I 14
R326	A11368~10021	10K 1/10W 1% SMD 0805 T/R	A 4
R327	A1136B-10021	10K 1/10W 1% SMD 0805 T/R	A 3
R328		DPEN	мв
R329	A1136B-10021	10K 1/10W 1% SMD 0805 T/R	L B
R330	A11368-20031	200K 0.1W 1% SMD CHIP 0805	LB
R331	A11368-84511	B.45K 0.1W 1% 0805 T/R	LB
R332	A1136B-56211	5.62KOHM .1W 1% 0805 T/R	I 13
R333	A11371-3905	39 DHM 1W 5% 2512 T/R	I 14*
R334	A11371-3905	39 DHM 1W 5% 2512 T/R	I 14*
R335	A11368-20031	200K 0.1W 1% SMD CHIP 0805	L B_
R336	A11368-19621	19.6K DHM .1W 1% 0805 T/R	L B
R337	A11368-10021	10K 1/10W 1% SMD 0805 T/R	LB
R338	A11368-75011	7.50K .10W 1% CHIP 0805	B B
R339	A11368-60411	6.04KOHM .1W 1% 0805 T/R	L 11*
R340	A11368-10031	100.KOHM .1W 1% CHIP 0805	M 4*
R341	A11368-10011	1.KOHM .1W 1% CHIP 0805	N 4*
R342	A11368-20021	20.KOHM .1W 1% CHIP 0805	N 4*
R343	A1136B-61901	619.DHM 1/10W 1% SMD 0805 T/R	N 2*
R344	A11368-10041	1M OHM .1W 1% CHIP ØBØ5	N 2*
R345	A1136B-90921	90.9K, 0.10W 1% MF 0805	N 2*
R346	A11371-5141	510.KOHM .1W 5% CHIP 0805	N 2*
R347	A11368-33231	332K 0.1W 1% 0805 T/R	D 2*
R34B	A11368-22111	2.21KOHM .1W 1% CHIP 0805	P 2
R349	A11368-14031	140KOHM .1W 1% 0805 T/R	P 2
R35Ø	A11368-22111		P 2

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SIZE A	DWG	NO.	126218-14						REV A
5CAL	E N	DNE	PR01	NO.	MD425DØ	SHEET 3	31 OF	48	



		PARTS LIST	
REF DES	Г. Р. N.	DESCRIPTION	MAP LOC.
R351		140KOHM .1W 1% 0805 T/R	P 2
R352		75.OHM 1/10W 1% 5MD 0805 T/R	К 9
R353		75. DHM 1/10W 1% SMD 0805 T/R	К 9
R354		1.KOHM .1W 1% CHIP 0805	К 9
R355	A11371-3005	30 OHM 1W 5% 2512 T/R	К В*
R356	A11371-3005	30 OHM 1W 5% 2512 T/R	K 8*
R357	A11371-1104	RES 11.0 OHM .5W SMT	J 9
R358	A11371-3005	30 OHM 1W 5% 2512 T/R	K 9*
R359	A11371-3005	30 OHM 1W 5% 2512 T/R	K 9*
R360	A11371 3003	RES 11.0 OHM .5W SMT	J B
		RES 02 OHM 5W 3% VERTICAL	мв
R361	126901-1		N B
R362	126901-1	RES, .02 OHM 5W 3% VERTICAL	N 10
R363	126564-1	300HM 10W 5% VERT THICK FILM	N 9
R364	126564-1	300HM 10W 5% VERT THICK FILM	J 12
R365	A11371-1104	RES 11.0 OHM .5W SMT	
R366	A11371-3005	30 OHM 1W 5% 2512 T/R	K 12*
R367	A11371-3005	30 OHM 1W 5% 2512 T/R	K 12*
R36B	A11371-1104	RES 11.0 DHM .5W SMT	J 10
R369	A11371-3005	30 OHM 1W 5% 2512 T/R	K 11*
R37Ø	A11371-3005	30 OHM 1W 5% 2512 T/R	K 11*
R371		1.KOHM .1W 1% CHIP 0805	K 11
R372	A11371-1104	RES 11.0 OHM .5W SMT	K 12
R373		75.0HM 1/10W 1% SMD 0805 T/R	K 11
R374		75.0HM 1/10W 1% SMD 0805 T/R	K 11
R375	125539-1	1 OHM Ø.25W 5% 12Ø6	H 9*
R376	125539-1	1 OHM 0.25W 5% 1206	H 7*
R377	125539-1	1 OHM 0.25W 5% 1206	H 12*
R378	125539-1	1 OHM 0.25W 5% 1206	H 10*
R379	125539-1	1 OHM 0.25W 5% 1206	H 9*
R380	125539-1	1 OHM 0.25W 5% 1206	H 12*
R381	125539-1	1 OHM 0.25W 5% 1206	H 8*
R3B2	125539-1	1 OHM 0.25W 5% 1206	H 11*
R383	126901-1	RES, .02 OHM 5W 3% VERTICAL	м 8
R3B4	126901-1	RES, .02 OHM 5W 3% VERTICAL	N B
R385	A1136B-10041	1M OHM .1W 1% CHIP 0805	N 6*
R386		100.KOHM .1W 1% CHIP 0805	N 6*
R387	A11371-1104	RES 11.0 OHM .5W SMT	J 7
R388		OPEN	P 5*
R389	A11368-75R01	75.DHM 1/10W 1% 5MD 0805 T/R	N 6*
R390	A11368-75RØ1	75.0HM 1/10W 1% SMD 0805 T/R	N 6*
R391	A11368-75R01	75.OHM 1/10W 1% SMD 0B05 T/R	N 5*
R392	A11368-75R01	75.0HM 1/10W 1% SMD 0B05 T/R	N 5*
R393	A11371-1104	RES 11.0 DHM .5W SMT	M 7
R394	A11371-1104	RES 11.0 OHM .5W SMT	M 7
R395	A11368-10021	10K 1/10W 1% SMD 0805 T/R	N 6*
R396	A1136B-44221	44.2K 0.1W 1% 0805 T/R	P 5*
R397	A1136B-10021	10K 1/10W 1% SMD 0805 T/R	P 6*
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A	DWG	NO.		,	12621	8-1	4		REV A
SCAL	E N	ONE	PROJ	ND.	MD425DØ	SHEET 32	OF	4B	



		PARTS LIST	Ţ
REF DES	C.P.N.	DESCRIPTION	MAP LOC.
R398	A11368-28011	2.80KOHM .10W 1% MF 0805	P 5*
R399	A11368-23221	23.2KOHM .1W 1% 0805 T/R	0 5*
R400	A11368-10031	100.KOHM .1W 1% CHIP 0805	O 1*
R401	A11371-6B14	680 OHM .5W 5% 2010 T/R	0 1
R403	A11368-10021	10K 1/10W 1% SMD 0805 T/R	C 8
R4Ø4	A11368-20021	20.KOHM .1W 1% CHIP 0805	A 7
R405	A11368-10031	100.KOHM .1W 1% CHIP 0805	A 8
R407	A11368-15013	1.5KOHM .25W 1% 1210 T/R	K 1
R4Ø8	A11368-10021	10K 1/10W 1% SMD 0805 T/R	A 4*
R409		OPEN	B 9
R410	A11358-49901	499 OHM .1W 1% 0805 T/R	N 2
R411		33.2KOHM 0.25W 1% 1210 T/R	M 2*
R412		82.5K Ø.10W 1%CHIP Ø8Ø5	M 2*
R414		4.99K 1/10W 1% SMD 0805 T/R	M 2
R415	A11300 43311	OPEN	P 4*
	A11271-2041		м з*
R417	A11371-3041	300.KOHM .1W 5% CHIP 0805	N 3*
R418		30.1K, 0.10W 1% MF 0805	
R419		10K 1/10W 1% SMD 0805 T/R	A 8
R420	A11368-20011	2.0K, 0.10W 1% MF 0B05	B 8
R422		OPEN	P 4*
R424		22.6K OHM .1W 1% 0805 T/R	D 4
R425	A11368-49921	49.9KOHM .1W 1% CHIP 0805	A 4
R426		OPEN	A 10
R427		OPEN	B 10
R42B		OPEN	B 10
R429		OPEN	B 10
R430		OPEN	B 11
R431		OPEN	B 11
R432		OPEN	B 11
R433		OPEN	B 11
R434	A11368-10021	10K 1/10W 1% SMD 0805 T/R	A 7
R435	A11368-20011	2.0K, 0.10W 1% MF 0805	A 7
R436	A11368-49901	499 OHM .1W 1% 0805 T/R	0.2
R437	A11368-10001	100 OHM 1% 0805 RES T/R	□ 3*
R43B	A11368-10001	100 OHM 1% 0805 RES T/R	D 3*
R439	A11368-10001	100 OHM 1% 0805 RES T/R	□ 7*
R440		100.KOHM .1W 1% CHIP 0805	м з*
R441		1.KOHM .1W 1% CHIP 0805	N 3*
R442		20.KOHM .1W 1% CHIP 0805	N 3*
R443		1M OHM .1W 1% CHIP 0805	N 2*
		619.OHM 1/10W 1% SMD 0805 T/R	N 2*
		90.9K, 0.10W 1% MF 0805	N 2*
R445			
R446	A11371-5141	510.KOHM .1W 5% CHIP 0805	N 2*
R447	A11368-33231	332K 0.1W 1% 0805 T/R	0 2*
R448		10K 1/10W 1% SMD 0805 T/R	C 7
R449		4.22KDHM .1W 1% 0805 T/R	C 8
R450	A11368-10011	1.KOHM .1W 1% CHIP 0805	C 8
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		PARTS LIST	1:
	C.P.N.	DESCRIPTION	MAP LOC.
R451	A10266-3041	300.KOHM .25W 5% CF T/R	A 2
R452		75.0HM 1/10W 1% SMD 0805 T/R	K 5
R453		75.0HM 1/10W 1% SMD 0805 T/R	K 5
R454		1.KOHM .1W 1% CHIP 0805	K 5
R455	A11371-3005	30 OHM 1W 5% 2512 T/R	K 6*
R456	A11371-3005	30 OHM 1W 5% 2512 T/R	K 6*
R457	A11371-1104	RES 11.0 OHM .5W SMT	J 4
R45B	A11371-3005	30 OHM 1W 5% 2512 T/R	K 5*
R459	A11371-3005	30 OHM 1W 5% 2512 T/R	K 5*
R460	A11371-1104	RES 11.0 OHM .5W SMT	J 6
R461	126901-1	RES, .02 OHM 5W 3% VERTICAL	O B
R462	126901-1	RES, .02 OHM 5W 3% VERTICAL	PB
R463	126564-1	300HM 10W 5% VERT THICK FILM	0 10
R464	126564-1	300HM 10W 5% VERT THICK FILM	0.9
R465	A11371-1104	RES 11.0 OHM .5W SMT	J 2
R466	A11371-3005	30 OHM 1W 5% 2512 T/R	K 2*
R467	A11371-3005	30 OHM 1W 5% 2512 T/R	K 2*
R468	A11371-1104	RES 11.0 OHM .5W SMT	J 3
R469	A11371-3005	30 OHM 1W 5% 2512 T/R	K 3*
R470	A11371-3005	30 OHM 1W 5% 2512 T/R	К 3*
R471	A1136B-10011		K 2
R472	A11371-1104	RES 11.0 OHM .5W SMT	K 1
R473		75.0HM 1/10W 1% SMD 0805 T/R	К 3
R474	A11368-75R01	75.0HM 1/10W 1% SMD 0805 T/R	К 3
R475	125539-1	1 OHM 0.25W 5% 1206	H 5*
R476	125539-1	1 OHM 0.25W 5% 1206	Н Б*
R477	125539-1	1 OHM 0.25W 5% 1206	H 2*
R478	125539-1	1 OHM 0.25W 5% 1206	н з*
R479	125539-1	1 OHM 0.25W 5% 1206	H 4*
R480	125539-1	1 OHM 0.25W 5% 1206	H 2*
R481	125539-1	1 OHM 0.25W 5% 1206	H 5*
R482	125539-1	1 OHM 0.25W 5% 1206	н 3*
R483	126901-1	RES, .02 OHM 5W 3% VERTICAL	0.8
R484	126901-1	RES, .02 DHM 5W 3% VERTICAL	P 8
R485	A11368-10041	1M OHM .1W 1% CHIP 0805	N 4*
R486	A11368-10031	100.KOHM .1W 1% CHIP 0805	. N 4*
R4B7	A10266-3041	300.KOHM .25W 5% CF T/R	B 6
R488	A11368-17811	1.78K 0.1W 1% 0805 SMD T/R	B 9
R489	A11368-75R01	75.DHM 1/10W 1% SMD 0805 T/R	N 4*
R490	A11368-75R01	75.0HM 1/10W 1% SMD 0805 T/R	N 3*
R491	A11368-75RØ1	75.0HM 1/10W 1% SMD 0805 T/R	N 4*
R492	A11368-75RØ1	75.0HM 1/10W 1% SMD 0805 T/R	N 4*
R493	A11371-1104	RES 11.0 OHM .5W SMT	M 7
R494	A11371-1104	RES 11.0 OHM .5W SMT	M 7
R495	A11368-10021	10K 1/10W 1% SMD 0805 T/R	N 4*
R496	A1136B-44221	44.2K 0.1W 1% 0805 T/R	P 3*
R497	A11368-10021	10K 1/10W 1% SMD 0805 T/R	P 4*
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51ZE	DWG	NO.			12621	8 - 1	4		REV I
SCAL	E N	ONE	PROJ	NO.	MD425DØ	SHEET 3	34 OF	48	



DEC 255	5 D M	PARTS LIST	MAD 1 55	
	C.P.N.	DESCRIPTION	MAP LOC.	_
R498		2.80KOHM .10W 1% MF 0805	P 3*	_
R499		23.2KOHM .1W 1% 0805 T/R	0 4*	
R500		499KOHM .1W 1% 0805 T/R	<u> </u>	_
R501	A11371-0R02	Ø. OHM .125W 5% CHIP RES T/R	<u>E 7</u>	_
R502	A10266-5141	510. KOHM .25W 5% CF T/R	D 2	_
R5Ø3	A10266-5141	510. KOHM .25W 5% CF T/R	D 2	_
R504		OPEN	D 3	_
R505	A10266-2751	2.7 MOHM .25W 5% CF T/R	B 5	
R5Ø6	A10266-2441	240. KOHM .25W 5% CF T/R	D 14	
R507	A10266-2441	240. KOHM . 25W 5% CF T/R	C 14	
R5Ø8	A11371-3905	39 OHM 1W 5% 2512 T/R	J 14*	
R509	A11371-3905	39 OHM 1W 5% 2512 T/R	J 14*	
R510		2.0K, 0.10W 1% MF 0805	D 4	
R511		7.87K OHM Ø.10W 1% Ø805 T/R	D 4	
R512		1.2KOHM 1/8W 5% 5MD 1206 T/R	D 4	
R513		20.KOHM .1W 1% CHIP 0805	D 4	
R514		13KOHM .1W 5% 0805 T/R	D 4	_
R515		3.01K 1/10W 1% SMD 0805 T/R	D 4	
R516	711300 30111	OPEN	D 4*	
	A11368-20021	20.KOHM .1W 1% CHIP 0805	M 4	
R517 R518		3.01K 1/10W 1% SMD 0805 T/R	M 4	
		20.KOHM .1W 1% CHIP 0805	м 6	
R519		20.KOHM .1W 1% CHIP 0805	N 5	_
R522		20.KOHM .1W 1% CHIP 0805	A 9*	_
R523		20.KOHM .1W 1% CHIP 0805	A 9*	_
R524		274K .125W 1% CHIP RES T/R	A 9*	_
R525			A 9	
R526		3.92 KOHM, 1% MF .125W 1206	B 9*	
R527		1.78K 0.1W 1% 0805 SMD T/R	B 9	_
R528		1.KOHM .1W 1% CHIP 0805	B 9*	_
R529		1.KOHM .1W 1% CHIP 0805	B 9*	_
R530		3.01K 1/10W 1% SMD 0805 T/R	C B*	_
R531		30.1K. 0.10W 1% MF 0805	A 3	_
R532	A1136B-10001	100 OHM 1% 0805 RES T/R	A 3*	_
R533		OPEN		
R534		49.9KOHM .1W 1% CHIP 0805	A 3	
R535		20.KOHM .1W 1% CHIP 0805	M 5	
R536		5.62KDHM .1W 1% 0805 T/R	M 5*	_
R537		5.62KOHM .1W 1% 0805 T/R	M 5*	
R538		20.KOHM .1W 1% CHIP 0805	M 5	_
R539		4.99K 1/10W 1% SMD 0805 T/R	D B	_
R540		15.0K, 0.10W 1% MF 0805	D 8*	_
R541	A11368-10021	10K 1/10W 1% SMD 0805 T/R	D B	
R542		OPEN	D B*	_
R543	A11368-20031	200K 0.1W 1% SMD CHIP 0805	D 8*	_
R544	A11368-56211	5.62KOHM .1W 1% 0805 T/R	C 8	
R545	A1136B-12121	12.1KOHM .1W 1% Ø8Ø5 T/R	СВ	
R546	A11368-49911	4.99K 1/10W 1% SMD 0805 T/R	D 8	_
				_
				_
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NTROLLED O	OPY, COPIES OF TH	ED INK BY CM AS A		
HESE DRAWI	NGS AND SPECIFICA CROWN INTERNATION E REPRODUCED, COP	DNAL, INC. AND \ \ \ \ \ \ \ \ \	1 4	F
MALL NUI 🖰	S FOR THE MANUFAC			_



	I	PARTS LIST	
REF DES		DESCRIPTION	MAP LOC.
R547	A11371-0R02	0. DHM .125W 5% CHIP RES T/R	_ E 7
R548	A11371-0R02	0. OHM .125W 5% CHIP RES T/R	E 9
R549	A11371-0R02	0. OHM .125W 5% CHIP RES T/R	E 8
R55Ø	A11368-10021	10K 1/10W 1% SMD 0805 T/R	M 2*
R557		20.KOHM .1W 1% CHIP 0805	N 1
R558	A1136B-39231	392 KOHM .1W 1% 0805 T/R	N 1*
R559		499 OHM .125W 1% 1206 T/R	N 1*
R560		OPEN	N 1*
R561	A11368-20021	20.KOHM .1W 1% CHIP 0805	L 1*
R562	A11371-2724	2.7 KDHM .5W 5% 2010 T/R	L 1
R563		10K 1/10W 1% SMD 0805 T/R	0 1*
R564	7.1.200	OPEN	N 1*
R565	A11368-20021	20.KOHM .1W 1% CHIP 0805	N 2*
R566		20.KOHM .1W 1% CHIP 0805	L 1*
R567	A11371-2724	2.7 KOHM .5W 5% 2010 T/R	L 1
		20.KOHM .1W 1% CHIP 0805	N 1
R657 R658		392 KOHM .1W 1% 0805 T/R	N 1*
R659		499 OHM .125W 1% 1206 T/R	N 1*
	A11300 43302	OPEN	N 1*
R660	A11260-20021	20.KOHM .1W 1% CHIP 0805	N 1*
R661		2.7 KOHM .5W 5% 2010 T/R	N 1
R662	A11371-2724	10K 1/10W 1% SMD 0805 T/R	N 1*
R663	A11300-10021	OPEN	D 1*
R664	A442CD 28821	20.KOHM .1W 1% CHIP 0805	0.2*
R665		20.KOHM .1W 1% CHIP 0805	D 1*
R666		2.7 KOHM .5W 5% 2010 T/R	D 1
R667	A11371-2724	1.5KOHM .25W 1% 1210 T/R	B 9
R700			B 8*
R701		100 DHM 1% 0805 RES T/R	B 8*
R702	A11371-4741	470KOHM .1W 5% CHIP 0805	B 8
R703		12.1KOHM .1W 1% 0805 T/R	B 8*
R7Ø4		200K 0.1W 1% SMD CHIP 0805	B 9
R705	A11371-2023	2K OHM .25W 5% 1210 T/R	В 9
R706	A11371-2023	2K DHM . 25W 5% 1210 T/R	J B
R707	A11371-0R04	0 OHM 1/2W 5% 2010 T/R	J 9
R7ØB	A11371-0R04	0 OHM 1/2W 5% 2010 T/R	L 6
R709		10 OHM 0.25W 1% 1210 T/R	L 6
R710		10 OHM 0.25W 1% 1210 T/R	E 13
R711	128184-3	NTC. 20K #8 PRI SEC ISO	
R712		10K 1/10W 1% SMD 0805 T/R	E 12
R713	127517-2	NTC, 20K J 10%	C 13
R714		4.87K OHM .10W 1% 0805	C 12
R715		221 KDHM .1W 1% 0805 T/R	D 3*
R716		36.5K OHM 0.1W 1% 0805 T/R	D 3*
R717		3.57KOHM .125W 1% CHIP RES T/R	B 6
R718	A11371-0R04	0 OHM 1/2W 5% 2010 T/R	J 12
R719	A11371-0R04	0 OHM 1/2W 5% 2010 T/R	J 11
R720	A11371-1104	RES 11.0 DHM .5W SMT	J 10
R721	A11371-1104	RES 11.0 OHM .5W SMT	J 12
	1	1	1

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size A	DWG NO.	126218-14	REV A
SCAL	E NONE	PROJ NO. MD425DØ SHEET 36 OF	48



## ## ## ## ## ## ## ## ## ## ## ## ##			PARTS LIST	T
A11371-0R01				MAP LOC.
1724				-
17.73	7723	A11371-0R01	0 OHM 0.1W CHIP 0805	
1730	7724		OPEN	
AT AT AT AT AT AT AT AT	7730			
172	7731			
A11368-12021 10K 1716N	R732	A11368-10041	1M OHM .1W 1% CHIP 0805	
A1136B-10021	798	A11368-10021	10K 1/10W 1% SMD 0805 T/R	<u> </u>
No.	R799			
R802	RBØØ	A11368-10021	10K 1/10W 1% SMD 0805 T/R	B 3
REGS	RBØ1			B 3
No.	R802	A11368-49911	4.99K 1/10W 1% SMD 0805 T/R	
BBBB	R805	A11368-10021		C 7
MB809	R807	A11371-0R04	Ø OHM 1/2W 5% 2010 T/R	J 6
Aliana	R8Ø8	A11371-0R04	0 OHM 1/2W 5% 2010 T/R	J 5
MB11			RES 11.0 DHM .5W SMT	J 4
MB12	RB10	A11371-1104	RES 11,0 OHM .5W SMT	
No.	RB 1 1	A11371-1104	RES 11.0 OHM .5W SMT	
R814 A11371-0R04 0 OHM 1/2W 5% 2010 T/R	1812	A11371-1104	RES 11.0 OHM .5W SMT	
No.	RB13	A11371-0R04	Ø DHM 1/2W 5% 2010 T/R	
R831 Al1368-22111 2. 21KOHM. 1W 1% CHIP 0805 M 2 R832 Al1368-10041 1M OHM. 1W 1% CHIP 0805 N 4 R889 Al1368-10021 10K 1/10W 1% SMD 0805 T/R P 3* R899 Al1368-6721 26. 7KOHM. 1W 1% 0805 T/R P 3* R811 127518-3 NTC 20K J 10% #8 RING K 11 R72 127518-3 NTC 20K J 10% #8 RING K 3 R11 126012-1 XFMR. 400V/150V CT D 11 R2 127522-2 XFMR. 125KHZ 15V GATE DRIVE F 7 R3 127522-2 XFMR. 125KHZ 15V GATE DRIVE F 7 R14 126072-1 XFMR. CURRENT SENSE C 9 R14 126072-1 XFMR. CURRENT SENSE C 9 R14 101128-1 WIRE, K2 CURRENT SENSE C 9 R100 H43628-9 XFMR D350 100:1 CURRENT SENSE N 11 R100X 101128-1 WIRE, K2 CURRENT SENSE N 11 R100X 101128-1 WIRE, K2 CURRENT SENSE N 11 R101 126863-1 XFMR. BCA GATE SUPPLY K 7 R200 H43628-9 XFMR D350 100:1 CURRENT SENSE P 11 R201 126863-1 XFMR. BCA GATE SUPPLY K 7 R200 H43628-9 XFMR D350 100:1 CURRENT SENSE P 11 R201 126863-1 XFMR. BCA GATE SUPPLY K 7 R201 H2664-1 TEST POINT. SMT 1206 N 6 R27 127064-1 TEST POINT. SMT 1206 C 4 R27 127064-1 TEST POINT. SMT 1206 C 4 R27 127064-1 TEST POINT. SMT 1206 C 4 R27 127064-1 TEST POINT. SMT 1206 C 6 R28 00-1480-1480-1480-1480-1480-1480-1480-14	RB14			
R832 A11368-10041 IM OHM .1W 1% CHIP 0805 N 4 R889 A11368-10021 10K 1/10W 1% SMD 0805 T/R P 3* R899 A11368-26721 25.7KOHM .1W 1% 0805 T/R P 3* R899 A11368-26721 25.7KOHM .1W 1% 0805 T/R P 3* R811 127518-3 NTC 20K J 10% #8 RING K 11 R812 127518-3 NTC 20K J 10% #8 RING K 3 R11 126012-1 XFMR, 400V/150V CT D 11 R812 127522-2 XFMR, 125KHZ 15V GATE DRIVE F 7 R9 127522-2 XFMR, 125KHZ 15V GATE DRIVE F 9 R14 126072-1 XFMR, CURRENT SENSE C 9 R14 126072-1 XFMR CURRENT SENSE C 9 R14 12612-1 WIRE, K2 CURRENT SENSE C 9 R14 101128-1 WIRE, K2 CURRENT SENSE N 11 R100 H43628-9 XFMR D350 100:1 CURRENT SENSE N 11 R101 126863-1 XFMR, BCA GATE SUPPLY K 7 R101X 101128-1 WIRE, K2 CURRENT SENSE N 11 R101 126863-1 XFMR, BCA GATE SUPPLY K 7 R101X 101128-1 WIRE, K2 CURRENT SENSE N 11 R101 126863-1 XFMR, BCA GATE SUPPLY K 7 R101X 101128-1 WIRE, K2 CURRENT SENSE N 11 R101 126863-1 XFMR, BCA GATE SUPPLY K 7 R101 126863-1 XFMR, BCA GATE SUPPLY K 7 R101 127064-1 TEST POINT, SMT 1206 C 4 R17- 127064-1 TEST POINT, SMT 1206 C 6 R17- 127064-1 TEST POINT, SMT 1206 C 8 R17- 127064-1 TEST POINT	R83Ø			0 3*
R8B9 A1136B-10021 10K 1/10W 1% SMD 0805 T/R P 3* R8B9 A1136B-26721 26.7KOHM .1W 1% 0805 T/R P 3* R8B9 A1136B-26721 26.7KOHM .1W 1% 0805 T/R P 3* R8T1 12751B-3 NTC 20K J 10% #B RING K 11 R12 12751B-3 NTC 20K J 10% #B RING K 3* R11 126012-1 XFMR. 400V/150V CT D 11 R12 127522-2 XFMR. 125KHZ 15V GATE DRIVE E 7* R3 127522-2 XFMR. 125KHZ 15V GATE DRIVE E 7* R3 127522-2 XFMR. 125KHZ 15V GATE DRIVE E 9* R4 126072-1 XFMR. CURRENT SENSE C 9* R4X 10112B-1 WIRE. K2 CURRENT SENSE C 9* R100 H4362B-9 XFMR D350 100:1 CURRENT SENSE N 11* R101 12B-1 WIRE. K2 CURRENT SENSE N 11* R102 12B-1 WIRE. K2* R102 1	RB31			
### Alijabe-Z6721 Z6.7KOHM .1W 1% 2005 T/R	RB32			
NTC 20K J 10% #8 RING K 11	RBB9			<u> </u>
127518-3	R899	A1136B-26721		
1	RT 1	127518-3		
127522-2	RT2	127518-3	NTC 20K J 10% #8 RING	
127522-2	Г1	126012-1		
12	Γ2	127522-2		
TAX 101128-1 WIRE, K2 CURRENT SENSE C 9 T100 H43628-9 XFMR D350 100:1 CURRENT SENSE N 11 T100X 101128-1 WIRE, K2 CURRENT SENSE N 11 T101 126863-1 XFMR, BCA GATE SUPPLY K 7 T101X 101128-1 WIRE, K2 CURRENT SENSE K 7 T200 H43628-9 XFMR D350 100:1 CURRENT SENSE K 7 T200 H43628-9 XFMR D350 100:1 CURRENT SENSE P 11 T201 126863-1 XFMR, BCA GATE SUPPLY K 7 T21 127064-1 TEST POINT, SMT 1206 N 6 T22 127064-1 TEST POINT, SMT 1206 C 4 T23 127064-1 TEST POINT, SMT 1206 C 4 T23 127064-1 TEST POINT, SMT 1206 E 3 T25 127064-1 TEST POINT, SMT 1206 C 4 T27 127064-1 TEST POINT, SMT 1206 C 5 T28 127064-1 TEST POINT, SMT 1206 C 5 T29 127064-1 TEST POINT, SMT 1206 C 6 T29 127064-1 TEST POINT, SMT 1206 C 7 T29 127064-1 TEST POINT, SMT 1206 C 7 T29 127064-1 TEST POINT, SMT 1206 C 8	ГЗ	127522-2	XFMR, 125KHZ 15V GATE DRIVE	
TI 100	Τ4	126072-1		
T180	T4X	101128-1		
T101	T100	H43628-9		
T101X	T100X			
T200				
T280				
TP1				
TP2				
TP3				
### TP5	TP2			
TPG				
TP7				
TPB 127064-1 TEST POINT, SMT 1206 E 4 TP9 127064-1 TEST POINT, SMT 1206 C 8 TP10 127064-1 TEST POINT, SMT 1206 N 6 TP11 127064-1 TEST POINT, SMT 1206 C 8 UNCONTROLLED ESS OTHERWISE MARKED IN RED INK BY CM AS A TROOLED COPY, COPIES OF THESE DOCUMENTS LUDING ASSOCIATED ELECTRONIC REPRODUCTIONS FOR REFERENCE ONLY. ESE DRAWINGS AND SPECIFICATIONS ARE THE SIZE DWG ND.				
TP9 127064-1 TEST POINT, SMT 1206 C 8 TP10 127064-1 TEST POINT, SMT 1206 N 6 TP11 127064-1 TEST POINT, SMT 1206 C 8 UNCONTROLLED ESS OTHERWISE MARKED IN RED INK BY CM AS A TROLLED COPY, COPIES OF THESE DOCUMENTS LUDING ASSOCIATED ELECTRONIC REPRODUCTIONS FOR REFERENCE ONLY. SEE DRAWINGS AND SPECIFICATIONS ARE THE SIZE DWG ND.				
TP10 127064-1 TEST POINT, SMT 1206 N 6 TP11 127064-1 TEST POINT, SMT 1206 C 8 UNCONTROLLED ESS OTHERWISE MARKED IN RED INK BY CM AS A TROLLED COPY. COPIES OF THESE DOCUMENTS LUDING ASSOCIATED ELECTRONIC REPRODUCTIONS FOR REFERENCE ONLY. SEE DRAWINGS AND SPECIFICATIONS ARE THE SIZE DWG ND.				
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ESS OTHERWISE MARKED IN RED INK BY CM AS A TROLLED COPY. COPIES OF THESE DOCUMENTS LUDING ASSOCIATED ELECTRONIC REPRODUCTIONS FOR REFERENCE ONLY. SEE DRAWINGS AND SPECIFICATIONS ARE THE SIZE DWG NO.	TP11	127064-1	TEST POINT, SMT 1206	L B
ESS OTHERWISE MARKED IN RED INK BY CM AS A TROLLED COPY. COPIES OF THESE DOCUMENTS LUDING ASSOCIATED ELECTRONIC REPRODUCTIONS FOR REFERENCE ONLY. SEE DRAWINGS AND SPECIFICATIONS ARE THE SIZE DWG NO.				
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REF DES	C. P. N.	DESCRIPTION	MAP LOC.
TP12	127064-1	TEST POINT, SMT 1206	C 7
TP13	127064-1	TEST POINT, SMT 1206	D 8
TP14	127064-1	TEST POINT, SMT 1206	E 8
TP15	127064-1	TEST POINT, SMT 1206	E 7
TP16	127064-1	TEST POINT, SMT 1206	D 9
TP17	127064-1	TEST POINT, SMT 1206	E 8
TP27	127064-1	TEST POINT, SMT 1206	E 7
TP2B	127064-1	TEST POINT, SMT 1206	E 7
TP29	127064-1	TEST POINT, SMT 1206	E 7
TP30	127064-1	TEST POINT, 5MT 1206	E 9
TP31	127064-1	TEST POINT, SMT 1206	E 8
TP32	127064-1	TEST POINT, SMT 1206	E 8
TP33	127064-1	TEST POINT, SMT 1206	B 7
TP34	127064-1	TEST POINT, SMT 1206	C 7
TP35	127064-1	TEST POINT, SMT 1206	<u> </u>
TP36	127064-1	TEST POINT, SMT 1206	C 8
TP37	127064-1	TEST POINT, SMT 1206	J 7
TP38	127064-1	TEST POINT, SMT 1206	K 11
TP39	127064-1	TEST POINT, SMT 1206	A 3
TP40	127064-1	TEST POINT, SMT 1206	B 3
TP41	127064-1	TEST POINT, SMT 1206	<u> </u>
TP43	127064-1	TEST POINT, SMT 1206	B 3
TP45	127064-1	TEST POINT, SMT 1206	B 2
TP46	127064-1	TEST POINT, SMT 1206	B 3 H 13
TP47	127064-1	TEST POINT, SMT 1206	B 11
TP4B	127064-1	TEST POINT, SMT 1206	A 8
TP49	127064-1	TEST POINT, SMT 1206	E B
TP50	127064-1	TEST POINT, SMT 1206	B 8
TP91	127064-1	TEST POINT, SMT 1206	P 6
TP100	127064-1	TEST POINT, SMT 1206 TEST POINT, SMT 1206	P 5
TP101	127064-1	TEST POINT, SMT 1206	N 6
TP102	127064-1	TEST POINT, SMT 1206	M 10
TP103 TP104	127064-1	TEST POINT, SMT 1206	0.5
TP104 TP105	127064-1	TEST POINT, SMT 1206	P 6
TP143	127064-1	TEST POINT, SMT 1206	A B
TP162	127064-1	TEST POINT, SMT 1206	B 9
TP200	127064-1	TEST POINT, SMT 1206	P 4
TP201	127064-1	TEST POINT, SMT 1206	P 3
TP202	127064-1	TEST POINT, SMT 1206	N 4
TP203	127064-1	TEST POINT, SMT 1206	P 10
TP204	127064-1	TEST POINT, SMT 1206	0.3
TP205	127064-1	TEST POINT, SMT 1206	P 4
TP243	127064-1	TEST POINT, SMT 1206	K 2
TP244	127064-1	TEST POINT, SMT 1206	J 7
TP245	127064-1	TEST POINT, SMT 1206	0.6
TP247	127064-1	TEST POINT, SMT 1206	мв
TP248	127064-1	TEST POINT, SMT 1206	м 3
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	1	PARTS LIST	
REF DES	C. P. N.	DESCRIPTION	MAP LOC.
TP249	127064-1	TEST POINT, SMT 1206	A 2
TP251	127064-1	TEST POINT, SMT 1206	B 6
TP252	127064-1	TEST POINT, SMT 1206	A 4
TP253	127064-1	TEST POINT, SMT 1206	
TP254	127064-1	TEST POINT, SMT 1206	0.3
TP255	127064-1	TEST POINT, SMT 1206	P 2
TP256	127064-1	TEST POINT, SMT 1206	C 7
TP257	127064-1	TEST POINT, SMT 1206	N 5
U1	C 9038-8	COMPARATOR, QUAD LM339D SO-14	N 1
U2	128279-1	IC, SGSL49B1B PFC CONTROL	D 3
U3	C 8262-5	MC33078D LOW NOISE DUAL OF AMP	0 1
⊔4	126681-1	IC. PWN CONT PHASE SHIFT	D B
υ5	C 9929-8	TL431ACLP ADJ PREC RFNC T/A	C 8
U6	125868-1	OP AMP TLØ74CD SMT	0.6
U7	126559-1	COMPARATOR, LM393 SO-8 DUAL	B 7
DB .	126561-1	REG, +5V LOW POWER SO-8	N 3
U9	127145-1	DVR, 1.5A DUAL SO-8 MOSFET	E 3
U10	126559-1	COMPARATOR, LM393 SO-B DUAL	А З
	126559-1	COMPARATOR, LM393 SO-B DUAL	А З
U11		REGULATOR, 15V SO-8	A 4
U12	126633-1	COMPARATOR, LM393 SO-8 DUAL	С 3
U13		REG. +5V LOW POWER SO-8	G 14
<u>U14</u>	126561-1	SGL 2 INPUT NOR GATE SOT-23-5	H 14
U15	126653-1	MC74HC4024D 7 STAGE COUNTER SM	Н 13
U16	125867-1		E 7
U17	127145-1	DVR, 1.5A DUAL SO-8 MOSFET	B 10
U1B	128383-1	OPTO HCNW2211 IEC65 COMPLIANT	C 7
U19	126561-1	REG, +5V LOW POWER SO-8	A 10
U20	128382-1	OPTO SFH615A-2 IEC65 COMPLIANT	B A
U21	126559-1	COMPARATOR, LM393 SO-B DUAL	L 6
U22	125541-1	DRVR. 600V IR2104 HALF BRIDGE	
U23	126553-1	IC, 20V 0.1350HM SOB DUAL NMOS	L 6
⊔24	126559-1	COMPARATOR, LM393 SO-8 DUAL	A 4
U25	C 9929-B	TL431ACLP ADJ PREC RFNC T/A	C 3
U26	127145-1	DVR, 1.5A DUAL SO-8 MOSFET	E 3
U2 <i>7</i>	126633-1	REGULATOR, 15V SO-8	E 4
U2B	C 5095-2	MC7815CT +15V. REG	D 7
U29	127145-1	DVR, 1.5A DUAL SO-B MOSFET	E 9
U30	128382-1	OPTO SFH615A-2 IEC65 COMPLIANT	A 9
U31	127145-1	DVR, 1.5A DUAL SO-B MOSFET	E 7
U32	127145-1	DVR, 1.5A DUAL SO-8 MOSFET	E 8
U33		OPEN	A 10
U34		OPEN	B 10
U35	C10344-7	74HC74AD DUAL D FLIP FLOP SOIC	C 7
П36	128382-1	OPTO SFH615A-2 IEC65 COMPLIANT	A 10
U37	126559-1	COMPARATOR, LM393 SO-8 DUAL	D 8
U99	C 9038-8	COMPARATOR, QUAD LM339D 50-14	B 8
U100	C 9012-3	OP AMP, QUAD LO NOISE MC33079D	P 5
U101	126548-1	COMPARATOR, LM361 HI SPD SO-14	N 5
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SIZE	DWG	NO.			12621	8-14		REV A
SCAL	E N	ONE	PROJ	NO.	MD425DØ	SHEET 39 OF 41	3	



REF DES	C. P. N.	DESCRIPTION	MAP LOC.
U102	126561-1	REG, +5V LOW POWER SO-8	N 5
U103	126548-1	COMPARATOR, LM361 HI SPD SO-14	N 6
U104	126561-1	REG. +5V LOW POWER SO-8	N 6
U1 Ø5	125869-1	OP AMP LM318M SMT	N 6
U106	126540-1	IC, QUAD 2 INPUT NOR GATE 50-14	мб
U107	125545-1	HCPL0601 HI SPEED OPTO	M 7
U108	126559-1	COMPARATOR, LM393 SO-8 DUAL	N 7
U110	C B262-5	MC33078D LOW NOISE DUAL OF AMP	P 5
U111	C 9012-3	OP AMP, QUAD LO NOISE MC33079D	0.5
U112	C 903B-B	COMPARATOR, QUAD LM339D SO-14	0 2
U113	C 9038-8	COMPARATOR, QUAD LM339D SO-14	М 5
U114	C 9038-8	COMPARATOR, QUAD LM339D SO-14	M 4
U115	C 9038-8	COMPARATOR, QUAD LM339D SO-14	L B
U116	C 9038-B	COMPARATOR, QUAD LM339D 50-14	M 4
U117	C 9038-8	COMPARATOR, QUAD LM339D SO-14	0 2
U118	126561-1	REG, +5V LOW POWER SO-8	КВ
U119	125546-1	HCPL0611 HI SPEED OPTO	K 9
U120	125544-1	MC34151D HISPD DUAL MOSFET DVR	J 9
U121	125544-1	MC34151D HISPD DUAL MOSFET DVR	J 11
⊔122	126561-1	REG, +5V LOW POWER SO-8	K 11
U123	125545-1	HCPL0601 HI SPEED OPTO	K 11
U124	C10344-7	74HC74AD DUAL D FLIP FLOP SOIC	L 6
U125	C 9012-3	DP AMP, QUAD LO NOISE MC33079D	N 2
U200	C 9012-3	OP AMP, QUAD LO NOISE MC33079D	P 4
U2Ø1	126548-1	COMPARATOR, LM361 HI SPD SO-14	N 4
U2 0 2	126561-1	REG, +5V LOW POWER SO-8	N 4
U203	126548-1	COMPARATOR, LM361 HI SPD SO-14	N 3
U204	126561-1	REG, +5V LOW POWER 50-8	ΝЗ
U205	125869-1	OP AMP LM318M SMT	N 4
U207	125545-1	HCPL0601 HI SPEED OPTO	P 7
U208	126559-1	COMPARATOR, LM393 SO-8 DUAL	P 7
U210	C 8262-5	MC33078D LOW NOISE DUAL OP AMP	P 3
U211	C 9012-3	OP AMP. QUAD LO NOISE MC33079D	0.3
U213	C 9038-8	COMPARATOR, QUAD LM339D 50-14	M 4
U214	C 9038-8	COMPARATOR, QUAD LM339D SO-14	М 3
U21B	126561-1	REG, +5V LOW POWER SO-B	K 4
U219	125546-1	HCPLØ611 HI SPEED OPTO	K 5
U22Ø	125544-1	MC34151D HISPD DUAL MOSFET DVR	J 5
U221	125544-1	MC34151D HISPD DUAL MOSFET DVR	Ј 3
U222	126561-1	REG, +5V LOW POWER SO-B	K 2
U223	125545-1	HCPL0601 HI SPEED OPTO	К 3
U224	C10344-7	74HC74AD DUAL D FLIP FLOP SOIC	N 5
Y1	C10476-7	CRYSTAL, 4 MHZ HC49U SERIES	G 13
1	126583-8	PWB, CE4000 MAIN	
3	103415-10805	SCREW, 8-32X.312 TORX PNHD SEM	
4	126923-4	INSULATOR, CE4K HEATSINK NOMEX	
5	128130-1	RIVET, CE4000 INS RET PLASTIC	

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size A	DWG ND.	126218-14	REV A
SCAL	E NONE	PROJ NO. MD425DØ SHEET 40 OF 48	



CE4000 MAIN PWA NUMBER: 126218-14 DRAWING SHEET: 41

CE4000 MAIN PWA NUMBER: 126218-14 DRAWING SHEET: 42

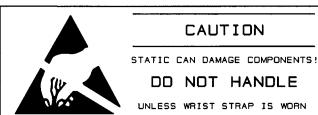


		REVISION HISTORY		
E.C.N.	REV	DESCRIPTION	DATE	APPROVED DWN CHK CM PE
00N0563	Α	RELEASE FOR PRODUCTION	06-15-00	JAW DUM (BEB

UNLESS OTHERWISE SPECIFIED, THIS PRINTED WIRING ASSEMBLY SHALL MEET THE SPECIFICATION DESCRIBED IN IPC-A-610_ CLASS 2 STANDARDS.

NOTES:

- 1. PRINTED WIRING BOARD PART NUMBER 126827-8.
- 2. ALL LEADS SHALL BE TRIMMED TO 0.093" OR LESS.
- 3. POSITION COMPONENTS AS SHOWN ON COMPONENT MAPS.
- 4. THE PRINTED WIRING ASSEMBLY PART NUMBER FOR THIS ASSEMBLY SHALL BE MARKED ON THE PRINTED WIRING BOARD AND SHALL BE PERMANENT.
- 5. MAP LOCATIONS DENOTED BY AN ASTERISK (*), INDICATE COMPONENTS MOUNTED ON THE BOTTOM SIDE OF THE PRINTED WIRING BOARD.
- 6. INSTALL 102472-3 IN J2 USING POSITIONS 1 THRU 12.



INACTIVE

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К	CHK	SIM	6-15-00	INTERNATIONAL INC. WWW. CROWNINTL. COM	
FILENAME	СМ	CB	6/15/10	INTERNATIONAL, INC. WWW. CROWNINTL. COM	
126828-7_A_01.F	CB PE	OB	6-15-00	d	
TOLERANCE UNLES				PWA, CE4000 BFG	
.00 = ±.02° .000 = ±.016 DRILLS = ±.003	a" 			SIZE DWG NO. 126828-7	REV A
DO NOT SCALE DRAY	WING			SCALE PROJ NO. MD425DØ SHEET SHEET 1 OF B	



C. P. N.	PARTS LIST DESCRIPTION	OTY	REFERENCE DESIGNATION
	10K 1/10W 1% SMD 0805 T/R	17	R7, R8, R9, R10, R11, R12, R25,
			R26, R31, R32, R33, R34, R47,
			R50, R55, R57, R59
A11368-10R03	10 OHM 0.25W 1% 1210 T/R	1	R49
A11368-11321	11.3KOHM .1W 1% CHIP 0805	4	R5,R19,R29,R41
	143K OHM .1W 1% Ø8Ø5 T/R	2	R13,R35
A11368-15011	1.5K 1/10W 1% SMD 0805 T/R	1	R48
A11368-15021	15.0K, 0.10W 1% MF 0805	2	R18,R40
	158KOHM .1W 1% 0805 T/R	2	R24,R46
A11368-19631	196K OHM .1W 1% 0805 T/R	2	R23, R45
	2.0K, 0.10W 1% MF 0805	2	R2,R27
A11368-22621	22.6K OHM .1W 1% ØBØ5 T/R	2	R16,R38
	P1.0.1887		
	2.61K Ø.1W 1% Ø8Ø5 T/R	2	R4.R28
A11368-26131	261K OHM .1W 1% 0805 T/R	2	R22,R44
A11368-28722	RES 28.7K 1% SMD 1206	2	R15,R37
A11368-30101	301 OHM .1W 1% 0B05 T/R	2	R52, R53
A11368-38322	RES 38.3K 1% SMD 1206	2	R14,R36
A11368-56221	56.2K OHM .1W 1% 0805 T/R	2	R17,R39
A11368-8B711	8.87KOHM .1W 1% CHIP 0805	4	R6.R20.R30.R42
A11368-97631	976K OHM .1W 1% 0805 T/R	2	R21,R43
A11369-330J2	33 PF 50V 5% NPO MLC 0805	3	C2,C3B,C39
A11427-103K2	.01 UF 50V 10% X7R MLC 0805	В	C30.C31.C32.C33.C34.C35.
			C36,C37
A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	Б	C11, C12, C13, C25, C26, C27
A11427-124K5	0.12 50V 10% CHIP X7R 1206	4	C6, C10, C20, C24
A11427-154K5	0.15 50V 10% CHIPX7R 1206	4	C5, C9, C19, C23
A11427-224J5	0.22UF 50V 5% X7R 1206 T/R	4	C4, CB, C1B, C22
A11427-274K5	0.27UF 50V 105 X7R 1206 T/R	4	C3, C7, C17, C21
C 7251-9	.22UF 25V CHIP CAPACITOR	2	C15,C29
C 7325-1	2POLE 2POS PC SLIDE SWITCH	1	52
C 8262-5	MC33078D LOW NOISE DUAL OP AMP	2	U3,U4
C 9012-3	OP AMP, QUAD LO NOISE MC33079D	2	U6, U7
	100PF 100V CERAMIC CHIP CAP	2	C1.C16
C 9049-5	***************************************		
101993-1	JACK, 6P4 COND MODULAR R/A	1	J3
102472-3	CONN, 12PDS .1CTR ASSY SGL ROW		J2
102486-1	DPTO BJT NPN SOIC-B CTR=100%	1	U5
102723-2	DPTOCELL ON<.5KOHM OFF>10M5SEC	2	U1,U2
125798-1	TRANSISTOR, MMBT3906LTI PNP SMT	1	Q1
126827-B	PWB, CE4000 BFG	1	1
127386-1	SWITCH, 4P3T SLIDE R/A PCB MNT	2	
127387-1	SWITCH. 4P4T SLIDE R/A PCB MNT	2	S5.S6
127412-1	SWITCH, DP3T SLIDE R/A PCB MNT	1	S1
128180-1	2.2UF 25V +80/-20 Y5V 1206 CAP	2	C14,C28
128182-4	CABLE, 26POS AMP-3M BFG MAIN	1	J1
			
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		PARTS LIST	
REF DES	C.P.N.	DESCRIPTION	MAP LOC.
C1	C 9049-5	100PF 100V CERAMIC CHIP CAP	F 2
C2	A11369-330J2	33 PF 50V 5% NPO MLC 0805	F 1*
C3	A11427-274K5	0.27UF 50V 105 X7R 1206 T/R	B 1*
C4	A11427-224J5	0.22UF 50V 5% X7R 1206 T/R	B 1
C5	A11427-154K5	0.15 50V 10% CHIPX7R 1206	B 1*
C6	A11427-124K5	0.12 50V 10% CHIP X7R 1206	B 1
C7	A11427-274K5	0.27UF 50V 105 X7R 1206 T/R	B 1*
СВ		0.22UF 50V 5% X7R 1206 T/R	B 1
C9		0.15 50V 10% CHIPX7R 1206	B 1*
C10		0.12 50V 10% CHIP X7R 1206	B 1
C11		.1UF 50V CHIP CAP 10% 0805 X7R	A 1
C12		.1UF 50V CHIP CAP 10% 0805 X7R	A 1
C13		.1UF 50V CHIP CAP 10% 0805 X7R	A 1
C14	128180-1	2.2UF 25V +80/-20 Y5V 1206 CAP	A 1
C15	C 7251-9	. 22UF 25V CHIP CAPACITOR	A 1
C16	C 9049-5	100PF 100V CERAMIC CHIP CAP	E 2
C17		0.27UF 50V 105 X7R 1206 T/R	D 1*
C18		0.22UF 50V 5% X7R 1206 T/R	D 1
C19		0.15 50V 10% CHIPX7R 1206	D 1*
C20		0.12 50V 10% CHIP X7R 1206	D 1
C21	A11427-274K5	Ø.27UF 50V 105 X7R 1206 T/R	D 1 *
C22	A11427-224J5	0.22UF 50V 5% X7R 1206 T/R	D 1
C23	A11427-154K5	0.15 50V 10% CHIPX7R 1206	D 1*
C24	A11427-124K5	0.12 50V 10% CHIP X7R 1206	D 1
C25	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	□ 1
C26	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	C 1
C27	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	C 1
C28	128180-1	2.2UF 25V +80/-20 Y5V 1206 CAP	C 1
C29	C 7251-9	.22UF 25V CHIP CAPACITOR	C 1
C30	A11427-103K2	.01 UF 50V 10% X7R MLC 0805	E 1*
C31		.01 UF 50V 10% X7R MLC 0805	E 1*
C32	A11427-103K2		F 1*
C33	A11427-103K2		F 1*
C34	A11427-103K2	.01 UF 50V 10% X7R MLC 0805	B 1*
C35	A11427-103K2	.01 UF 50V 10% X7R MLC 0805	A 1*
C36	A11427-103K2		D 1*
C37		.01 UF 50V 10% X7R MLC 0805	E 1*
		33 PF 50V 5% NPO MLC 0805	
C38			A 1
C39		33 PF 50V 5% NPO MLC 0805	C 1
J1	128182-4	CABLE, 26POS AMP-3M BFG MAIN	G 1
J2	102472-3	CONN, 12POS .1CTR ASSY SGL ROW	E 1
13	101993-1	JACK, 6P4 COND MODULAR R/A	F 2
<u>01</u>	125798-1	TRANSISTOR, MMBT3906LTI PNP SMT	F 1
R2	A1136B-20011	2.0K, 0.10W 1% MF 0805	F 1
R4	A11368-26111	2.61K 0.1W 1% 0B05 T/R	F 2
<u>.</u>			
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	J . UIL THE MANUFAL	OUT PERMISSION SCALE NONE PROJ NO. MD425DØ SHEET	



		PARTS LIST	
REF DES	C.P.N.	DESCRIPTION	MAP LOC.
R5		11.3KOHM .1W 1% CHIP 0B05	F 2
R6	A11368-88711	8.87KOHM .1W 1% CHIP 0805	F 2
R7	A11368-10021	10K 1/10W 1% SMD 0805 T/R	F 2.*
RB	A11368-10021	10K 1/10W 1% SMD 0805 T/R	F 1*
R9	A1136B-10021	10K 1/10W 1% SMD 0805 T/R	B 1
R10	A11368-10021	10K 1/10W 1% SMD 0805 T/R	B 1
R11	A11368-10021	1204	B 1
R12	A11368-10021	10K 1/10W 1% SMD 0805 T/R	B 1
R13		143K DHM .1W 1% 0805 T/R	B 1*
R14		RES 38.3K 1% SMD 1206	A 1*
R15		RES 28.7K 1% SMD 1206	A 1*
R16	****	22.6K OHM .1W 1% 0805 T/R	A 1
R17		56.2K OHM .1W 1% 0805 T/R	A 1
R1B		15.0K, 0.10W 1% MF 0805	A 1
R19		11.3KOHM .1W 1% CHIP 0805	A 1
		8.87KOHM .1W 1% CHIP 0805	A 1*
R20		976K OHM .1W 1% 0805 T/R	A 1
R21			A 1
R22		261K OHM .1W 1% 0805 T/R	A 1
R23		196K OHM .1W 1% 0805 T/R	
R24		158KOHM .1W 1% 0805 T/R	A 1
R25		10K 1/10W 1% SMD 0805 T/R	B 1
R26		10K 1/10W 1% SMD 0805 T/R	F 1
R27	A11368-20011		E 1
R2B		2.61K 0.1W 1% 0B05 T/R	E 2
R29		11.3KOHM .1W 1% CHIP 0805	E 2
R30		8.87KOHM .1W 1% CHIP 0805	E 2*
R31		10K 1/10W 1% SMD 0805 T/R	D 1
R32	A11368-10021		D 1
R33		10K 1/10W 1% SMD 0805 T/R	D 1
R34		10K 1/10W 1% SMD 0805 T/R	D 1
R35		143K OHM .1W 1% Ø8Ø5 T/R	D 1
R36		RES 3B.3K 1% SMD 1206	C 1*
R37		RES 28.7K 1% SMD 1206	C 1*
R38	A1136B-22621		C 1
R39	A1136B-56221	56.2K OHM .1W 1% 0805 T/R	C 1
R40		15.0K, 0.10W 1% MF 0805	<u>C 1</u>
R41	A11368-11321	11.3KOHM .1W 1% CHIP 0805	C 1
R42	A11368-88711	8.87KOHM .1W 1% CHIP 0805	C 1
R43	A1136B-97631		D 1
R44	A11368-26131		C 1
R45		196K OHM .1W 1% 0805 T/R	C 1
R46		158KOHM .1W 1% 0805 T/R	C 1
R47		10K 1/10W 1% SMD 0805 T/R	F 1
R48	A11368-15011	1.5K 1/10W 1% SMD 0805 T/R	F 1
R49	A11368-10R03	10 OHM 0.25W 1% 1210 T/R	B 1*
R50	A1136B-10021	10K 1/10W 1% SMD 0805 T/R	A 1
R51		OPEN	A 1

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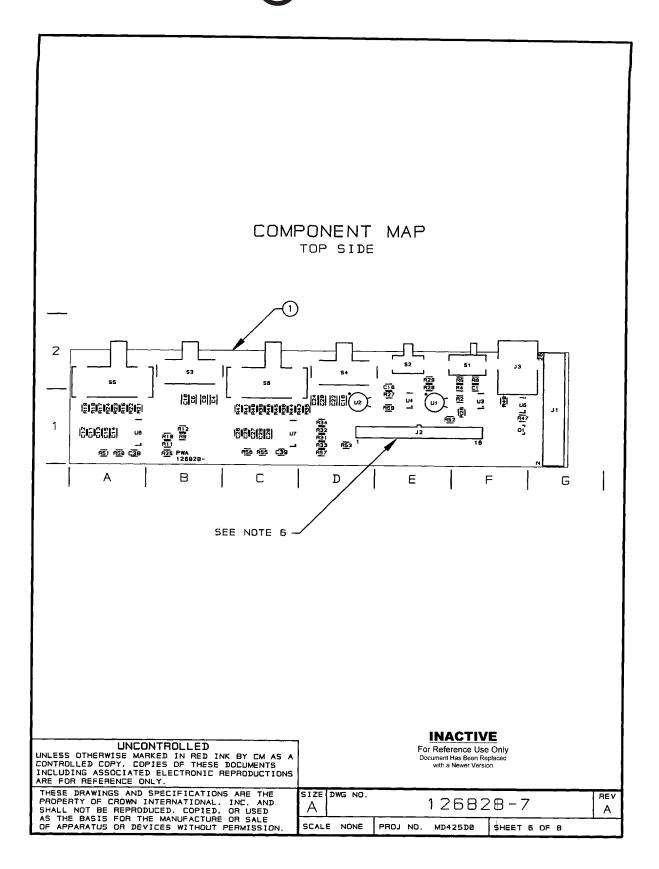
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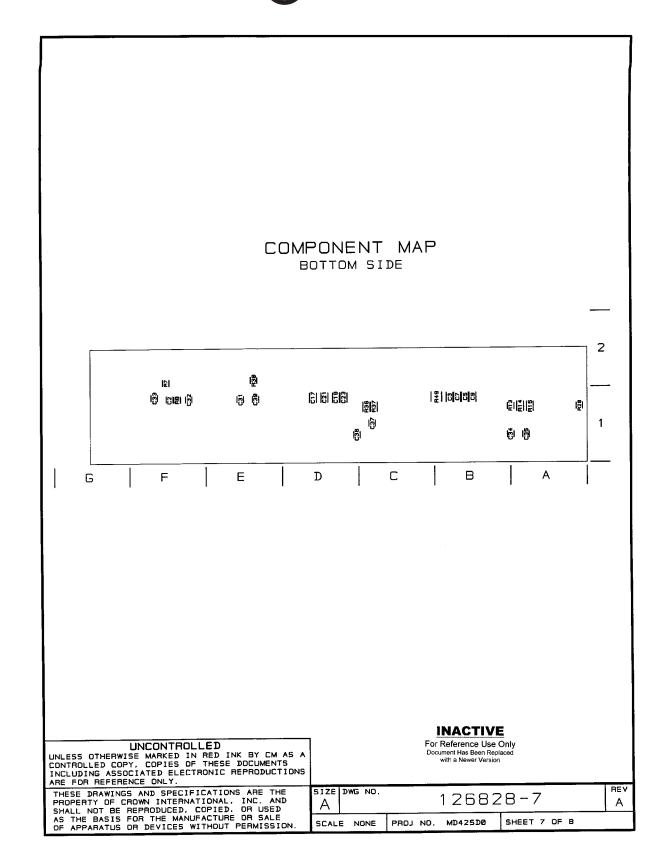
SCALE NONE PROJ ND. MD425DØ SHEET 4 OF B



	·····	PARTS LIST	- · · · · · · · · · · · · · · · · · · ·
	C. P. N.	DESCRIPTION	MAP LOC.
R52		301 OHM .1W 1% 0805 T/R	E 1
R53		301 OHM .1W 1% 0805 T/R	D 1
R55	A11368-10021	10K 1/10W 1% SMD 0805 T/R	<u>C 1</u>
R56		OPEN	C 1
R57	A11368-10021	10K 1/10W 1% SMD 0805 T/R	D 1
R59	A11368-10021	10K 1/10W 1% SMD 0805 T/R	E 1
51	127412-1	SWITCH, DP3T SLIDE R/A PCB MNT	F 2
52	C 7325-1	2POLE 2POS PC SLIDE SWITCH	E 2
53	127386-1	SWITCH, 4P3T SLIDE R/A PCB MNT	B 2
54	127386-1	SWITCH, 4P3T SLIDE R/A PCB MNT	D 2
S5	127387-1	SWITCH, 4P4T SLIDE R/A PCB MNT	A 2
S6	127387-1	SWITCH, 4P4T SLIDE R/A PCB MNT	C 2
U1	102723-2	OPTOCELL ON . 5KOHM OFF > 10M5SEC	E 1
U2	102723-2	OPTOCELL ON . 5KOHM OFF >1@M55EC	D 1
U3	C 8262-5	MC33078D LOW NOISE DUAL OF AMP	F 1
U4	C B262-5	MC33078D LOW NOISE DUAL OP AMP	E 1
U5	102486-1	OPTO BJT NPN SOIC-8 CTR=100%	F 1
บธ	C 9012-3	OP AMP, QUAD LO NOISE MC33079D	A 1
U7	C 9012-3	OP AMP. QUAD LO NOISE MC33079D	2 1
1	126827-B	PWB, CE4000 BFG	
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SE DRAWIN	GS AND SPECIFICATION CROWN INTERNATION REPRODUCED. COP:	IAL, INC. AND IA 126828-	- 7 F









				T	APPE	OVED	_
E.C.N.	REV	DESCRIPTION	DATE	DWN		CM	P
00N0952	Α	RELEASE FOR PRODUCTION	11-16-00	JAW	KB3	MMG	3
				<u> </u>		\vdash	⊢
							l

UNLESS OTHERWISE SPECIFIED, THIS PRINTED WIRING ASSEMBLY SHALL MEET THE SPECIFICATION DESCRIBED IN IPC-A-610_ CLASS 2 STANDARDS.

NOTES:

1. PRINTED WIRING BOARD PART NUMBER 126827-14.

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- З. POSITION COMPONENTS AS SHOWN ON COMPONENT MAPS.
- THE PRINTED WIRING ASSEMBLY PART NUMBER FOR THIS ASSEMBLY SHALL BE MARKED ON THE PRINTED WIRING BOARD AND SHALL BE PERMANENT.
- MAP LOCATIONS DENOTED BY AN ASTERISK (*), INDICATE COMPONENTS MOUNTED ON THE BOTTOM SIDE OF THE PRINTED WIRING BOARD.



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ERENCE DESIGNATION
31,R231
R2, R4, R104, R105, R108,
04,R205,R208
2.R115.R202.R215
19,R209
4.R214
0,R220
9,R219
10, R200
2,R212
1,R124,R125,R127,R221
4,R225,R227
11,R201
B, R218
1,R211
16,R206
Ø,R210
3,R213
13, R116, R203, R216
7,R217
8.C218
C101.C201
2,R128,R222,R228
C3, C4, C5, C6, C7, C10, C11
23,24,23,20,27,218,21
11,U201
12. U202
0,C200

1,5201
0.5200
0,3200
2 5102 5104 5105 5110
2,C103,C104,C105,C110, 2,C203,C204,C205,C210
2,L203,L204,L205,L210
4 5314
4.C214
6,C111,C206,C211
B, C113, C20B, C213
0A, U200A
7,C112,C116,C117,C207,
2,C216,C217

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SIZE A	DWG	NO.		,	12682	8 - 1	2		REV A
SCAL	E N	DNE	PROJ	ND.	MD425D0	SHEET	2 DF	8	



		PARTS LIST	
REF DES		DESCRIPTION	MAP LOC.
C1	A11369-330J2	33 PF 50V 5% NPO MLC 0805	F 1*
C2	A11427-103K2	.01 UF 50V 10% X7R MLC 0805	E 1*
СЗ		.01 UF 50V 10% X7R MLC 0805	E 2*
C4		.01 UF 50V 10% X7R MLC 0805	F_1
C5	A11427-103K2	.01 UF 50V 10% X7R MLC 0805	<u>F 1*</u>
C6	A11427-103K2	.01 UF 50V 10% X7R MLC 0805	A 1 *
C7	A11427-103K2	.01 UF 50V 10% X7R MLC 0805	A 1 *
C10	A11427-103K2	.01 UF 50V 10% X7R MLC 0805	C 1*
C11	A11427-103K2	.01 UF 50V 10% X7R MLC 0805	<u> </u>
C100	C 9049-5	100PF 100V CERAMIC CHIP CAP	F 1*
C101		33 PF 50V 5% NPO MLC 0805	B 1*
C102	128113-1	CAP, 0.1UF 16V FILM 1210 SMD	A 1
C103	128113-1	CAP. 0.1UF 16V FILM 1210 SMD	A 1
	128113-1	CAP, 0.1UF 16V FILM 1210 SMD	A 1
C104	128113-1	CAP, 0.1UF 16V FILM 1210 SMD	C 1
C105	130964-1	CAP, 0.082UF 5% 16V FILM 1210 SMD	C 1
C106		CAP, .027UF 16V 5% FILM SMT	B 1
C107	131576-1	CAP, .047UF 16V 5% FILM SMT	B 1
C10B	131399-1	OPEN	A 1*
C109	100117 1	CAP, 0.1UF 16V FILM 1210 SMD	B 1
C110	128113-1	CAP. 0.082UF 5% 16V FILM 1210 SMD	B 1
C111	130964-1	CAP027UF 16V 5% FILM SMT	B 1
C112	131576-1	CAP, .047UF 16V 5% FILM SMT	B 1
C113	131399-1		D 1
C114	130963-1	CAP, 4.7AF 20% 16V NP ELEC SMT TR	A 1
C115		OPEN SME AND SME	B 1
C116	131576-1	CAP027UF 16V 5% FILM SMT	B 1
C117	131576-1	CAP027UF 16V 5% FILM SMT	E 1*
C11B	A11369-102J2	.001UF 50V 5% NPO MLC 0805 T/R	E 1*
C200	C 9049-5	100PF 100V CERAMIC CHIP CAP	C 1*
C201	A11369-330J2	33 PF 50V 5% NPO MLC 0805	C 1
C202	128113-1	CAP, 0.1UF 16V FILM 1210 SMD	C 1
C203	128113-1	CAP, 0.1UF 16V FILM 1210 SMD	C 1
C204	128113-1	CAP, 0.1UF 16V FILM 1210 SMD	
C205	128113-1	CAP, 0.1UF 16V FILM 1210 5MD	D 1
C206	130964-1	CAP, 0.082UF 5% 16V FILM 1210 SMD	D 1
C207	131576-1	CAP, .027UF 16V 5% FILM SMT	D 1
C20B	131399-1	CAP, .047UF 16V 5% FILM SMT	D 1
C209		OPEN	□ 1*
C210	128113-1	CAP, 0.1UF 16V FILM 1210 SMD	D 1
C211	130964-1	CAP. 0.082UF 5% 16V FILM 1210 5MD	D 1
C212	131576-1	CAP, .027UF 16V 5% FILM SMT	D 1
C213	131399-1	CAP, .047UF 16V 5% FILM SMT	D 1
C214	130963-1	CAP, 4.7AF 20% 16V NP ELEC SMT TR	D 1
C215	1	OPEN	□ 1*
C216	131576-1	CAP, .027UF 16V 5% FILM SMT	D 1
C217	131576-1	CAP027UF 16V 5% FILM SMT	D 1
C218	A11369-102J2	TO SEE TO SEE AND AND SEE TO S	E 1
C210	711303 18232		
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		CTURE OR SALE SCALE NONE PROJ NO. MD425DØ SHEE	T 3 OF 8



		PARTS LIST	
REF DES	C. P. N.	DESCRIPTION	MAP LOC.
J 1	128182-4	CABLE, 26POS 3M BFG MAIN	G 1
J2	102472-3	CONN, 12POS .1CTR ASSY SGL ROW	E 1
J3	101993-1	JACK, 5P4 COND MODULAR R/A	
Q1	125798-1	TRANSISTOR, MMBT3906LTI PNP SMT	F 1
R1	A11368-10021	10K 1/10W 1% SMD 0805 T/R	F 2
R2	A11368-10021	10K 1/10W 1% SMD 0805 T/R	F 1*
R3		10 OHM 0.25W 1% 1210 T/R	G 1
R4		10K 1/10W 1% SMD 0805 T/R	F 1
R5		1.5K 1/10W 1% SMD 0805 T/R	F 1
R100		2.0K, 0.10W 1% MF 0805	E 1
R1Ø1		2.61K 0.1W 1% 0805 T/R	F 2
R102		11.3KOHM .1W 1% CHIP 0805	F 2
R103		B.87KOHM .1W 1% CHIP 0805	
R104		The state of the s	F 2
		10K 1/10W 1% SMD 0805 T/R	F 1*
R105		10K 1/10W 1% SMD 0805 T/R	F 1*
R106	A11368-30101	301 OHM .1W 1% 0805 T/R	F 1*
R107		OPEN	A 1 *
R108		10K 1/10W 1% SMD 0805 T/R	B 1*
R109		143K OHM .1W 1% Ø8Ø5 T/R	A 1*
R110		RES 38.3K 1% SMD 1206	A 1
R111		RES 28.7K 1% SMD 1206	A 1*
R112		22.6K OHM .1W 1% 0805 T/R	A 1*
R113	A1136B-56221	56.2K OHM .1W 1% 0805 T/R	A 1
R114	A11368-15021	15.0K, 0.10W 1% MF 0805	A 1
R115	A11368-11321	11.3KOHM .1W 1% CHIP 0805	A 1*
R116	A11368-88711	8.87KOHM .1W 1% CHIP 0805	A 1*
R117	A11368-97631	976K OHM .1W 1% 0805 T/R	B 1
R11B	A11368-26131	261K OHM .1W 1% 0805 T/R	A 1
R119	A11368-19631	196K OHM .1W 1% 0805 T/R	A 1
R120	A1136B-15B31	158KOHM .1W 1% 0805 T/R	A 1
R121	A11368-24921	24.9K 1/10W 1% SMD 0805 T/R	A 1*
R122	A11371-0R01	0 OHM 0.1W CHIP 0805	A 1*
R123		OPEN	A 1*
R124	A11368-24921	24.9K 1/10W 1% SMD 0805 T/R	B 1*
R125		24.9K 1/10W 1% SMD 0805 T/R	B 1*
R126		OPEN	A 1 *
R127	A11368-24921	24.9K 1/10W 1% SMD 0805 T/R	B 1*
R128	A11371-0R01	0 OHM 0.1W CHIP 0805	A 1*
R129	MITS/ I DILOT	OPEN	
R130		DPEN	A 1*
	A11350-18001		B 1*
R131		10.0 OHM 0.10W 1% 0805 T/R	D 1*
R200	·	2.0K, 0.10W 1% MF 0805	E 1*
R201		2.61K 0.1W 1% 0805 T/R	E 2
R202		11.3KOHM .1W 1% CHIP 0805	E 2
R203	A11368-88711	8.87KOHM .1W 1% CHIP 0805	E 1*
TROLLED CO	UNCONTROLLE WISE MARKED IN RE DPY, COPIES OF TH	D INK BY CM AS A SEE DOCUMENTS	
FOR REFER	SOCIATED ELECTRON RENCE ONLY. NGS AND SPECIFICA	TIDNS ARE THE SIZE DWG NO.	4.0
	CROWN INTERNATION REPRODUCED, COP FOR THE MANUFACT	IED, OR USED A	12

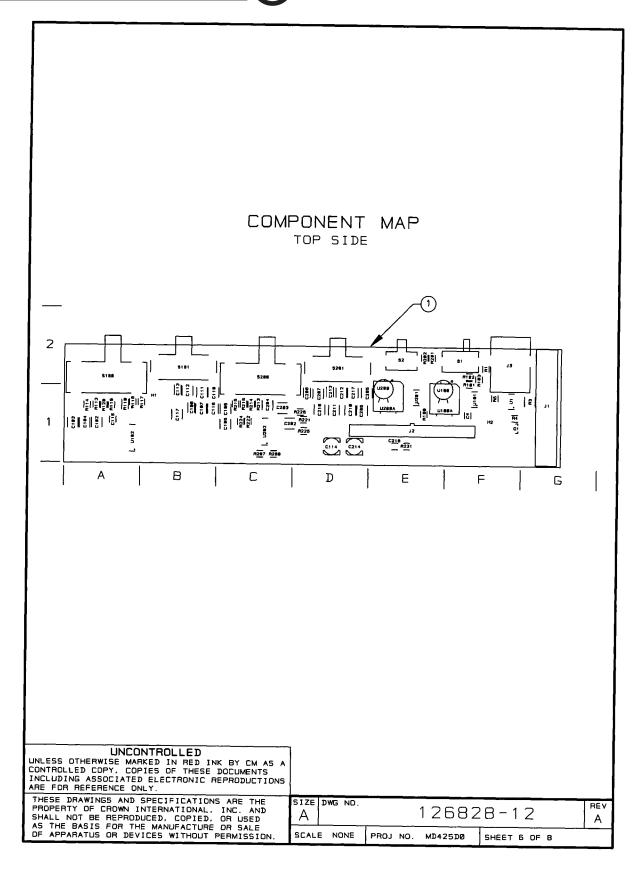


REF DES	C.P.N.	DESCRIPTION	MAP LOC.
R204	· 	10K 1/10W 1% SMD 0805 T/R	E 1*
R205		10K 1/10W 1% 5MD 0805 T/R	
R206		301 OHM .1W 1% 0805 T/R	E 1*
R207	 	OPEN	
R208	A11368-10021	10K 1/10W 1% SMD 0805 T/R	C 1
R209		143K OHM .1W 1% 0805 T/R	D 1*
R210		RES 38.3K 1% SMD 1206	C 1*
R211		RES 28.7K 1% SMD 1206	C 1*
R212	1	22.6K DHM .1W 1% ØBØ5 T/R	C 1*
R213		56.2K DHM .1W 1% 0805 T/R	C 1
R214		15.0K, 0.10W 1% MF 0805	C 1
R215		11.3KOHM .1W 1% CHIP 0805	C 1
R216	+	8.87KOHM .1W 1% CHIP 0805	C 1
R217		976K OHM .1W 1% 0805 T/R	
R218		261K OHM .1W 1% 0805 T/R	D 1*
R219		196K OHM .1W 1% 0805 T/R	
	 		C 1*
R220	-	158KOHM .1W 1% 0805 T/R	□ 1*
R221	+	24.9K 1/10W 1% SMD 0805 T/R	D 1
R222	A11371-0R01	0 OHM 0.1W CHIP 0805	<u> </u>
R223	A44360 34034	OPEN	C 1*
R224		24.9K 1/10W 1% SMD 0805 T/R	<u>C 1</u>
R225	A11368-24921	24.9K 1/10W 1% SMD 0805 T/R	D 1
R226		OPEN	D 1
R227		24.9K 1/10W 1% SMD 0805 T/R	<u>C 1*</u>
R228	A11371-0R01	0 OHM 0.1W CHIP 0805	C 1*
R229	 	OPEN	<u> </u>
R230		OPEN	<u>C 1*</u>
R231		10.0 OHM 0.10W 1% 0805 T/R	E 1
S1	127412-1	SWITCH, DP3T SLIDE R/A PCB MNT	F 2
52	C 7325-1	2POLE 2POS PC SLIDE SWITCH	E 2
5100	127387-1	SWITCH, 4P4T SLIDE R/A PCB MNT	A 2
5101	127386-1	SWITCH, 4P3T SLIDE R/A PCB MNT	B 2
S200	127387-1	SWITCH, 4P4T SLIDE R/A PCB MNT	C 2
5201	127386-1	SWITCH, 4P3T SLIDE R/A PCB MNT	D 2
TP2	TESTPOINT	TESTPOINT	B 1
TP3	TESTPOINT	TESTPOINT	B 1
TP4	TESTPOINT	TESTPOINT	F 2
TP5	TESTPOINT	TESTPOINT	C 1
<u> </u>	102486-1	OPTO BUT NPN SDIC-8 CTR-100%	F 1
U100		OPEN	E 1
U101	C 8262-5	MC3307BD LOW NOISE DUAL OF AMP	F 1
U1@2	C 9012-3	OP AMP, QUAD LO NOISE MC33079D	A 1
U200		OPEN	E 1
U2 0 1	C 8262-5	MC33078D LOW NOISE DUAL OP AMP	E 1
U2Ø2	C 9012-3	OP AMP, QUAD LO NOISE MC33079D	C 1
U100A	131547-1	OPTO.ON 500 OHM OFF >50MEG10SEC	E 1
U200A	131547-1	OPTD, DN< 500 OHM OFF >50MEG105EC	E 1
1	126B27-14	PWB, CE4000 BFG	

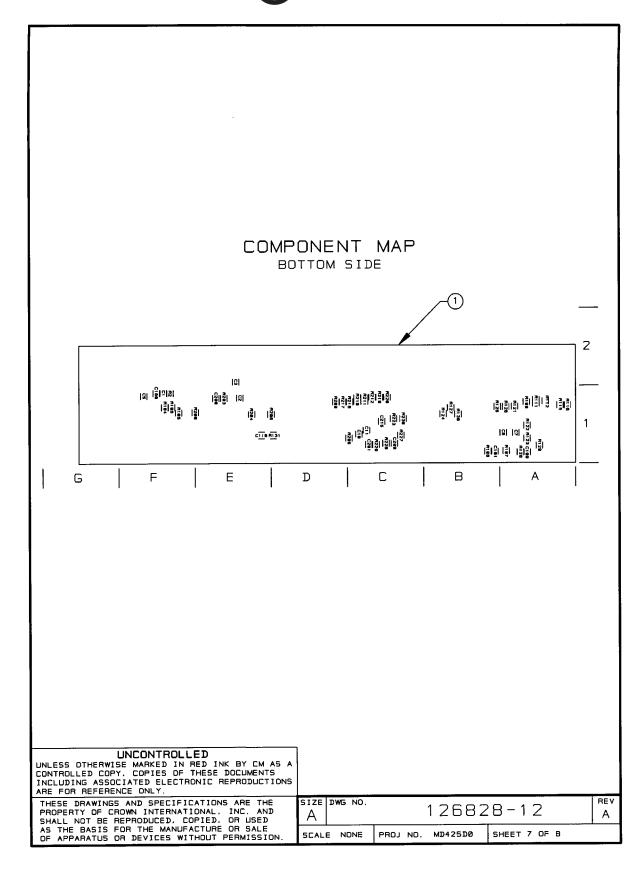
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SIZE A	DWG NO.		12682	28-12	REV A
SCAL	E NONE	PROJ NO.	MD425D0	SHEET 5 OF 8	









				DATE			PPRO	JVAL	_5
E.C.N.	E.C.N. ZONE REV.		DESCRIPTION		B	CHK	CM	EE	PE
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UNLESS OTHERWISE SPECIFIED, THE FINISHED PWA SHALL MEET: IPC-A-610_ CLASS 2

NOTES:

- 1. PWB PART NUMBER 127004-1.
- 2. ALL LEADS SHALL BE TRIMMED TO 0.093" OR LESS.
- 3. POSITION COMPONENTS AS SHOWN ON COMPONENT MAP.
- 4. SWAGE FIT HW1 & HW2 INTO PCB.
- 5. HAND SOLDER C510 (C 6806-1), AND C610 (C 6806-1) ACROSS BACK OF INPUT MODULE AS SHOWN, USE 1/2" KAPTON TAPE (S 6285-1) AS INSULATION BETWEEN EACH CAPACITOR AND THE BOARD.

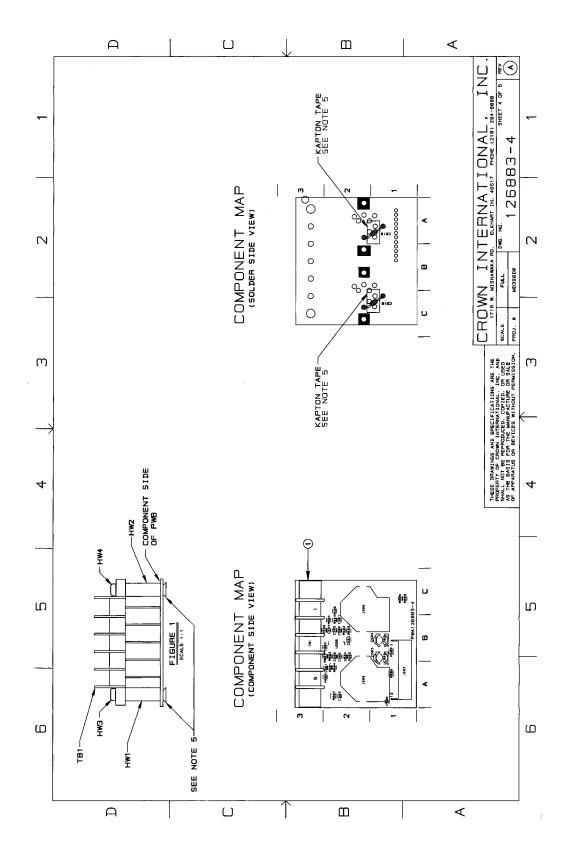


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ļ.F	2TNIA	1718 WEST	MISHAWAN	CA FIGAD E	LKHART	. INDIANA 469	17 PH	ONE (219) 294-	8000
									0.020 0.010
		DRAWN	DΚ	11/01/99	APPE	ROVED BY:	DO NO	T SCALE PRIN	iT
		CHECKED	JUM	11-1-97	ME N	4]	SUPERSED	ES	
		SCALE	N	ONE	EE N	Α	E.C.N.		
THESE DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF CROWN INTERNATIONAL, INC. AN	ND D	PROJ #	M	D390D0	PE O	11/2/99	DWG. NO.	SHEET 1 OF 5	$1 \frown 1$
SHALL NOT BE REPRODUCED, COPIED, OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS OR DEVICES WITHOUT PERMISSI	NEXT ASS	EMBLY				1268	383-4	(A)	



REF DES 1 C500		DESCRIPTION	
C500		2236/11 110/4	MAP LOC.
	127004-1	PWB, CE INPUT	
2504	A11369-120K2	12PF 50V 10% NPO 0805 T/R	B 2
C501		12PF 50V 10% NPO 0805 T/R	B 2
		12PF 50V 10% NPO 0805 T/R	B 2
C503	102467-1	22UF 25V 20% RADIAL T/R	B 1
C504	102438-221K2	220PF 200V 10% NPO 0805	B 2
		0.1UF 50V 1% CHIP 0805	B 2
C506		0.1UF 50V 1% CHIP 0805	B 2
C509		OPEN	
C510	C 6806-1	0.01 MF 100V AXIAL CER T/R	C 1
C600	A11369-120K2	12PF 50V 10% NPO 0805 T/R	
C601	A11369-120K2	12PF 50V 10% NPO 0805 T/R	B 2
C602	A11369-120K2		A 2
C603	102467-1	22UF 25V 20% RADIAL T/R	B 2
		220PF 200V 10% NPO 0805	B 1
	A11427-104K2	0.1UF 50V 1% CHIP 0805	B 2
	A11371-1501	15 OHM 0.10W 5% CHIP	A 2
2609		OPEN	A 1
2610	C 6806-1	0.01 MF 100V AXIAL CER T/R	
	102579-1	STAND, BROACHED 6-32 X .75	A 1
	102579-1	STAND, BROACHED 6-32 X .75	A 3
		SCREW, 6-32X.5 TORX PNHD SEM	C 3
	103435-70608		A 3
	126929-1	CONN., 1/4" XLR, PCB VERT.	<u>C 3</u>
	102471-2		B 2
	126929-1	HDR, 12POS. 2.5MM RT ANG KEYED CONN., 1/4" XLR, PCB VERT.	A 1
	A11368-10021	10. KOHM .1W 1% CHIP 0805	A 2
	A11368-10021	10. KOHM .1W 1% CHIP 0805	C 2
	A11368-10021		B 2
	A11368-10021	3111 0003	B 2
	A11368-20011		<u>B 2</u>
	A11368-20011		B 2
R508	A11300 20011	2.0 KOHM .1W 1% CHIP 0805	B 2
	A11369-10031	OPEN	
	A11368-10021	10. KOHM .1W 1% CHIP 0805	A 2
		10. KOHM .1W 1% CHIP 0805	A 2
	A11368-10021	10. KOHM .1W 1% CHIP 0805	B 2
	A11368-10021	10. KOHM .1W 1% CHIP 0805	B 2
	A11368-20011 A11371-1501	2.0 KOHM .1W 1% CHIP 0805	A 2
		15 OHM Ø.10W 5% CHIP	C 1
		2.0 KOHM .1W 1% CHIP 0805	A 2
	A11371-8205	82 OHM 1W 5% SMD 2512	A 2
8608	A11371 1531	OPEN 45 CHARLES AND THE CONTRACTOR OF THE CONTRA	
	A11371-1501	15 OHM 0.10W 5% CHIP	C 1
		BLOCK, 5POS., TERMINAL	A 3
1500	C 9012-3	OP AMP, QUAD MC33079D	B 2
			

	DRAWN DK 11/01/99 DWG. NO. SHEET 3 OF 5 F							
THESE DRAWINGS AND SPECIFICATIONS ARE THE	1718 WEST	MISHAWAK	A ROAD E	ELKHART, INDIANA	46517	PHONE (219) 294-	8000
PROPERTY OF CROWN INTERNATIONAL, INC. AND SHALL NOT BE REPRODUCED, COPIED, OR USED	DRAWN	DK	11/01/99	DWG. NO.		SHEET	3 OF 5	REV
AS THE BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS OR DEVICES WITHOUT PERMISSION.	PROJ.	MI)390D0	126	88	3 - 4		(A)





		REVISION HISTORY		
E.C.N.	REV	DESCRIPTION	DATE	APPROVED DWN CHK CM RE
00N0523	A	RELEASE FOR PRODUCTION	05-30-00	JG SLM (B)

UNLESS OTHERWISE SPECIFIED, THIS PRINTED WIRING ASSEMBLY SHALL MEET THE SPECIFICATION DESCRIBED IN IPC-A-610_ CLASS 2 STANDARDS.

NOTES:

- 1. PRINTED WIRING BOARD PART NUMBER 127026-3.
- 2. ALL LEADS SHALL BE TRIMMED TO 0.093" OR LESS.
- 3. POSITION COMPONENTS AS SHOWN ON COMPONENT MAP.
- 4. THE PRINTED WIRING ASSEMBLY PART NUMBER FOR THIS ASSEMBLY SHALL BE MARKED ON THE PRINTED WIRING BOARD AND SHALL BE PERMANENT.
- 5. APPPLY HEATSINK COMPOUND (CPN S2162-6) BETWEEN U2 AND HEATSINK (U2X).
- 6. SCREW(HW1) IS TO BE TORQUED TO 8-10 IN-LBS.

THESE DRAWINGS AND SPECIFICATIONS ARE THE

7. THIS PWA MUST MEET ALL SPECIFICATIONS AS LISTED IN 131062 SPECS. CE4000 FLYBACK PWA.



PROPERTY OF CROWN SHALL NOT BE REPROI AS THE BASIS FOR THE OF APPARATUS OR DEV	INTERNATI DUCED, CO HE MANUFA	ONAL, IN PIED, OR CTURE OR	C. AND USED SALE	UNLESS OTHERWISE MARKED IN RED INK BY CM AS A CONTROLLED COPY, COPIES OF THESE DOCUMENTS INCLUDING ASSOCIATED ELECTRONIC REPRODUCTIONS ARE FOR REFERENCE ONLY.
DISTRIBUTION	DWN	1G	05-30-00	ELKHART IN, 46517
K	СНК	SUM	5-31-00	1110/12/213/234 0000
FILENAME	СМ	CB	611/00	INTERNATIONAL, INC. WWW.CROWNINTL.COM
127027-6_A_01.PCB	PE	Me	5-31-00	
TOLERANCE UNLESS OTHERWISE SPECIFIED		//		PWA, CE4000 FLYBACK
.00 = ±.02" .000 = ±.010" DRILLS = ±.003"				SIZE DWG NO. 127027-6 A
DO NOT SCALE DRAWING				SCALE NONE PROJ NO. MD425DØ SHEET 1 OF 6

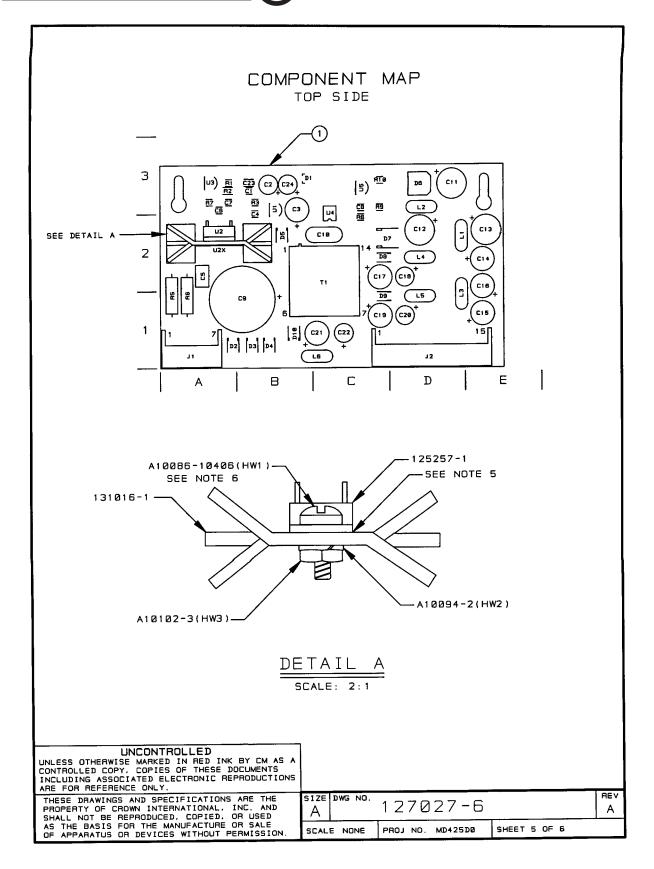
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REF DES	C.P.N.	DESCRIPTION	MAP LOC.
1	127026-3	PWB, CE4000 FLYBACK	
	A11427-103K2	.01 UF 50V 10% X7R MLC 0805	B 3
 C2	125855-1	47UF 50V 2.5MM L/S VERT CAP	8 3
23	126631-1	CAP, 220UF 25V RAD ELECT	B 3
 _4	A11427-104K2	.1UF 50V CHIP CAP 10% 0805 X7R	B 3
25		150PF 630VDC 10% PROP CAP T/A	A 2
26		1500PF 50V 5% NPO MLC 0805 T/R	А З
7		.1UF 50V CHIP CAP 10% 0805 X7R	Е А
28		.1UF 50V CHIP CAP 10% 0805 X7R	С 3
29	127032-1	CAP, 56UF 450V HIGH RIPPLE	B 1
210	126632-1	CAP, 2200PF CER DISK Y RATED	C 2
211	126630-1	CAP, 470UF 25V RAD ELECT	D 3
	126630-1	CAP, 470UF 25V RAD ELECT	D 2
212		CAP, 470UF 25V RAD ELECT	E 2
213	126630-1	CAP, 220UF 25V RAD ELECT	E 2
214	126631-1		E 1
215	126631-1	CAP, 220UF 25V RAD ELECT	E 2
15	126631-1	CAP. 220UF 25V RAD ELECT	
217	126631-1	CAP, 220UF 25V RAD ELECT	C 2
C18	125855-1	47UF 50V 2.5MM L/S VERT CAP	D 2
19	126631-1	CAP, 220UF 25V RAD ELECT	<u> </u>
20	125855-1	47UF 50V 2.5MM L/S VERT CAP	D 1
21	126631-1	CAP, 220UF 25V RAD ELECT	<u>C 1</u>
22	125855-1	47UF 50V 2.5MM L/S VERT CAP	C 1
23	A11427-473K5	.047UF 50V CHIP CAPACITOR X7R	B 3
224	125855-1	47UF 50V 2.5MM L/S VERT CAP	B 3
01	C 9283-0	DIODE, MMBD414B/914 SOT-23 SMT	B 3
02	126620-1	DIODE, 600V 1A SMB ULTRAFAST	A 1
)3	126620-1	DIODE, 600V 1A SMB ULTRAFAST	B 1
04	126621-1	DIODE, 180V 3W SMB ZENER	B 1
05	126618-1	DIODE, 200V 2A ULTRAFAST SMB	B 2
06	127361-1	DIODE, FAST RCVY 200V 4A DPAK	Д Э
07	126619-1	DIODE, 200V 4A SMC ULTRAFAST	C 2
08	125255-1	DIODE, ULTRAFAST 200V 1A SMA	□ 2
9	125255-1	DIODE, ULTRAFAST 200V 1A SMA	C 1
010	126618-1	DIODE, 200V 2A ULTRAFAST SMB	B 1
-IW1	A10086-10406	4-40 X .37 RDHR A S MSCR Z	A 2
1W2	A10094-2	#4 INT STAR LOCKWASHER	A 2
1W3	A10102-3	4 X 40 HEX NUT	A 2
J 1	127028-1	CONN, 7 PIN SHROUDED HDR	A 1
12	127029-1	CONN, 15 PIN SHROUDED HDR	21
1		CHOKE, 1UH 920MA AXIAL	D 2
	126648-1		+
2	126496-1	CHOKE, 10UH 500MA AXIAL	D 3
.3	126496-1	CHOKE, 10UH 500MA AXIAL	D 1
_4	126496-1	CHOKE, 10UH 500MA AXIAL	D 2
_5	126496-1	CHOKE, 10UH 500MA AXIAL	D 1
_6	126496-1	CHOKE, 10UH 500MA AXIAL	C 1
71	A11368-10001		A 3
۹2		20 OHM .125W 1% 1206 T/R	E A
3	A11368-22111	2.21KOHM .1W 1% CHIP 0805	B 3
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PERTY OF	NGS AND SPECIFICA CROWN INTERNATIO REPRODUCED, COP	NAL, INC. AND $\Delta = 12/22/-6$	



<u> </u>	C.P.N.	PARTS LIST DESCRIPTION		1.4.= : -=	
				MAP LOC.	
R5	100115-1	91. OHM 2W 5% MF T/R 1W		A 1	
R6	100115-1	91.OHM 2W 5% MF T/R 1W		A 1	
R7		4.75KOHM 0.10W 1% CHIP		A 3	
R8		100 OHM 1% 0805 RES T/F		C 2	
R9	A11368-56211	5.62KOHM .1W 1% 0805 T/	/R	С 3	
R10		1.13KOHM .1W 1% 0805 T/		С 3	
T1	126510-1	TRANSFORMER, 35W FLYBAC		C 2	
<u></u>	127144-1	VOLT REG. +12V 100MA 4%		B 3	
	125257-1	IC, SMPS CTAL VIPER100/			
J2				A 2	
73	C 9929-8	TL431ACLP ADJ PREC RENC		E A	
J4	128382-1	OPTO SFH615A-2 IEC65 CC		C 2	
J5	C 9929-8	TL431ACLP ADJ PREC RENC	T/A	C 3	
J2X	131016-1	HEATSINK, TO-220 PC MOL	INT	A 2	
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SS OTHER	UNCUN!MULLE WISE MARKED IN RE				
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	CROWN INTERNATION		127027-6		F
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 E.C.N.	ZONE	REV.	DESCRIPTION	DATE	BY	CHK	PPRO	VALS	
00N002B		Α	RELEASE TO PRODUCTION	01/14/00	JG,	UM	D8V/	N/A	K
<u> </u>						_			
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UNLESS OTHERWISE SPECIFIED, THIS PRINTED WIRING ASSEMBLY SHALL MEET THE SPECIFICATION DESCRIBED IN IPC-A-610_ CLASS 2 STANDARDS.

NOTES:

- 1. PRINTED WIRING BOARD PART NUMBER 127562-3.
- 2. ALL LEADS SHALL BE TRIMMED TO 0.093" OR LESS.
- 3. POSITION COMPONENTS AS SHOWN ON COMPONENT MAP.
- 4. THE PRINTED WIRING ASSEMBLY PART NUMBER FOR THIS ASSEMBLY SHALL BE MARKED ON THE PRINTED WIRING BOARD AND SHALL BE PERMANENT.
- 5. PART 1 OF THE COMPONENT MAP SHOWS ONLY THE PWB MOUNTED COMPONENTS. PART 2 SHOWS THE ASSEMBLY OF THE POT LOCATOR (127784-2).



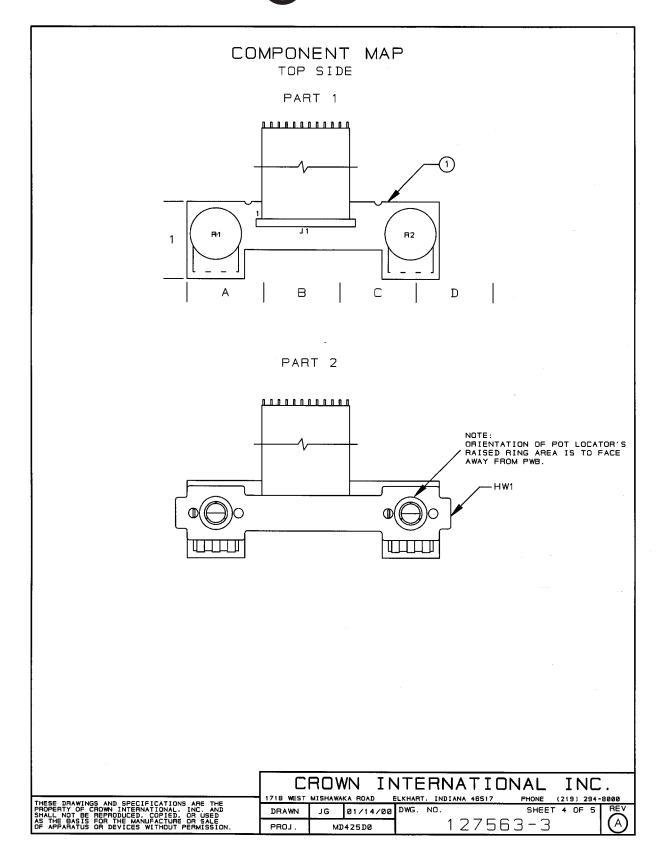
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K	P'	WA,	CE400	2) F	- 0T	BOAR	D	x.>	SS SPEC XX = ± (XX = ± (LS = ± (0.020 0.010
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	CHECKED	ILM	1-19-00	ME	DSV	1-19-00	SUPERSED	ES		
	SCALE	١	ONE	EE	NIA		E.C.N.			
	PROJ #	MD	425D0	PE	m	1-19-00	C.P.N. SI			RE V
	NEXT ASS	EMBLY			•		127	563	- 3	(A)



REF DES	C.P.N.	PARTS LIST DESCRIPTION	
HW1	127784-2	LOCATOR, CE4000 POT MACHINED	MAP LOC.
J 1	126604-2	12 POS SINGLE ROW CABLE ASSY	A 1
R1	C10245-6	5KOHM LNR 31 DETENT VERT PC	B 1
R2	C10245-6	5KOHM LNR 31 DETENT VERT PC	A 1
1	127562-3	PWB. CE4000 POT BOARD	C 1
	12/302-3	FWG. CE4000 POT BOARD	
			
	·		
			
T			
		CROWN INTERNAT	TONAL TNO
0.1111		1718 WEST MISHAWAKA ROAD ELKHART, INDIANA 469	TONAL INC
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		REVISION HISTORY				
E.C.N.	REV	DESCRIPTION	DATE	DWN C	PROVEI	_
00N0393	A	RELEASE FOR PRODUCTION	04/26/00	JG X	/ A A	W
				1 - M		

UNLESS OTHERWISE SPECIFIED, THIS PRINTED WIRING ASSEMBLY SHALL MEET THE SPECIFICATION DESCRIBED IN IPC-A-610_ CLASS 2 STANDARDS.

NOTES:

- 1. PRINTED WIRING BOARD PART NUMBER 127819-2
- 2. ALL LEADS SHALL BE TRIMMED TO 0.093" OR LESS.
- 3. POSITION COMPONENTS AS SHOWN ON COMPONENT MAPS.
- 4. THE PRINTED WIRING ASSEMBLY PART NUMBER FOR THIS ASSEMBLY SHALL BE MARKED ON THE PRINTED WIRING BOARD AND SHALL BE PERMANENT.
- 5. REMOVE SOLDER OR PREVENT SOLDER FROM ACCUMULATING IN HOLES INDICATED ON COMPONENT MAP.
- 6. "PART 1" ON THE COMPONENT MAP SHOWS THE PLACEMENT OF THE SPEAKON CONNECTORS. "PART 2" SHOWS THE ASSEMBLY OF THE DUAL BINDING POSTS TO THE OUTPUT PANEL AND THE ASSEMBLY OF THE OUTPUT PANEL/DUAL BINDING POSTS TO THE SPEAKON CONNECTORS.
- OUTPUT PANEL SCREWS (103175-1) ARE TO BE TORQUED TO 4-5 IN. POUNDS
- 8. BINDING POST NUTS ARE TO BE TORQUED TO 12-14 IN-LBS.



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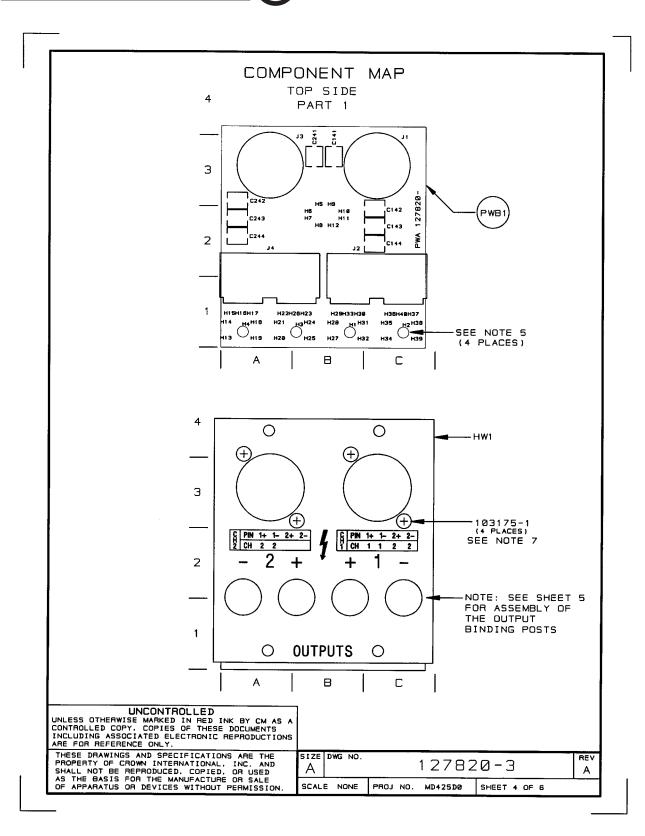
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1718 W. MISHAW ELKHART IN, 46 ELK

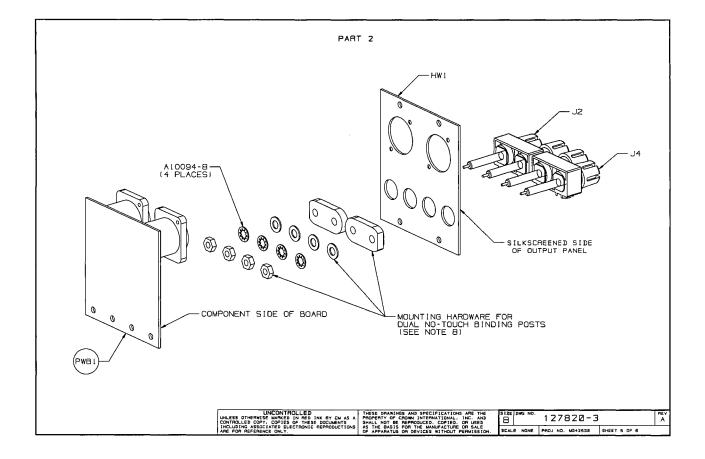
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FILENAME	EM	10CB	4/27/00	INTERNATIONAL, INC. WWW.CROWNINTL.COM
127820-3_A_01.PCB	PE	X	4-27-00	PWA.CE4K SPEAKON/BDG POST OTPT
TOLERANCE UNLESS OTHERWISE SPECIFIED		/ ×		FWA, CE4K SPEAKUN/BUG PUST UTPT
.00 - ±.02" .000 - ±.010" DRILLS - ±.003"				SIZE DWG NO. 127820-3 REV A
DO NOT SCALE DRAWING				SCALE NONE PROJ NO. MD425DØ SHEET 1 OF 6



REF DES	C.P.N.	DESCRIPTION	ARTS LIST			N	IAP LOC.	
C141	A10434-104JD	1UF 250V 5% N	ITL POLY F	LM T/A			B 3	
C142	A10434-104JD	.1UF 250V 5% N	ITL POLY FI	LM T/A			C 2	
C143	A10434-104JD	.1UF 250V 5% N	ATL POLY FI	LM T/A			C 2	
C144	A10434-104JD	.1UF 250V 5% N	ATL POLY FI	LM T/A	· · · · · · · · · · · · · · · · · · ·	- I	C 2	
C241		.1UF 250V 5% N					В 3	
C242		.1UF 250V 5% N					А З	
C243		.1UF 250V 5% N					A 2	
C244		.1UF 250V 5% N					A 2	
HW1	127826-2	PNL, CE4000 S					A 1	
HW2	103175-1	M2.9X9.5MM FL					A 4	
HW3	103175-1	M2.9X9.5MM FL1					В 3	_
HW4	103175-1	M2.9X9.5MM FL					B 4	
HW5	103175-1	M2.9X9.5MM FL					C 3	
HW6	A10094-8	#10 INT TOOTH					A 4	
HW7	A10094-8	#10 INT TOOTH					В 3	
HW8	A10094-8	#10 INT TOOTH					B 4	_
							C 3	
HW9	A10094-8	#10 INT TOOTH JACK, 4POLE P					C 3	
J1	126985-2						C 2	
J2	127521-1	BDG POST, DUAL						
73	126985-2	JACK, 4POLE PI					A 3	
J4	127520-1	BDG POST, DUAL			DUT	 _	A 2	
PWB1	127819-2	PWB, CE4000 SI	י עטאר פואט ו	-031 001	רחו			
								
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				REVISION HISTORY					
E.C.N.	REV	1		DESCRIPTION	DA	TE	DWN	APPROVE	
00N0527	A	RELEASE	TO PRODUCTION		05-3			MUM (S	5 1/2
									77

UNLESS OTHERWISE SPECIFIED. THIS PRINTED WIRING ASSEMBLY SHALL MEET THE SPECIFICATION DESCRIBED IN IPC-A-610, CLASS 2 STANDARDS.

NOTES:

- 1. PRINTED WIRING BOARD PART NUMBER 128242-3.
- ALL LEADS SHALL BE TRIMMED TO 0.093" OR LESS.
- 3. POSITION COMPONENTS AS SHOWN ON COMPONENT MAPS.
- THE PRINTED WIRING ASSEMBLY PART NUMBER FOR THIS ASSEMBLY SHALL BE MARKED ON THE PRINTED WIRING BOARD AND SHALL BE PERMANENT.
- 5. F1 (A10285-29) IS TO BE INSTALLED AFTER WAVE SOLDERING.



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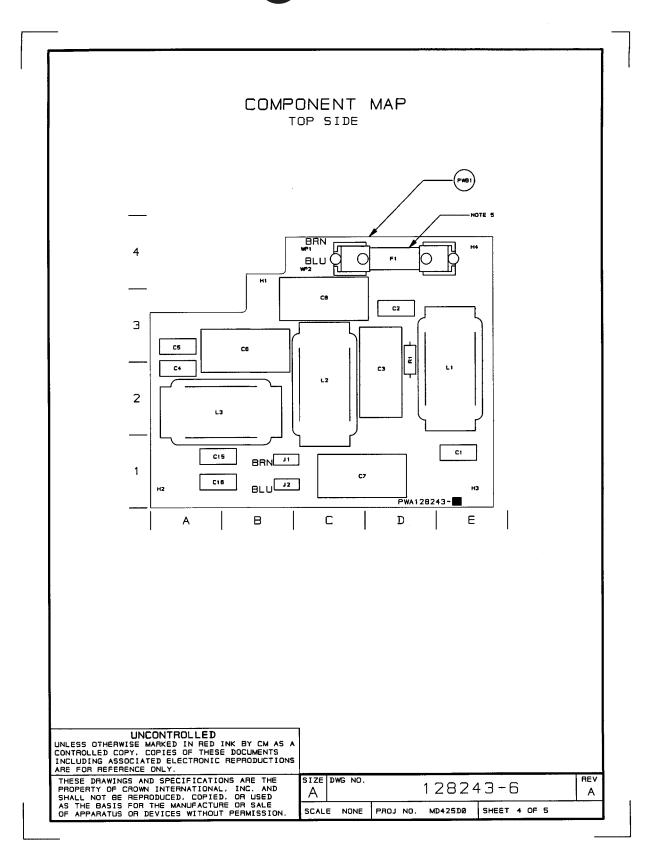


		T	PARTS L	IST		-			
REF DES		DESCRIPTION						MAP LOC.	
<u>C1</u>	C10325-6	2200.PF 250V						E 1	
C2	C10325-6	2200.PF 250VA		ILM	<u>Y2</u>			рз	
C3	C 7377-2	.68UF 250V RF						D 2	
C4	C10325-6	2200.PF 250VA	C 20% F	ILM	Y2			A 2	
C5	C10325-6	2200.PF 250VA	C 20% F	ILM	Y2			A 3	
C6	C 7377-2	.68UF 250V RF	I CAP					В 3	
C7	C 7377-2	.68UF 250V RF	I CAP					C 1	
C8	C 7377-2	.68UF 250V RF	I CAP					C 3	
C15	C10325-6	2200.PF 250VA	C 20% F	ILM	Y2			A 1	
C16	C10325-6	2200.PF 250VA	C 20% F	ILM	Y2			A 1	
F1	A10285-29	FUSE, 20A FLN	120 SLO-	BLO	N			(SEE NOTE	5
F1X	C 8867-1	FUSE CLIP, PO	TALLOM	TAG				D 4	
F1XX	C 8867-1	FUSE CLIP, PO						D 4	
	101031-1	.250 FASTON.			TARLE			B 1	
	101031-1	.250 FASTON,						B 1	
L1	127902-1	IDCTR, COMMON						E 2	-
L2	127902-1	IDCTR, COMMON						C 2	
	127902-1	IDCTR, COMMON						A 2	
	128242-3	PWB, EMI FILT		,	AU 1 A C L()			^ ^ 	
R1								D 2	
		1.00M .5W 1%		= 0	V EAST			D 3	
		WIRE, 14 BRN						C 4	
WP2	MU40E-98E11A	WIRE, 14 BLU	3/16 X	4.0	X FASI			C 4	
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APPARATUS	OR DEVICES WITH	DUI PEHMISSION.	JUALE N	017E	THOU NO.	MUTZOUG	Sheet	J UF 5	

Parts 5-108







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6 Schematics

The schematics provided are representative only. There may be slight variations between amplifier to amplifier. These schematics are intended to be used for troubleshooting purposes only.

CE4000 MAIN

PWA NUMBER: 126218-13

Schematic Sheet:

43

44

45

46

47

48

PWA NUMBER: 126218-14

Schematic Sheet:

43

44

45

46

47

48

PWA NUMBER: 126218-16

Schematic Sheet:

1

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CE4000 BFG

PWA NUMBER: 126828-7 (REV.A)

Schematic Sheet:

8

PWA NUMBER: 126828-12 (REV.A)

Schematic Sheet:

8

PWA NUMBER: 126828-13 (REV.A)

Schematic Sheet:

9

CE4000 INPUT CE

PWA NUMBER: 126883-4

Schematic Sheet:

5

CE4000 FLYBACK

PWA NUMBER: 127027-6

Schematic Sheet:

6

CE4000 POT BOARD

PWA NUMBER: 127563-3

Schematic Sheet:

5

PWA NUMBER: 127563-4 (REV.A)

Schematic Sheet:

5

CE 4K SPEAKON/BDG POST OTPT

PWA NUMBER: 127820-3

Schematic Sheet:

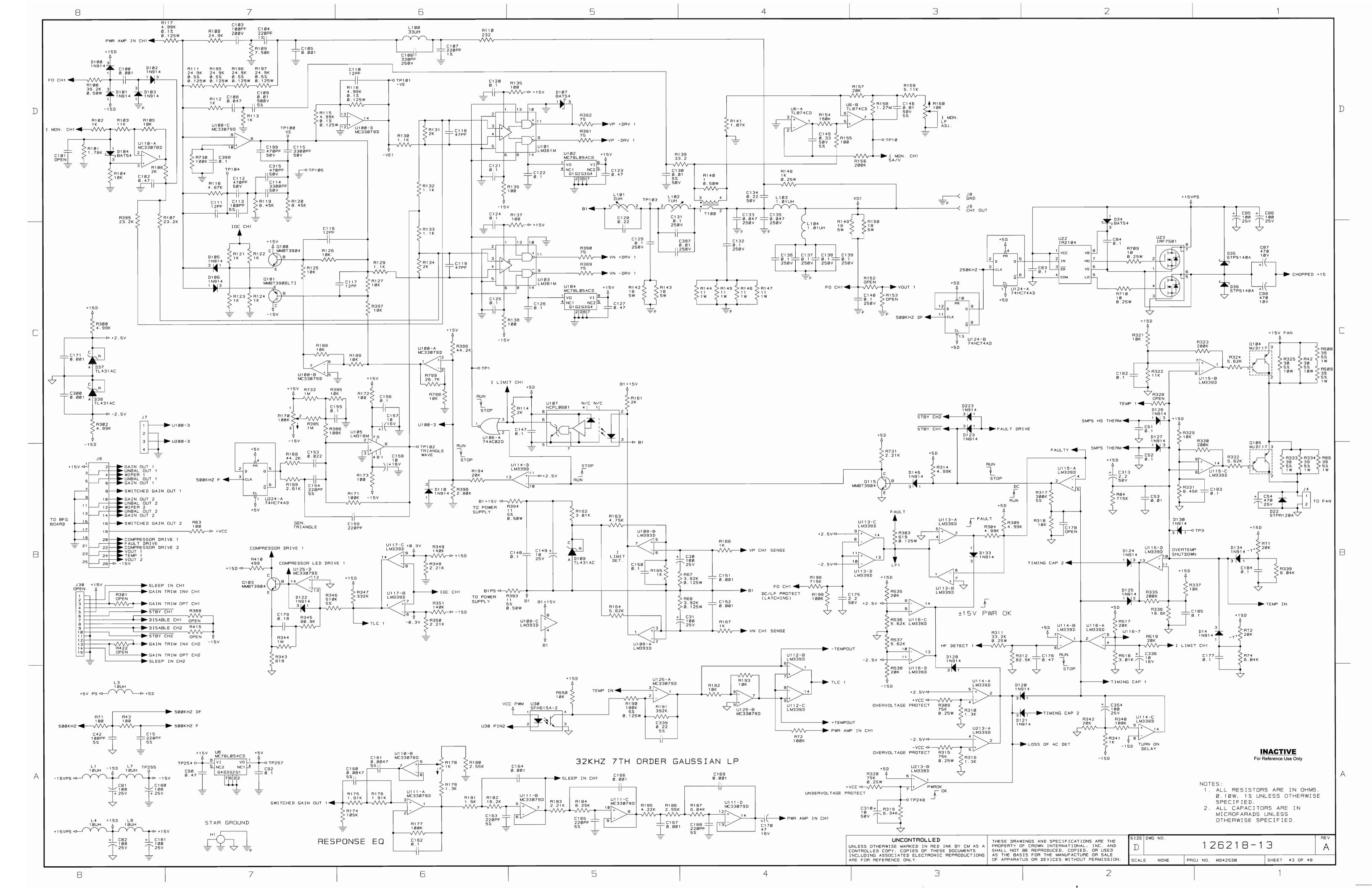
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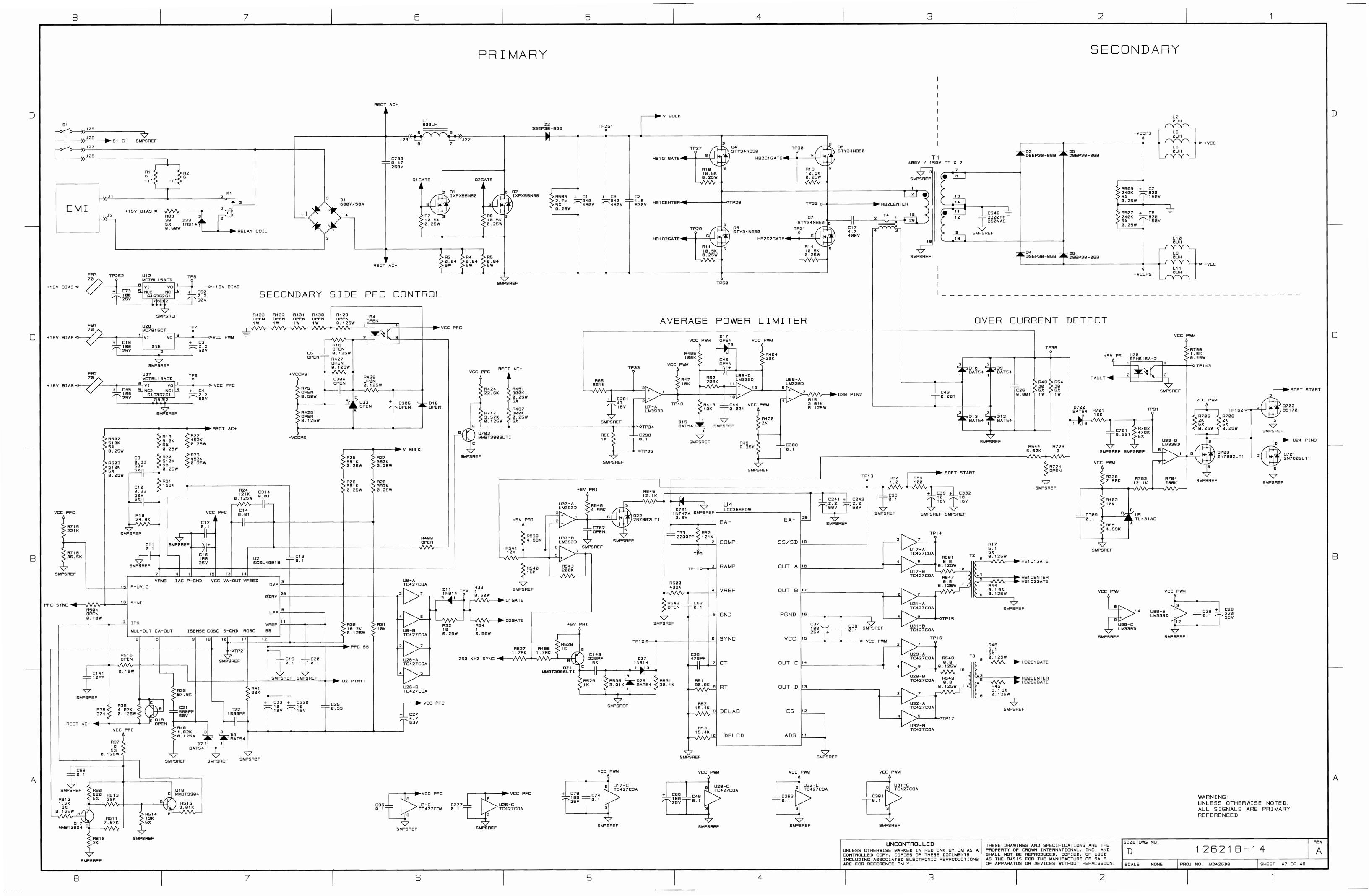
CE4000 EMI FILTER

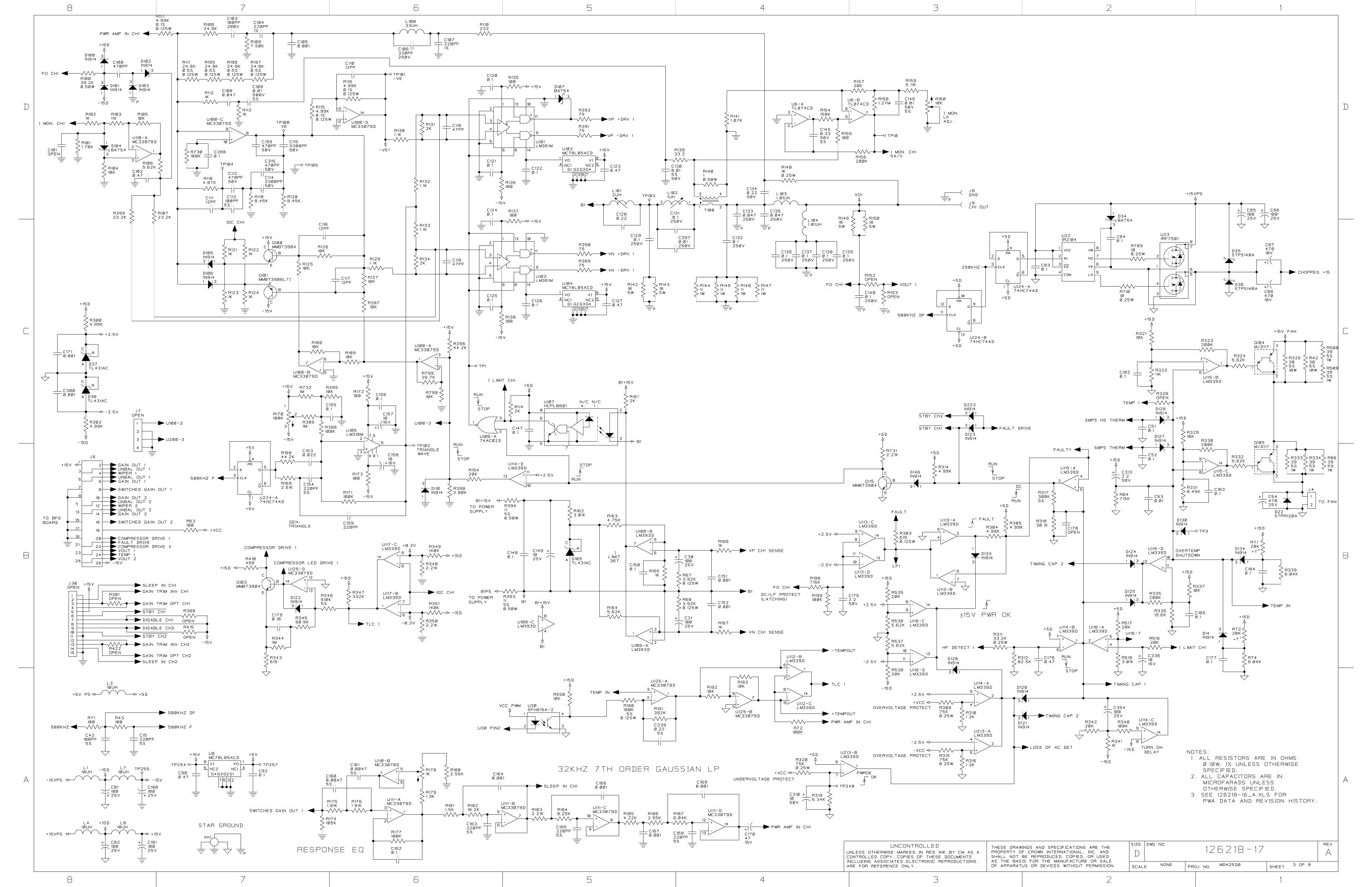
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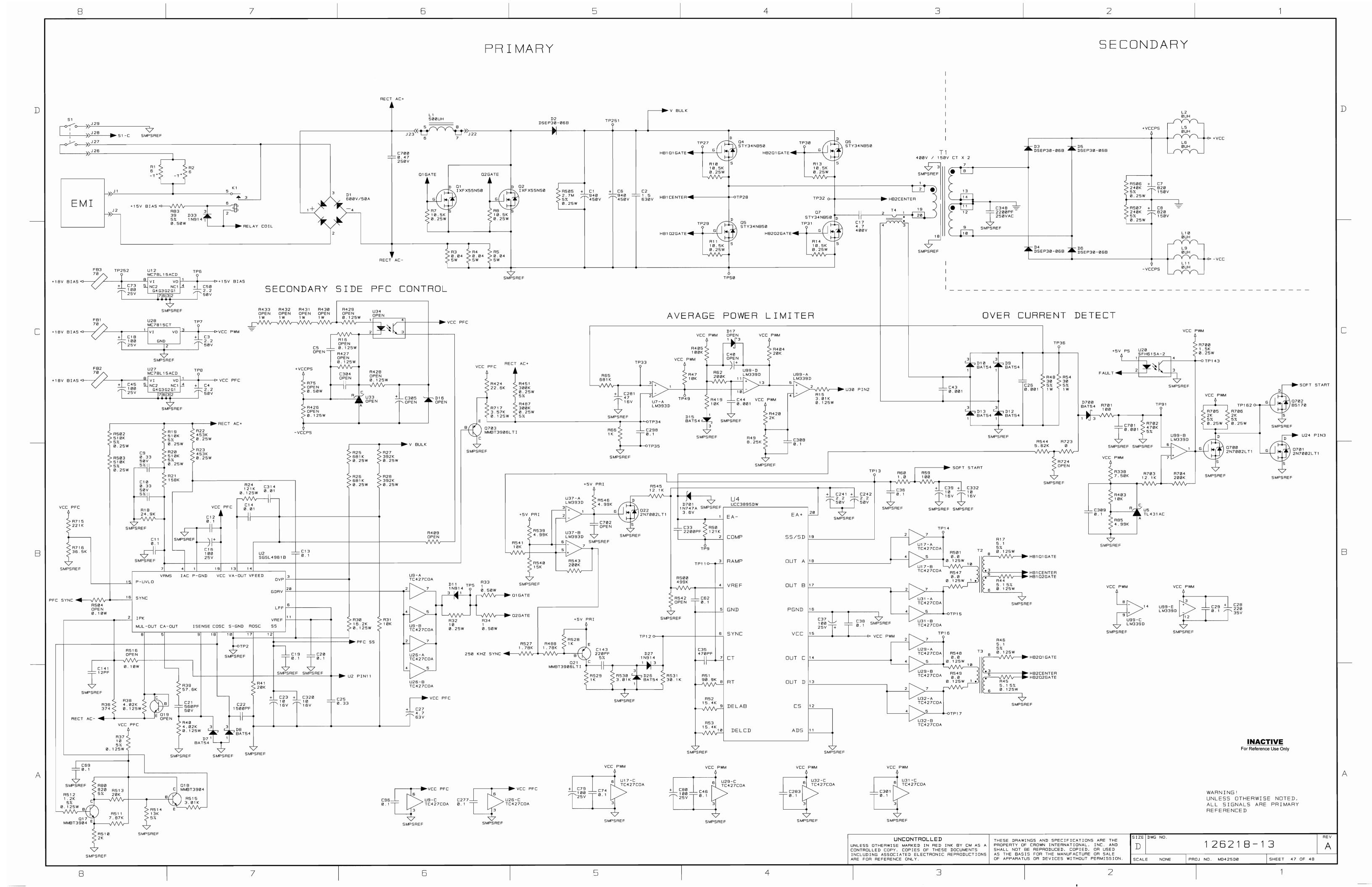
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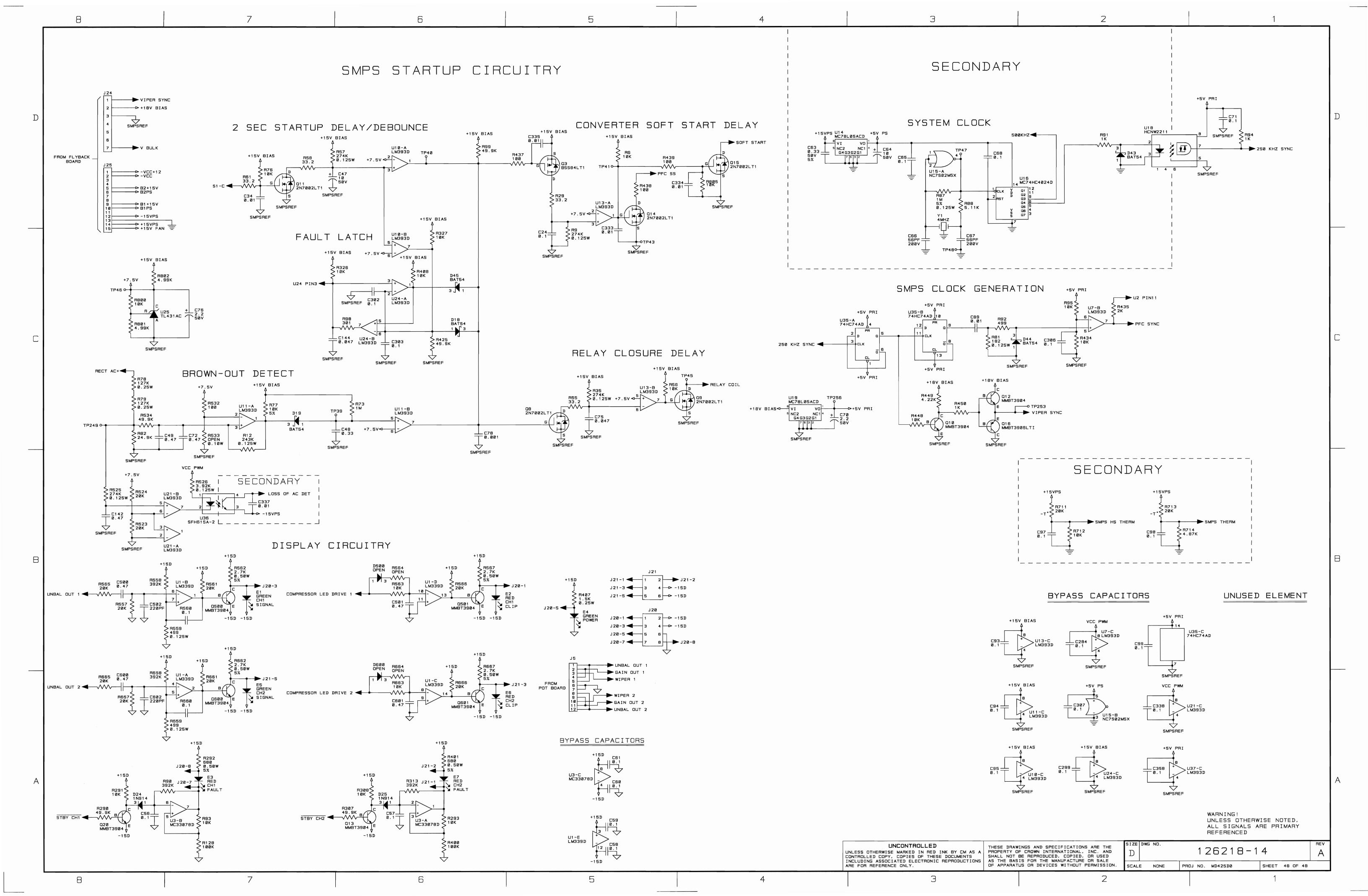
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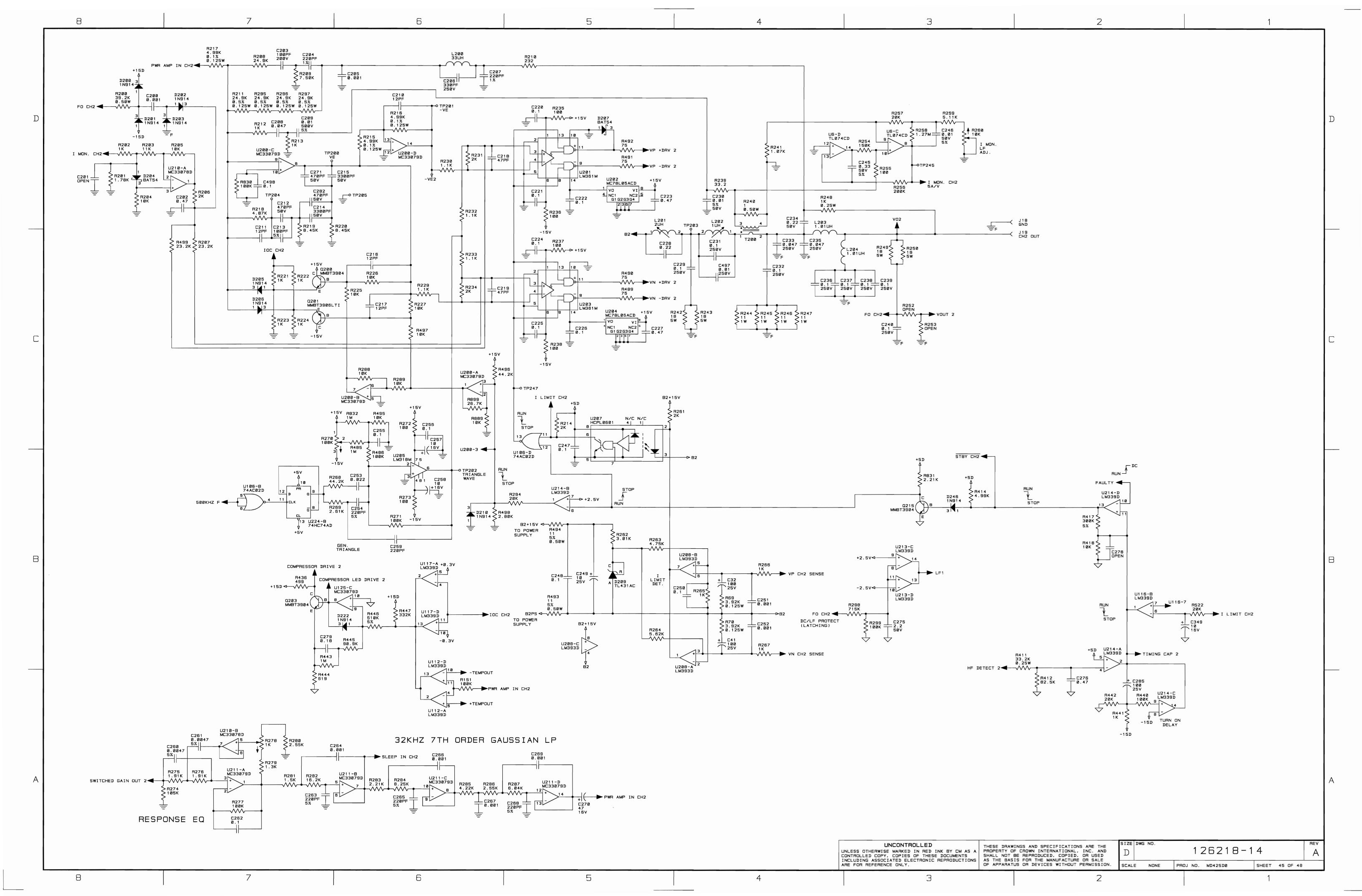


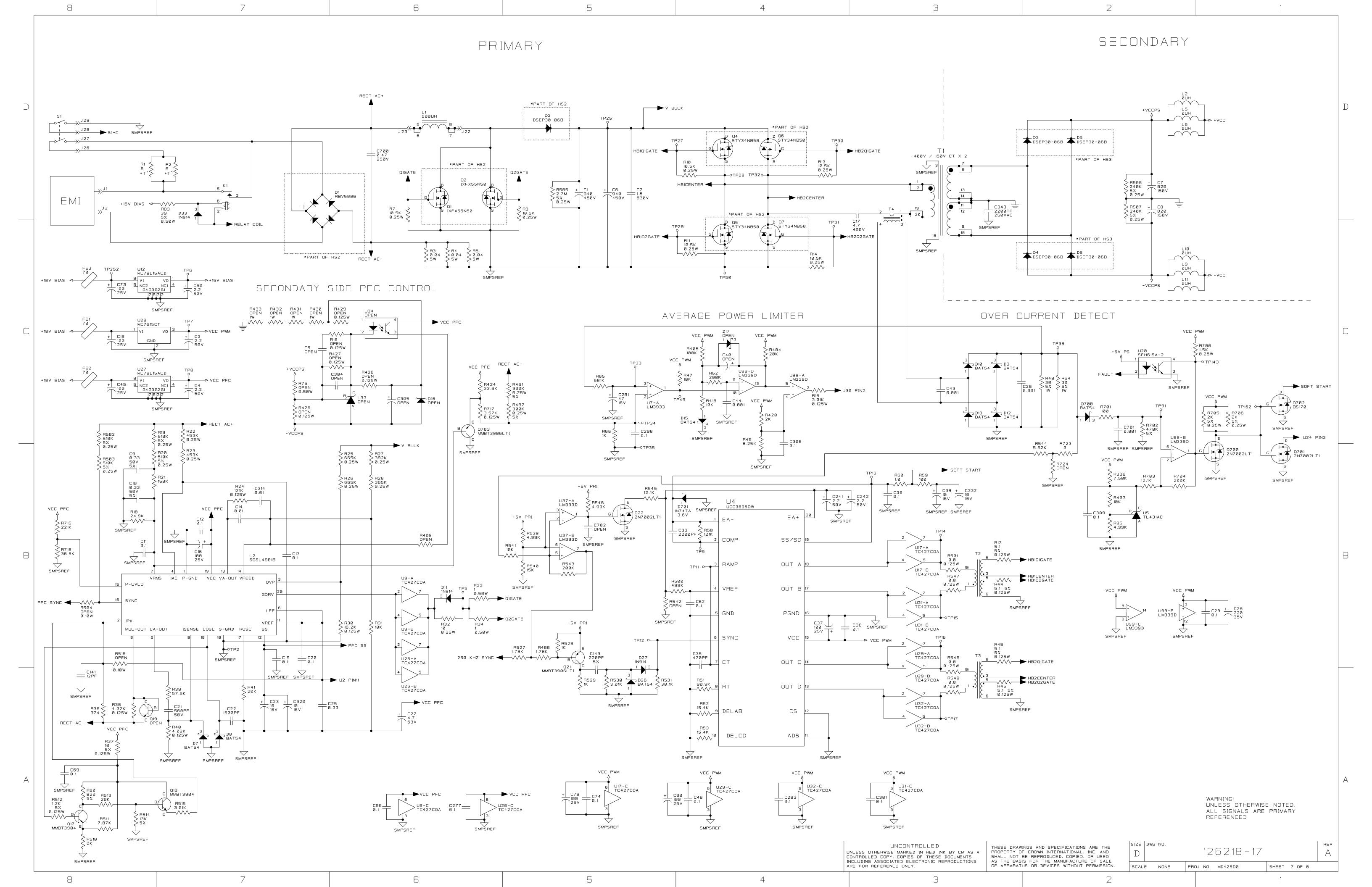


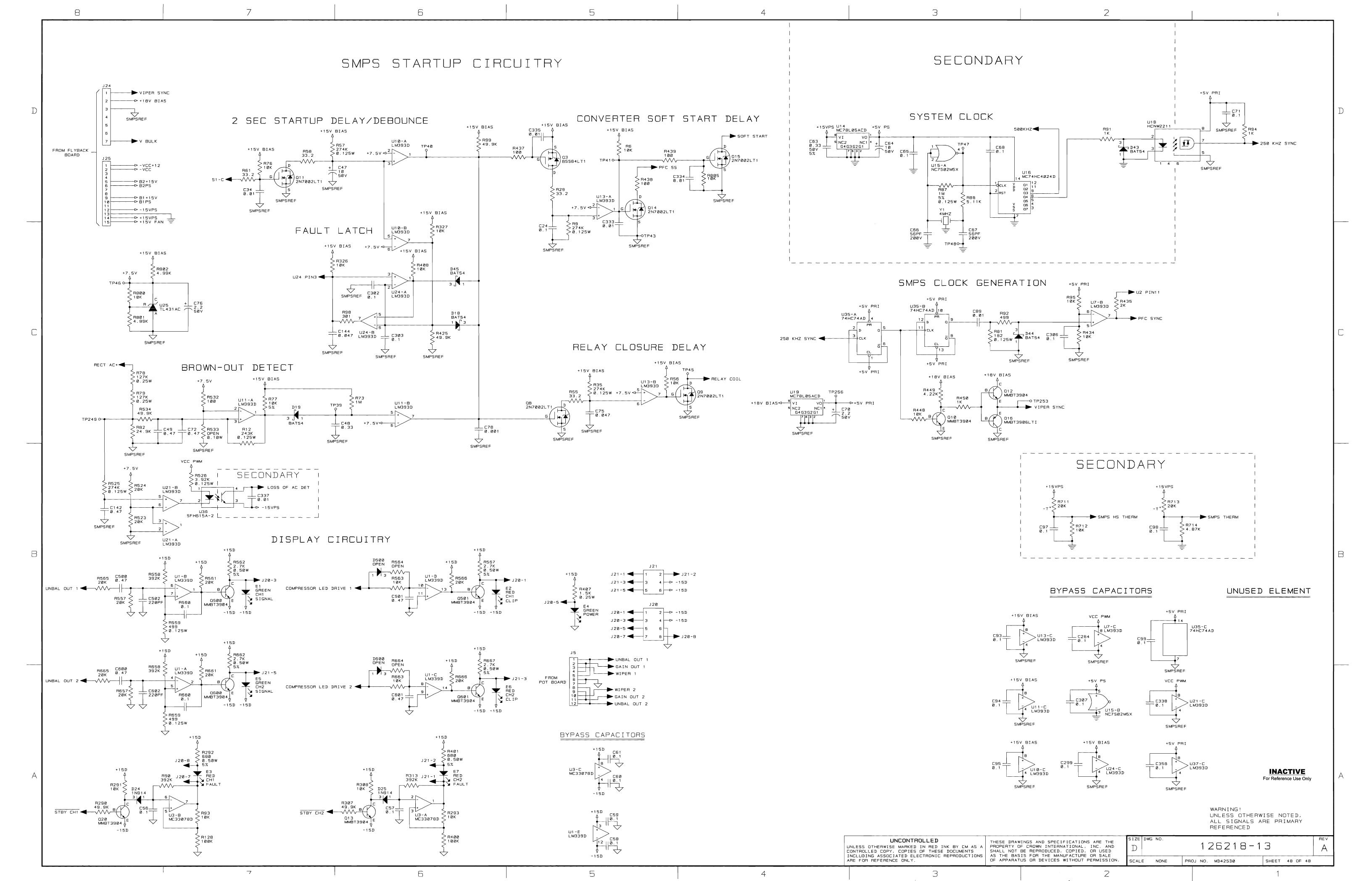


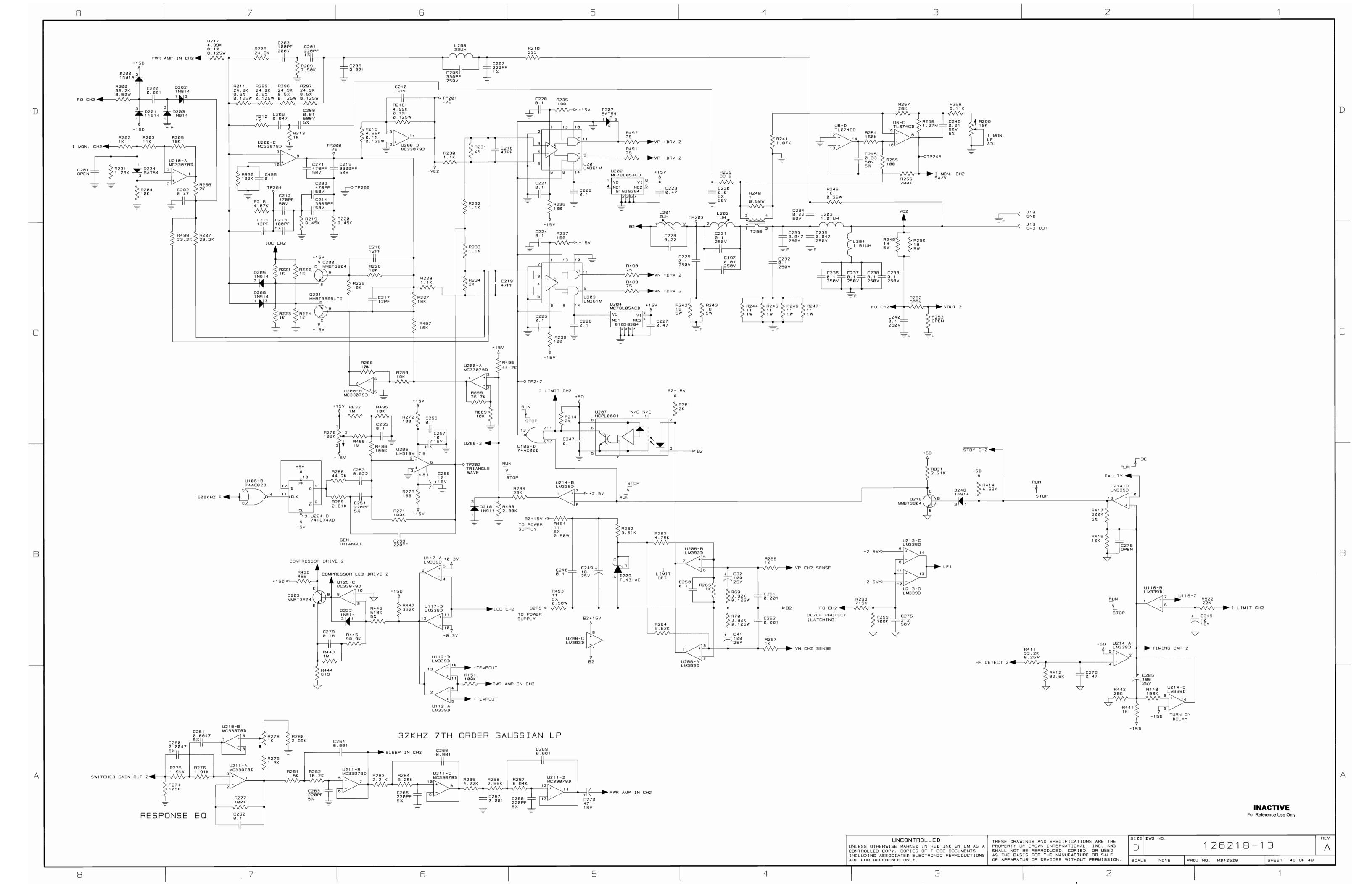


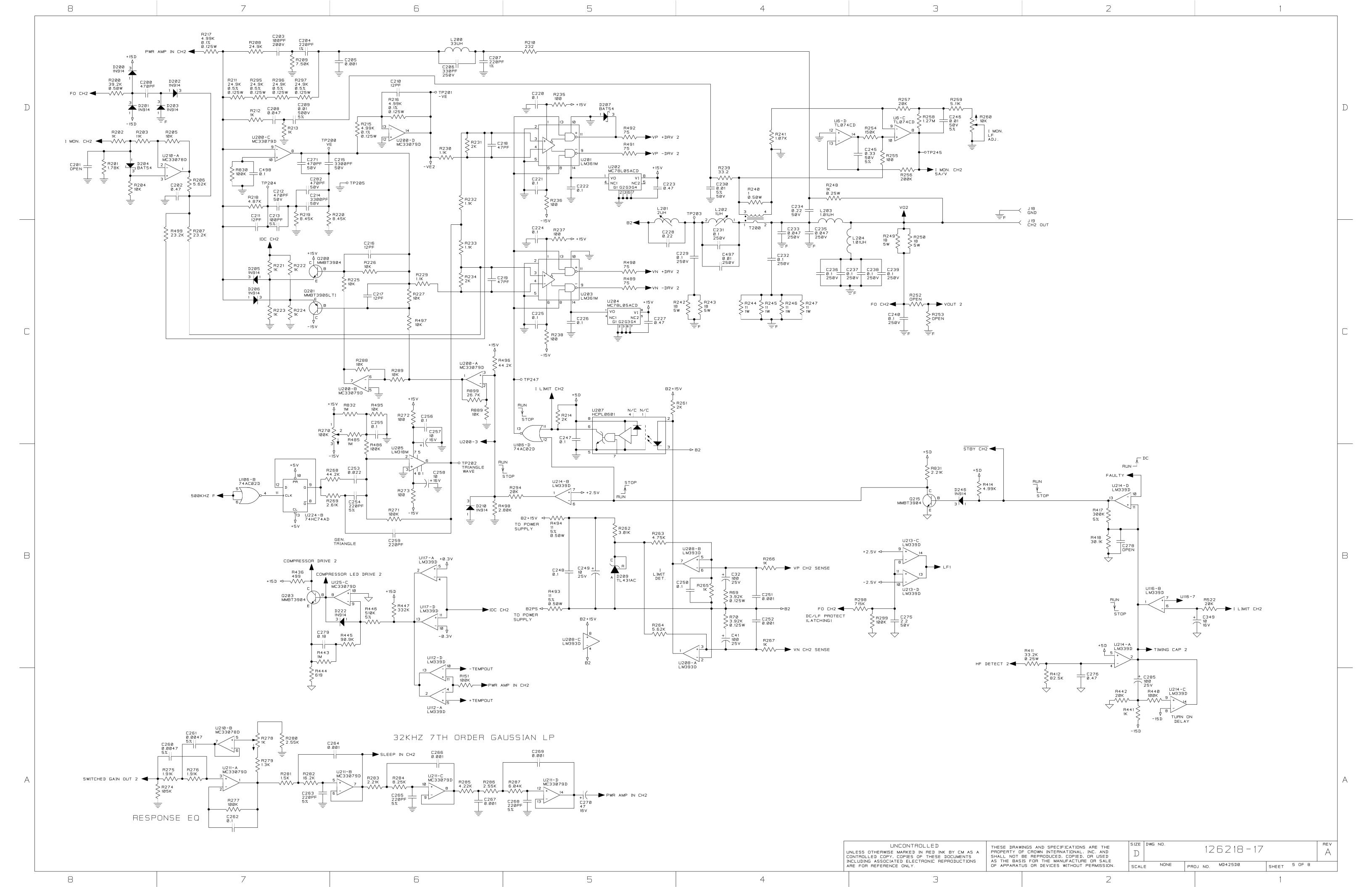


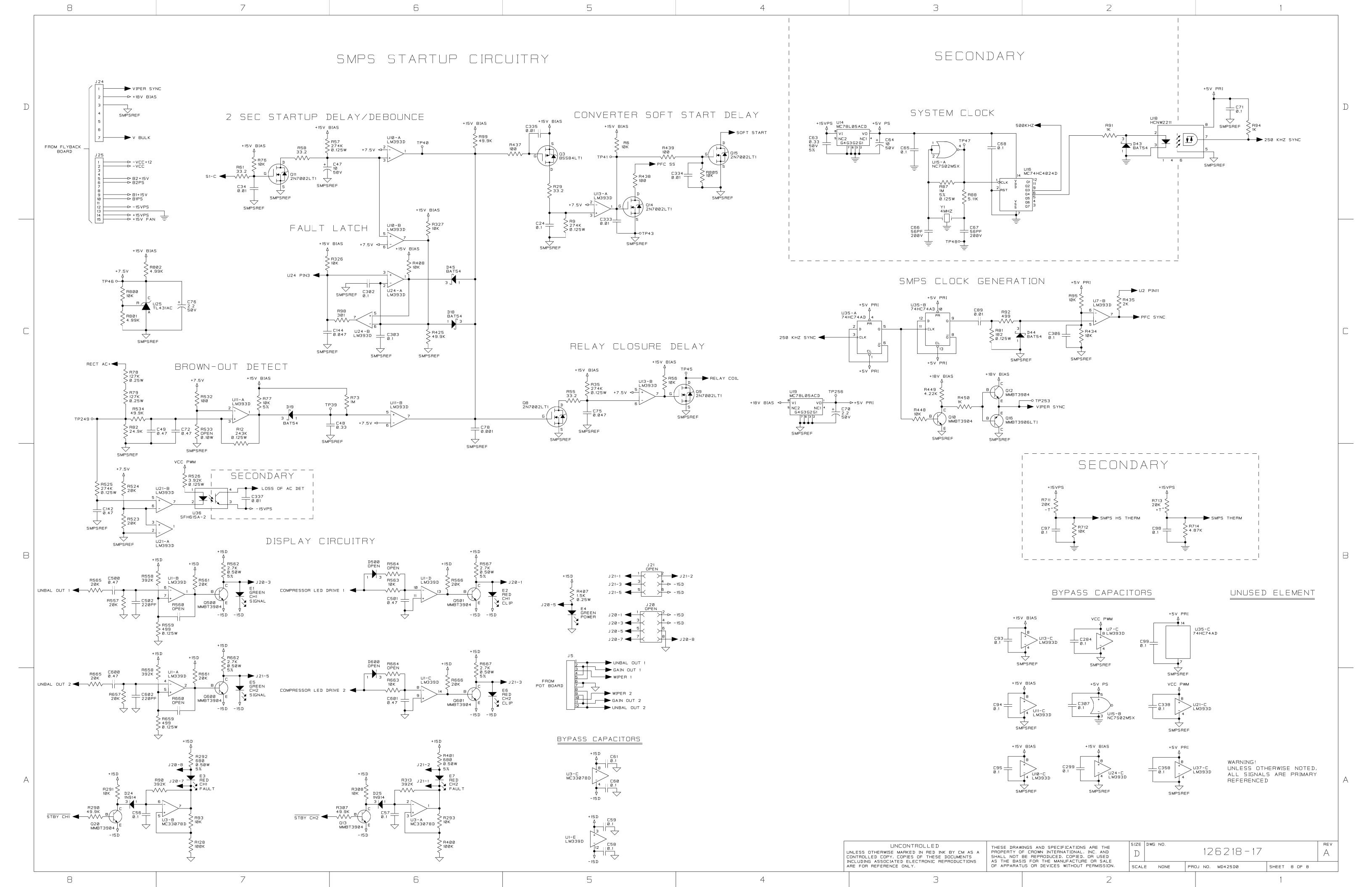


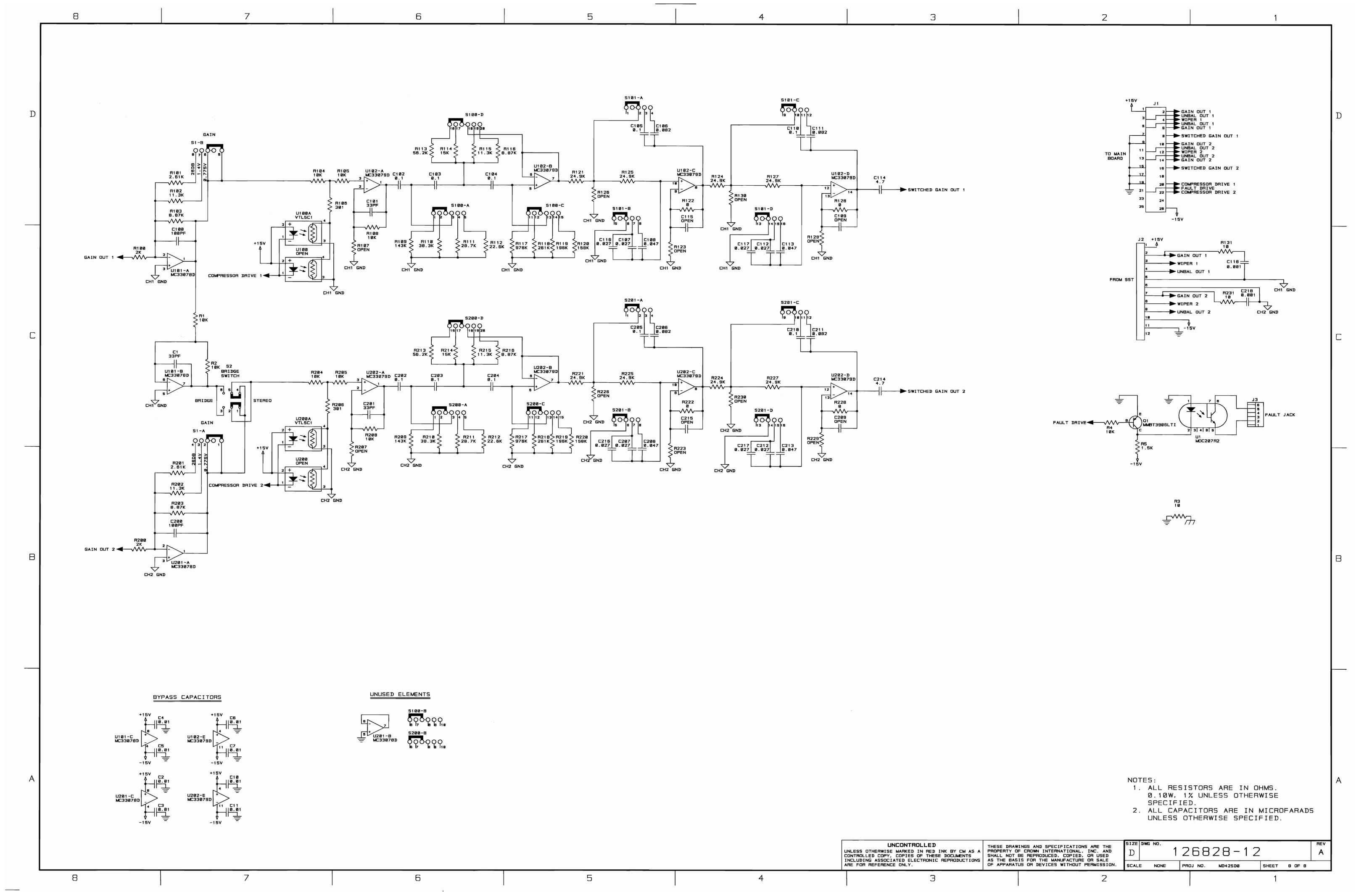


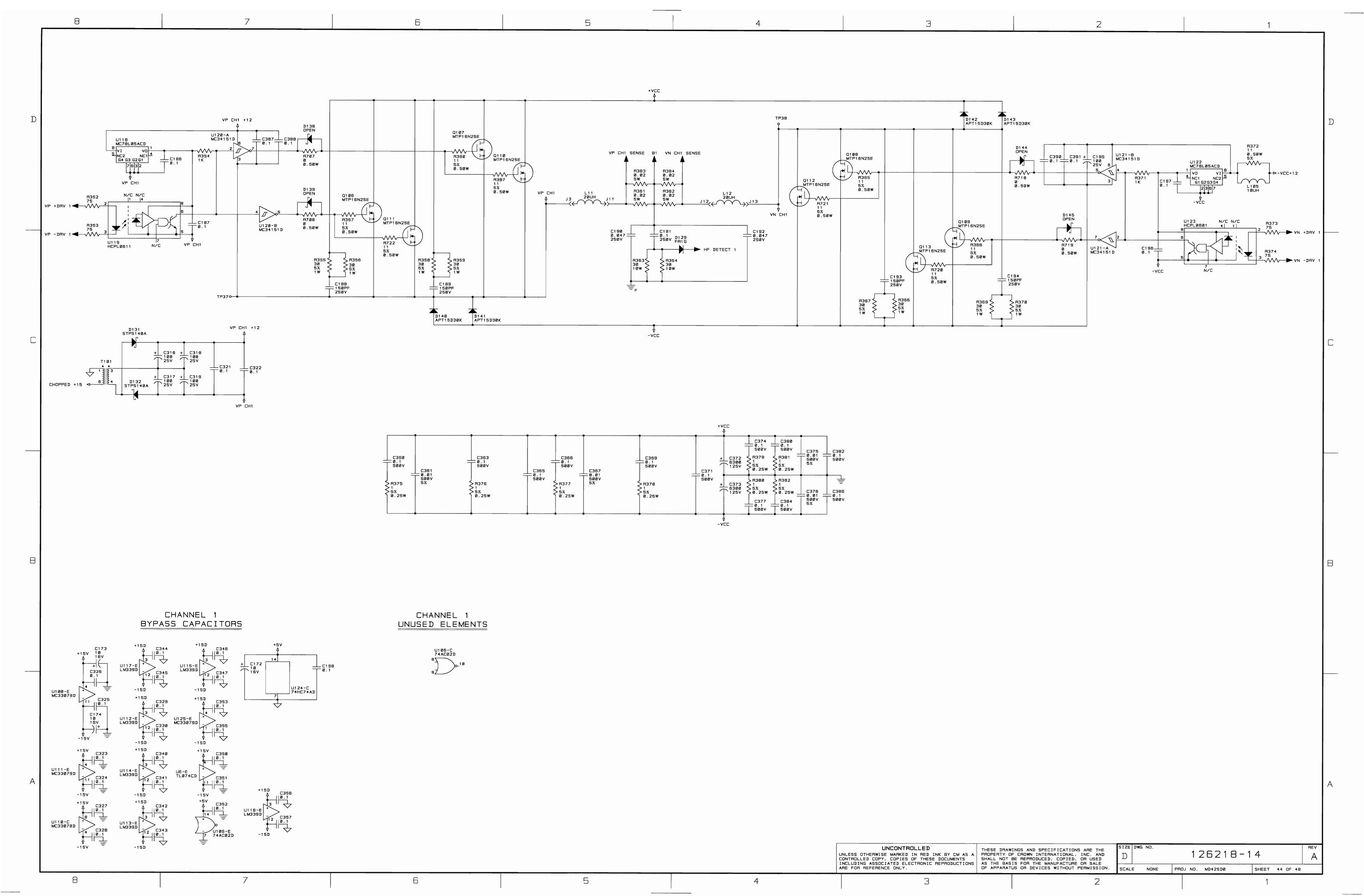


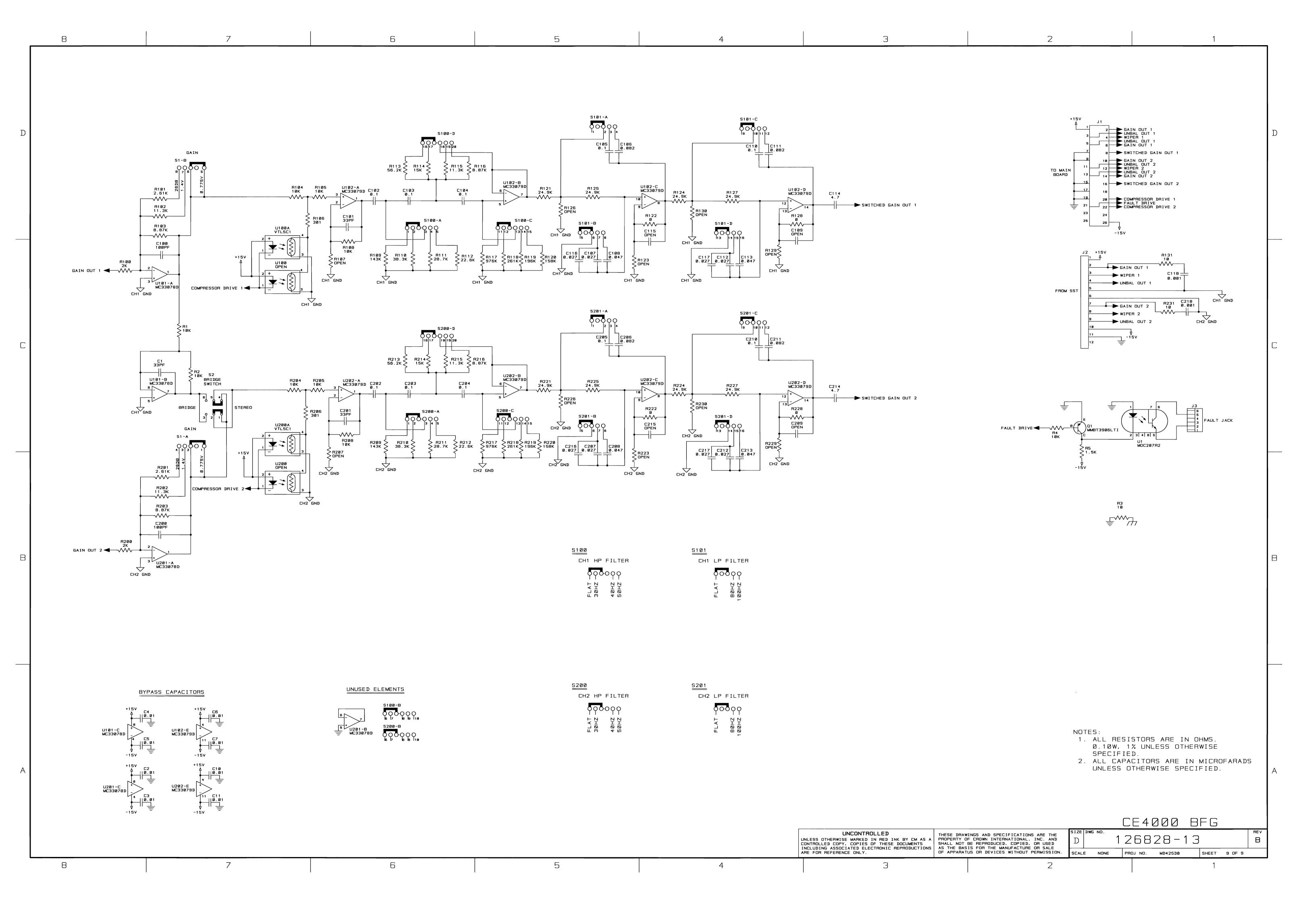


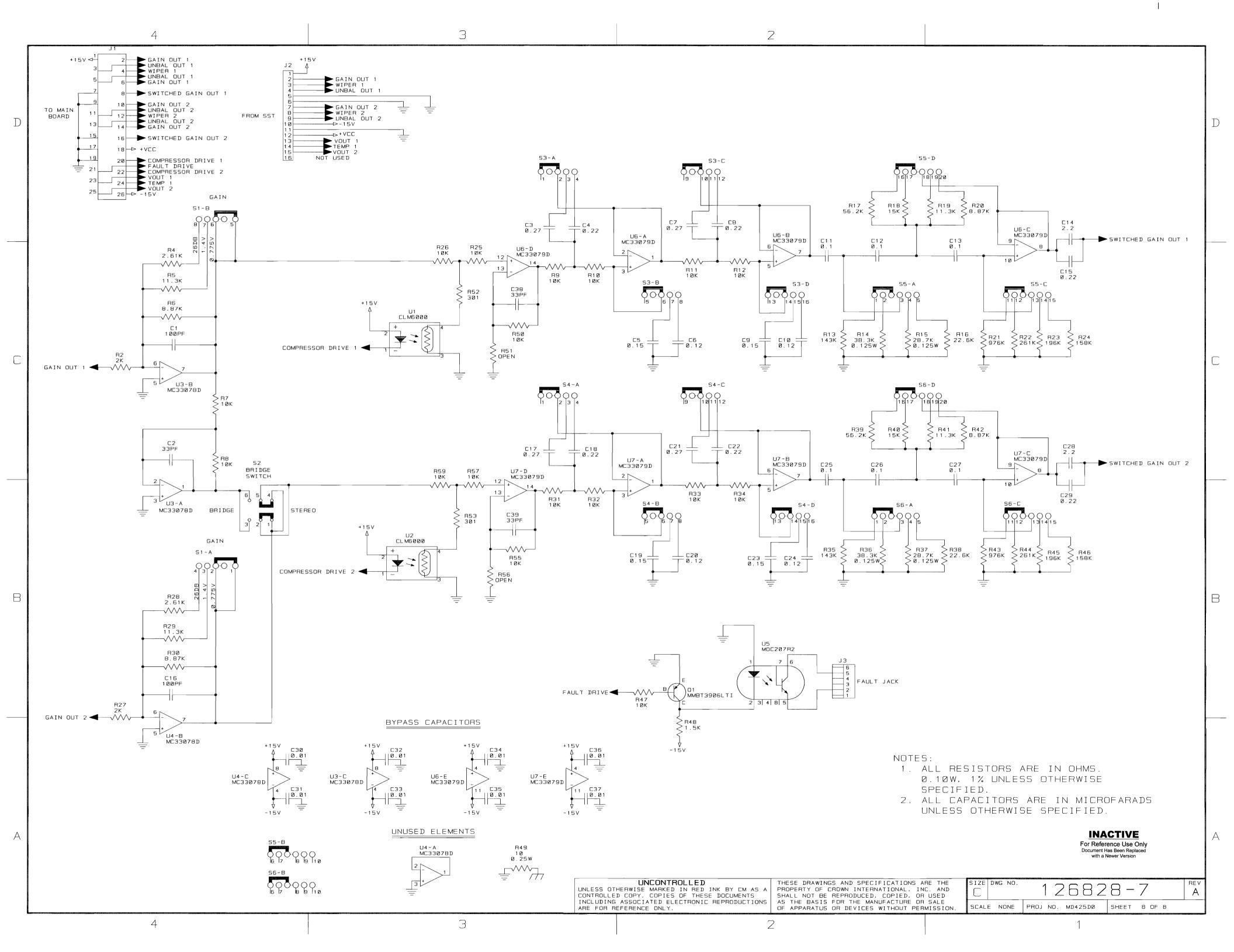


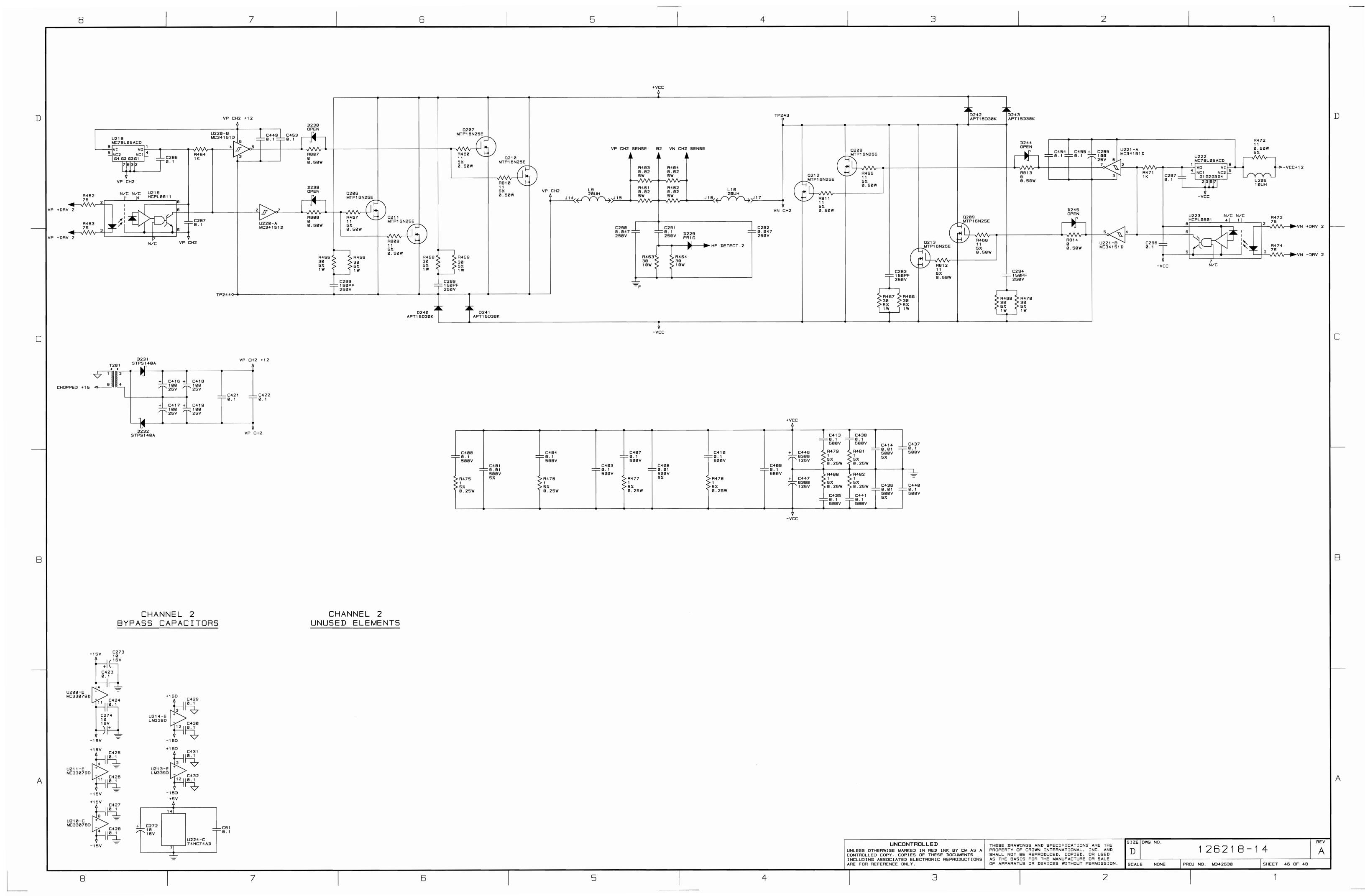


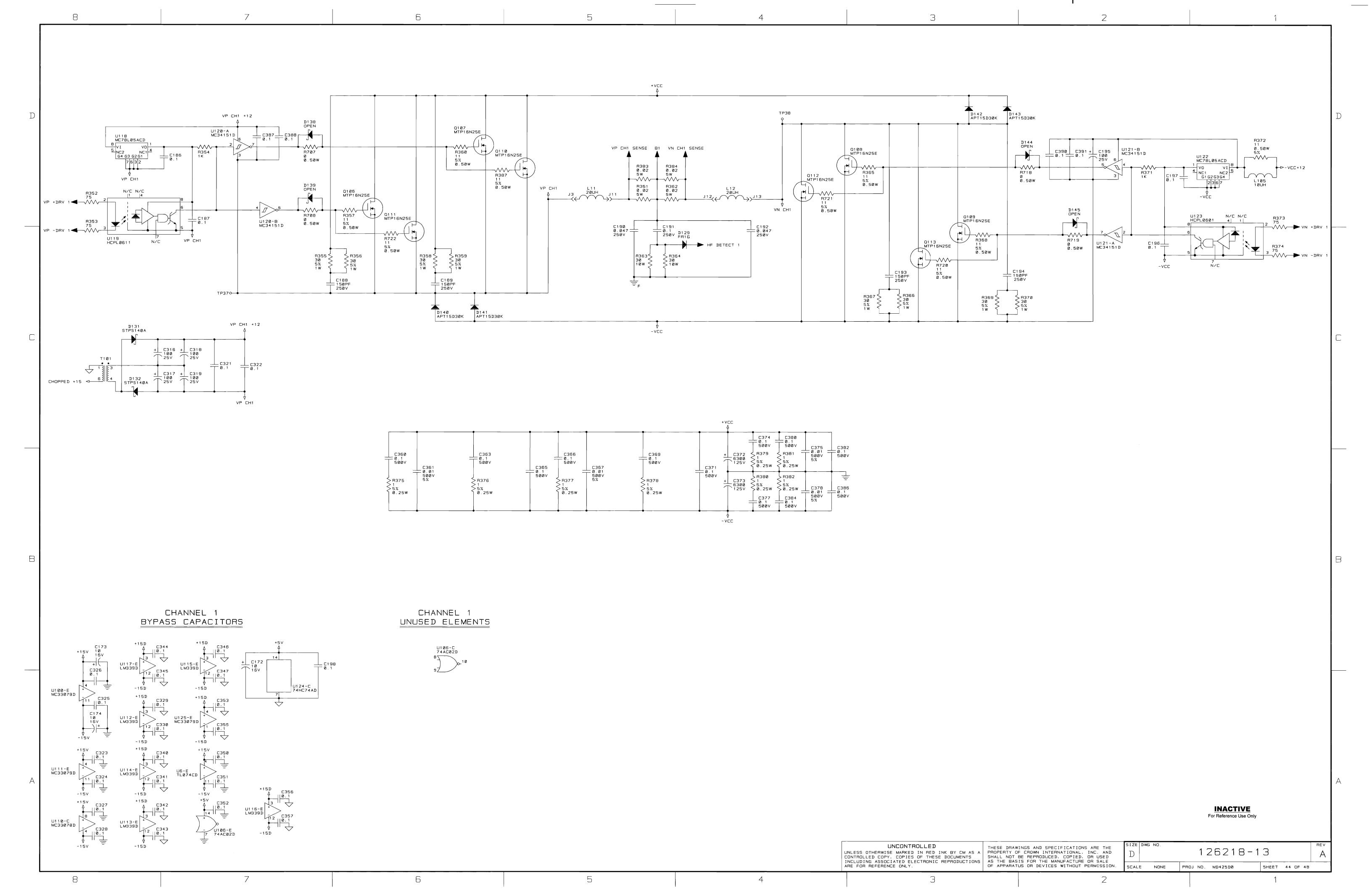


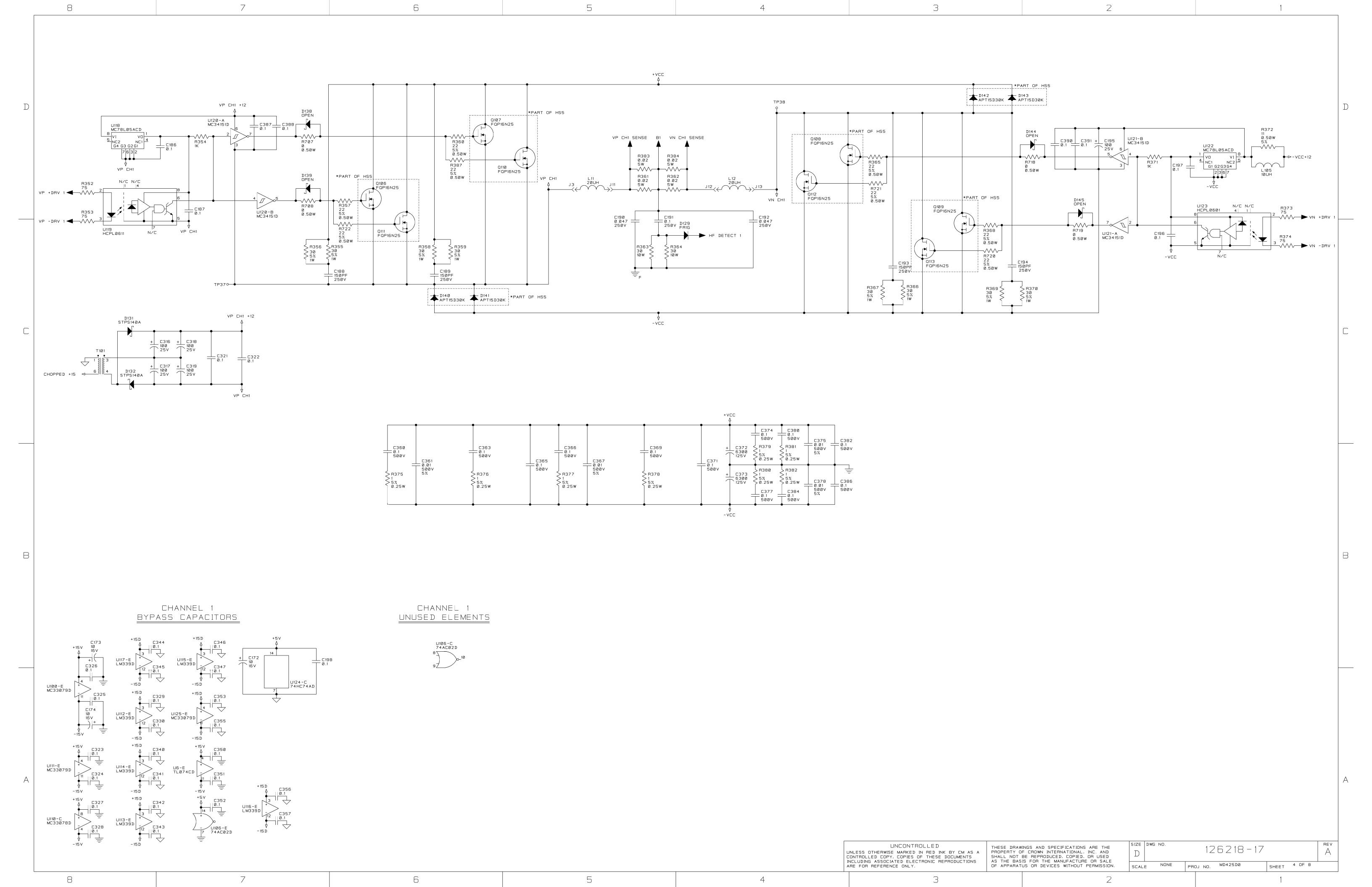


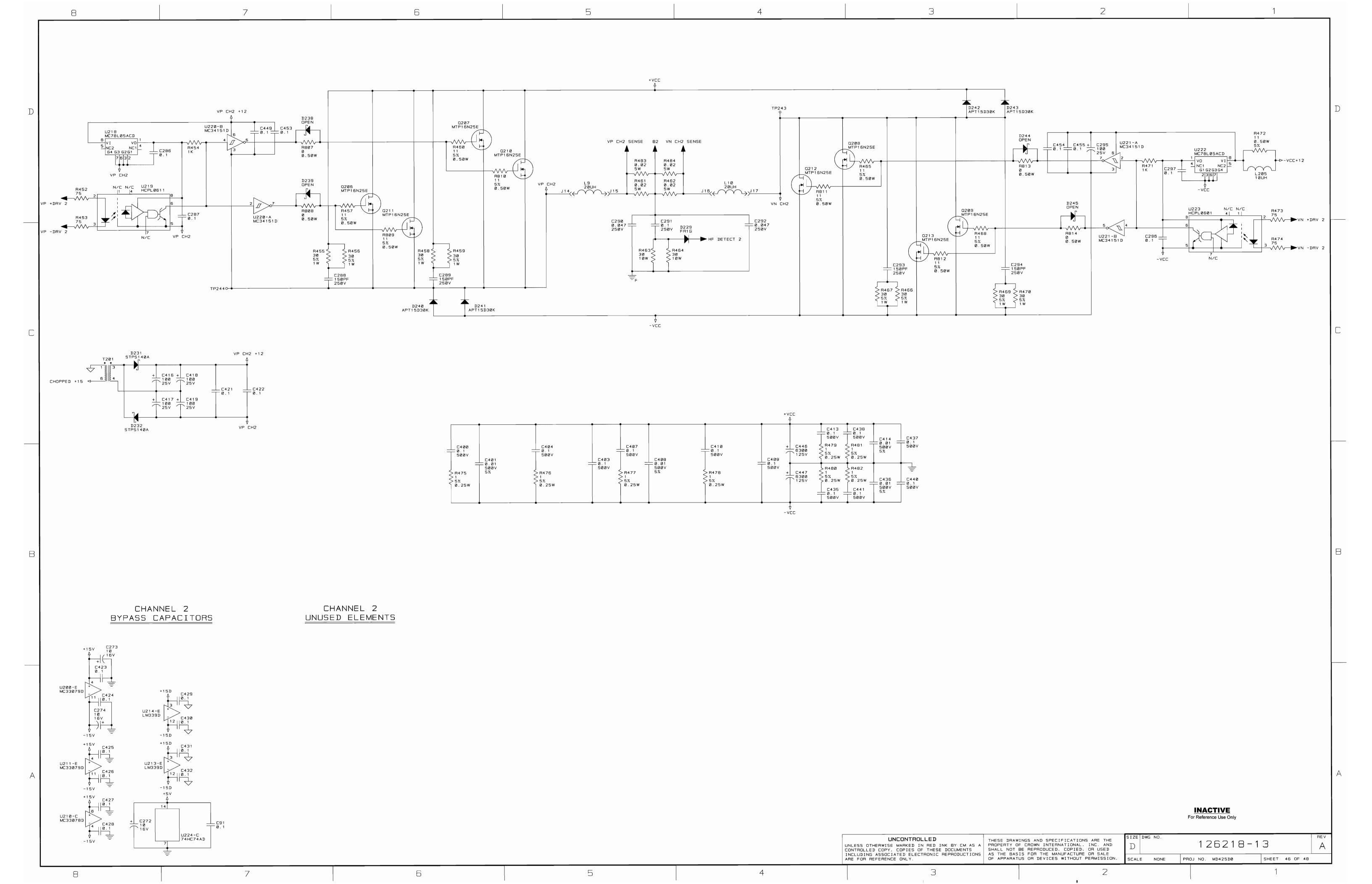


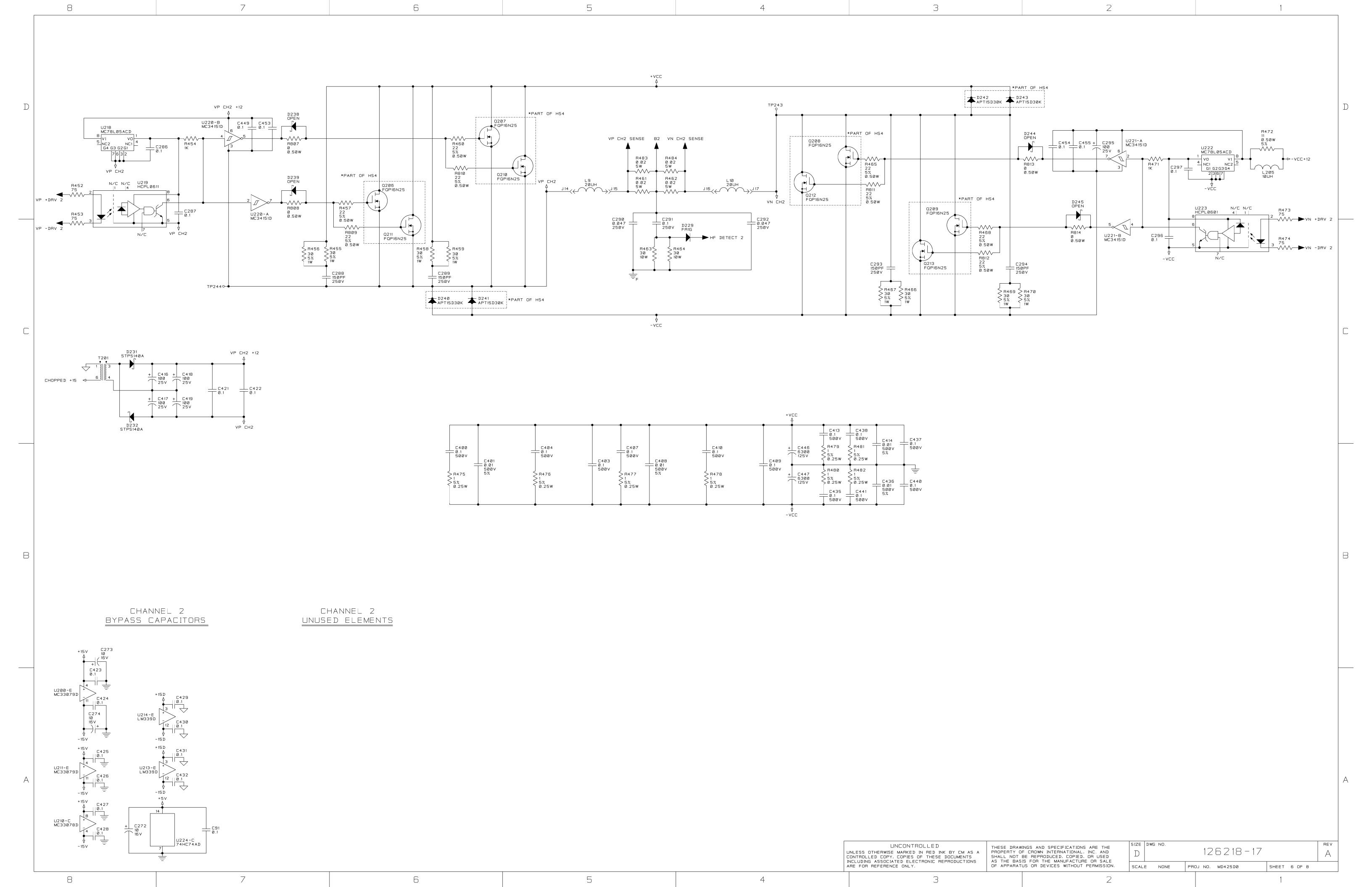


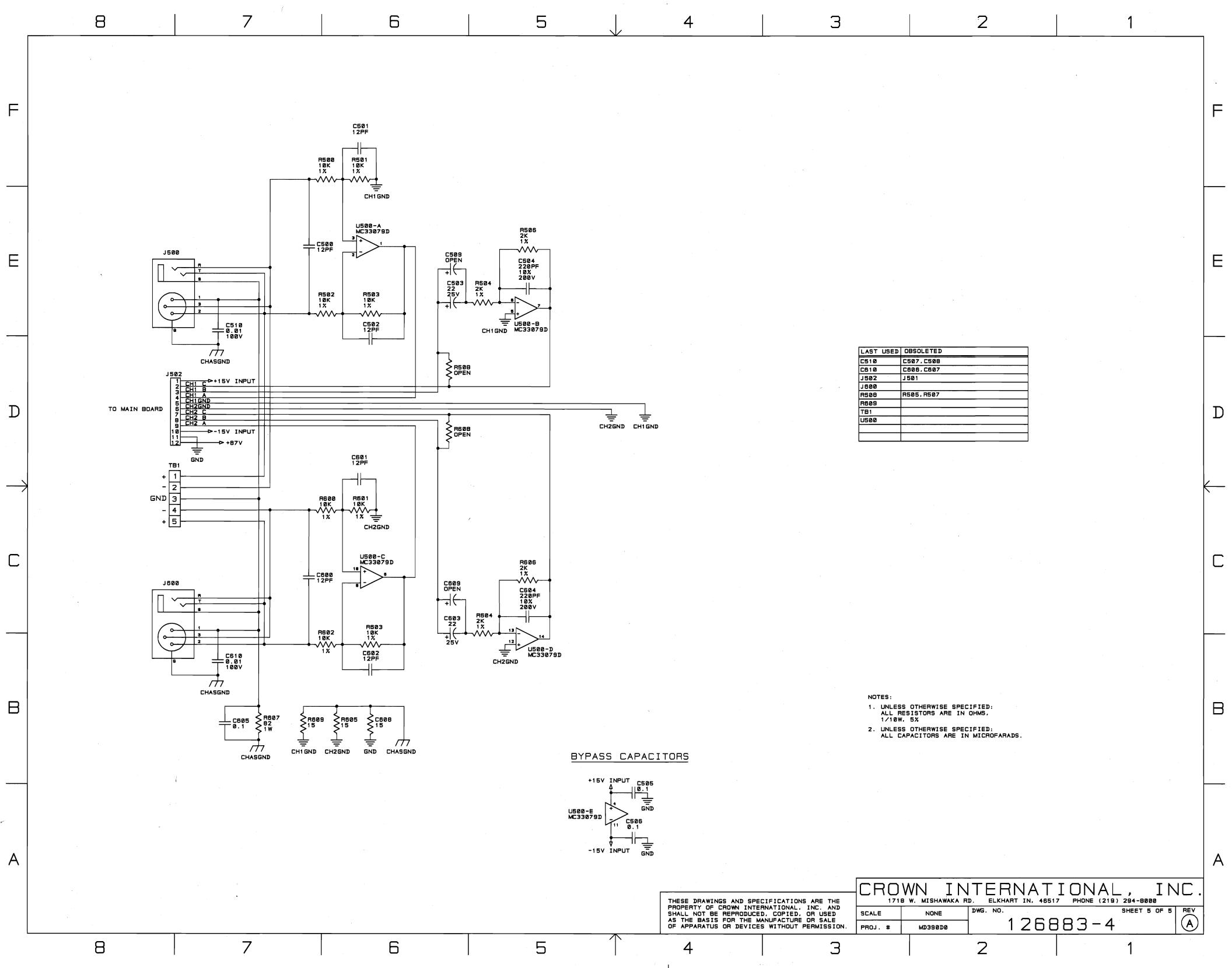


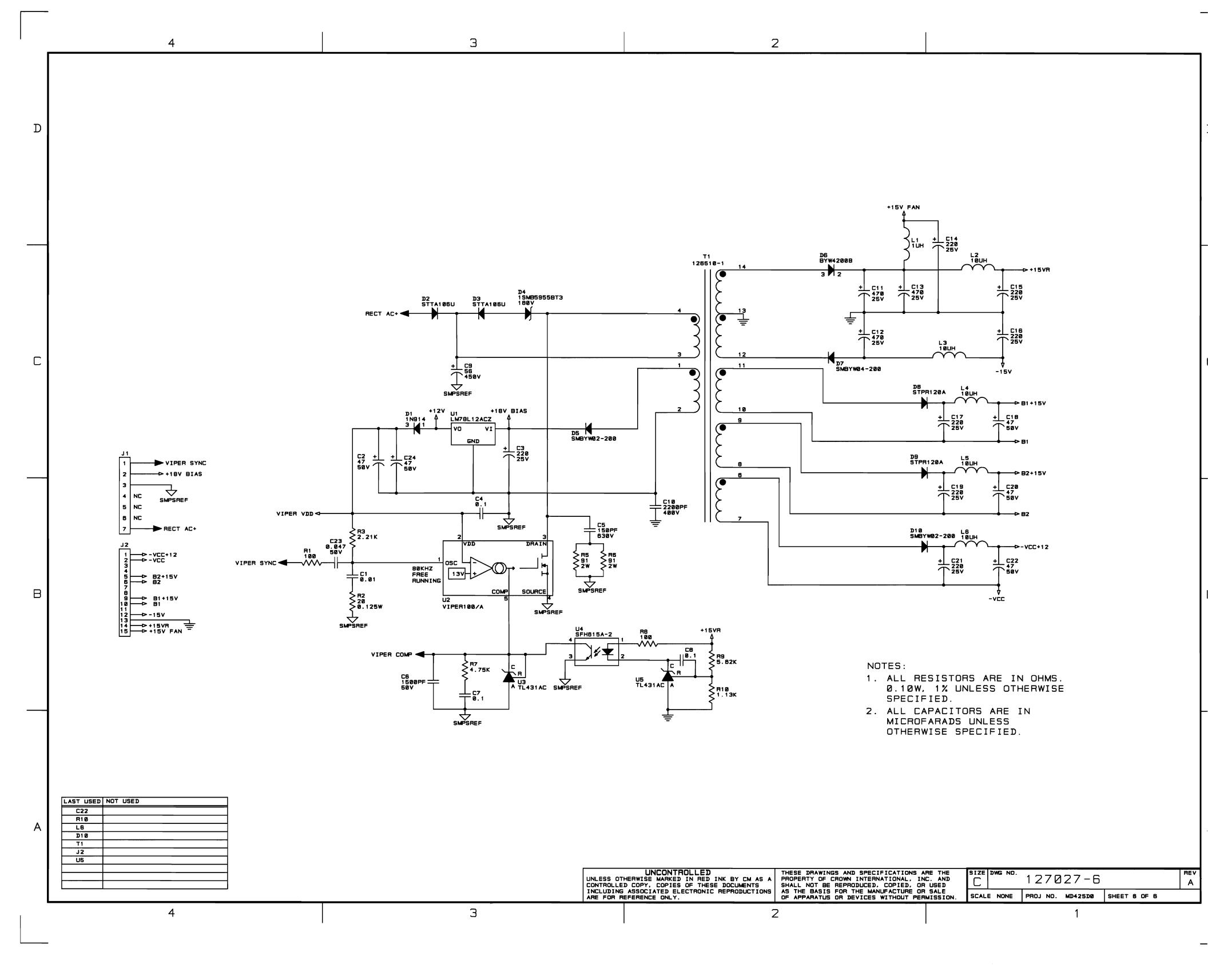


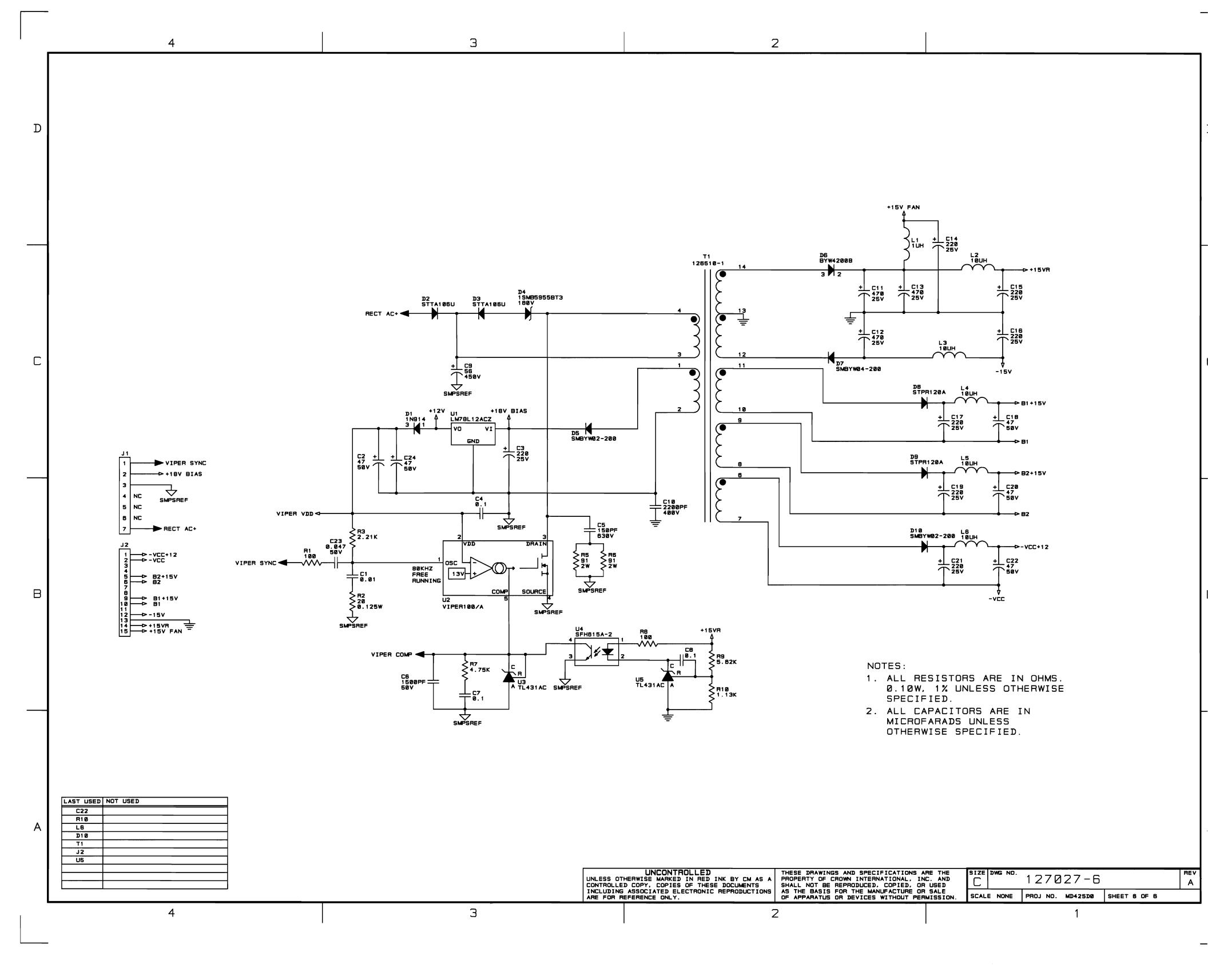


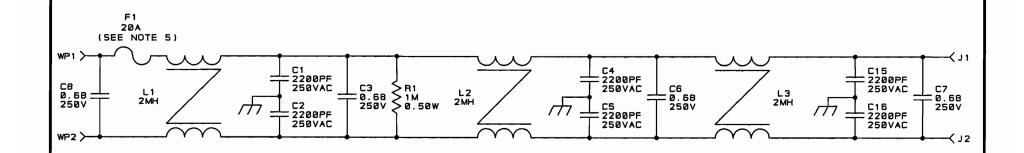












NOTES:

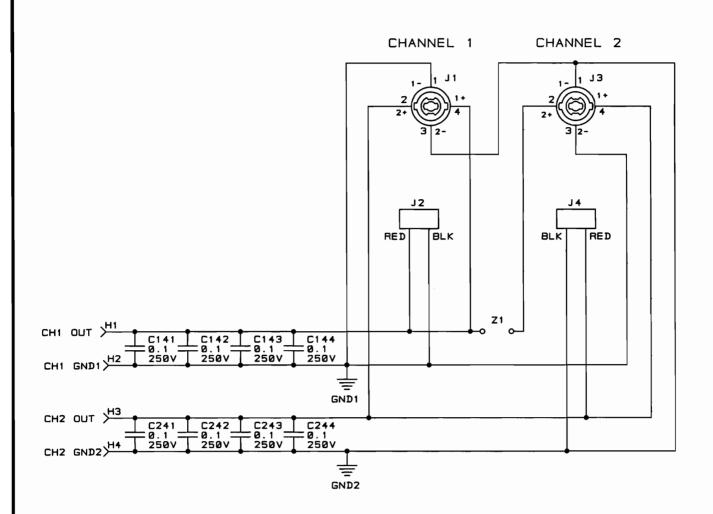
- 1. ALL RESISTORS ARE IN OHMS. .25W, 1% UNLESS OTHERWISE SPECIFIED.
- 2. ALL CAPACITORS ARE IN MICROFARADS UNLESS OTHERWISE SPECIFIED.

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SCAL	E N	ONE	PROJ	NO.	MD425D0	SHEET	5	0F	5	

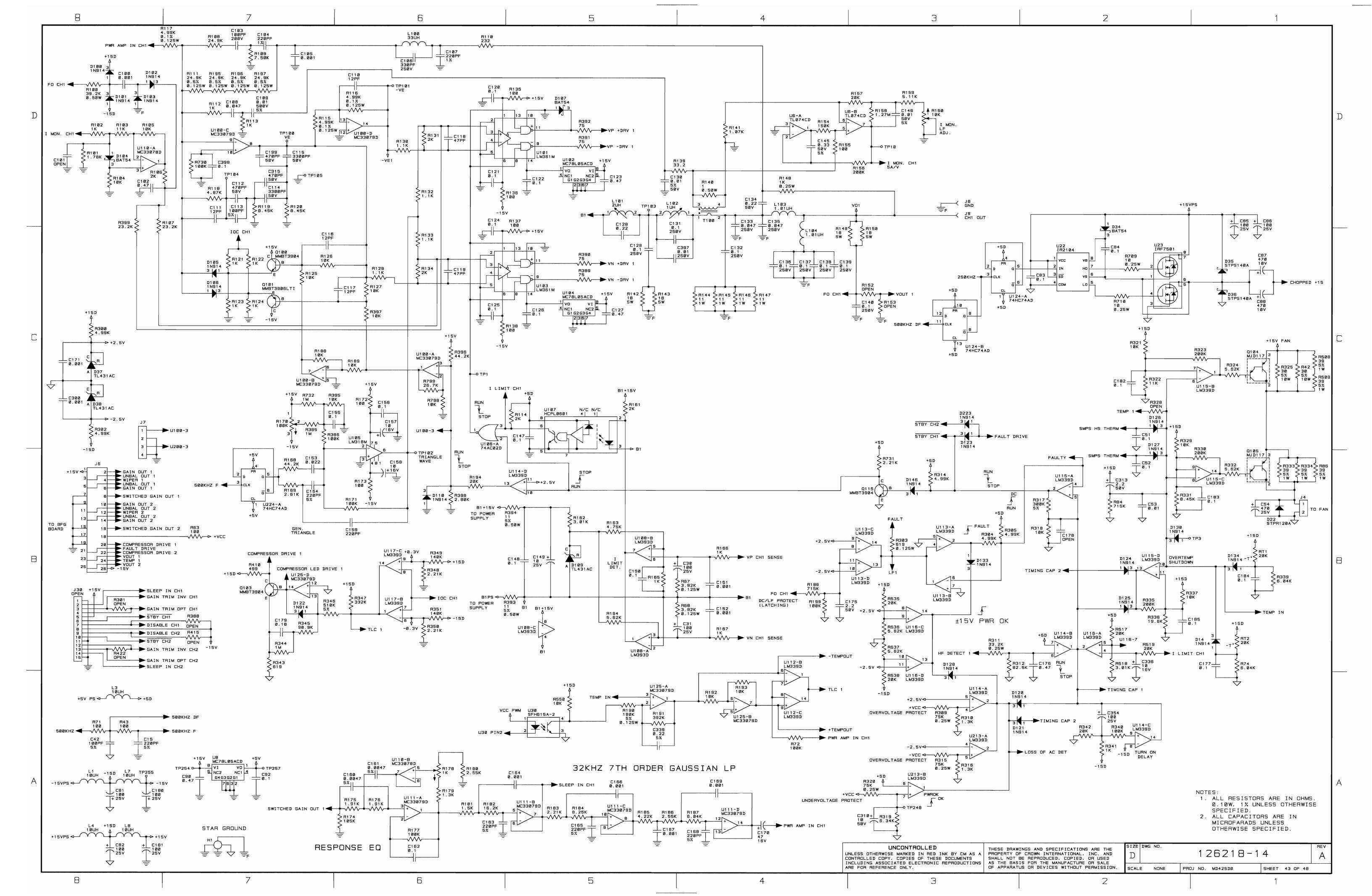


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