

Service Manual

Model: ALTODRIVE3.4

3-WAY STEREO DIGITAL X - OVER



www.altoproaudio.com

Version: 1.1

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1. Specifications

Input Channel

Digital Input Gain

- /+ 12 dB / step 0.5 dB

4 Parametric Filters

Gain - /+ 15 dB / step 0.5 dB

Freq 20 Hz - 20 KHz step 1/12 oct

BandWidth 0.05 oct - 3 oct / step 0.05 oct

Delay line

Up to 512 ms minimum step 21us

Output Channel

Digital Out Volume

- /+ 12 dB / step 0.5 dB

Delay line

Up to 512 ms minimum step 21us

5 Parametric Filters

Gain - /+ 15 dB / step 0.5dB

Freq 20 Hz - 20 KHz / step 1/12 oct

BandWidth 0.05 oct - 3 oct step 0.05 oct

High Pass filter type Butterworth

Freq: 20 Hz - 20 KHz / step 1/12 oct

Slope: Bypass, 1stord, 2ndord, 3rdord, 4thord

Low Pass filter type Butterworth

Freq: 20 Hz - 20 KHz / step 1/12 oct

Slope: Bypass, 1stord, 2ndord, 3rdord, 4thord

Polarity

Phase 0° or 180°

Limiter

Threshold - 29 dB up to 0 dB / step 1dB

Release Time 0.4 s, 0.5 s, 0.7 s, 1.4 s

Attack Time 0.05 s, 0.10 s, 0.20 s, 0.30 s

The Whole Unit

Memory

1 Factory Preset

64 User Preset

Analog

Inputs

2 XLR - F (BAL)

Outputs

6 XLR - M (BAL)

Input Impedance

>40k Ω

Output Impedance

<200 Ω

Input MAX Level

12dBv

Output MAX Level

12dBv

A/D Converter

20BITS Sigma-Delta

D/A Converter

24BITS Sigma-Delta

Performance

THD+N

0.02%(1KHz - 3dBFS)

Amplitude

20Hz - 20KHz

S/N Ratio

>97dBa

Digital

Processor speed

36 MIPS

DSP resolution

24x32 bits

Control

Microprocessor

MIDI section

Connections

Input/output/thru

Sockets

5 - poles DIN(female)

Mode

Photocoupled

Power Supply

Connector type	3 - poles DIN (female)
Type	Servo controlled, Switching
fuse	210 - 240V: T250mAL250VAC 95 - 120V: 500mAL250VAC
AC Input	95 - 240V~60 - 50Hz
rated power consumption	15W

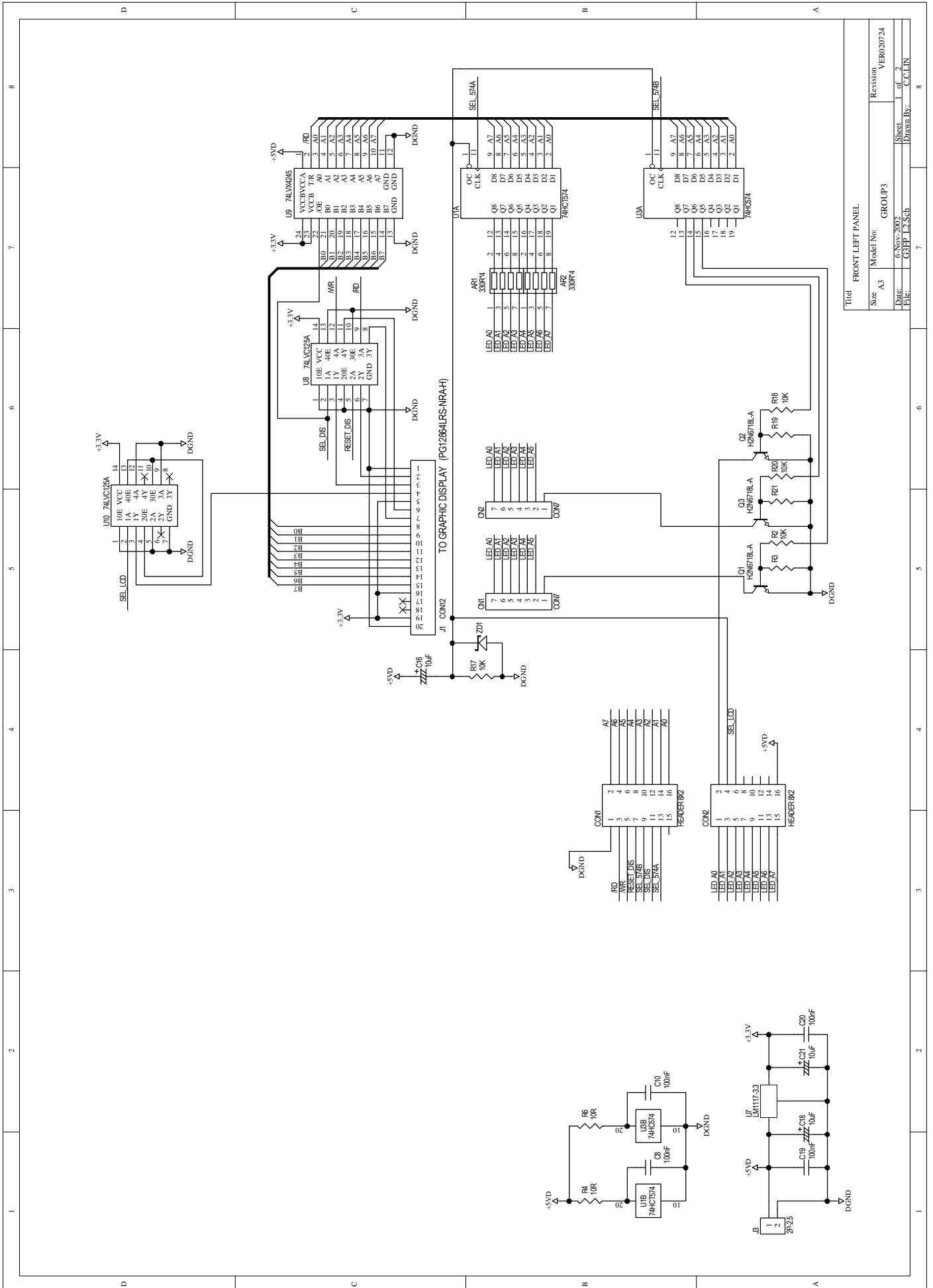
User Interface

Graphic display	128×64 dots
Keyboard	14 user keys/ 8LEDs
Vu meter	2×6 LEDs

Physical

Size	Standard 19"rack Mounting
Dimensions	483(W)×232.5(D)×44(H)mm(19"×9.3"×1.7")
weight	3.5Kg(7.72lb)

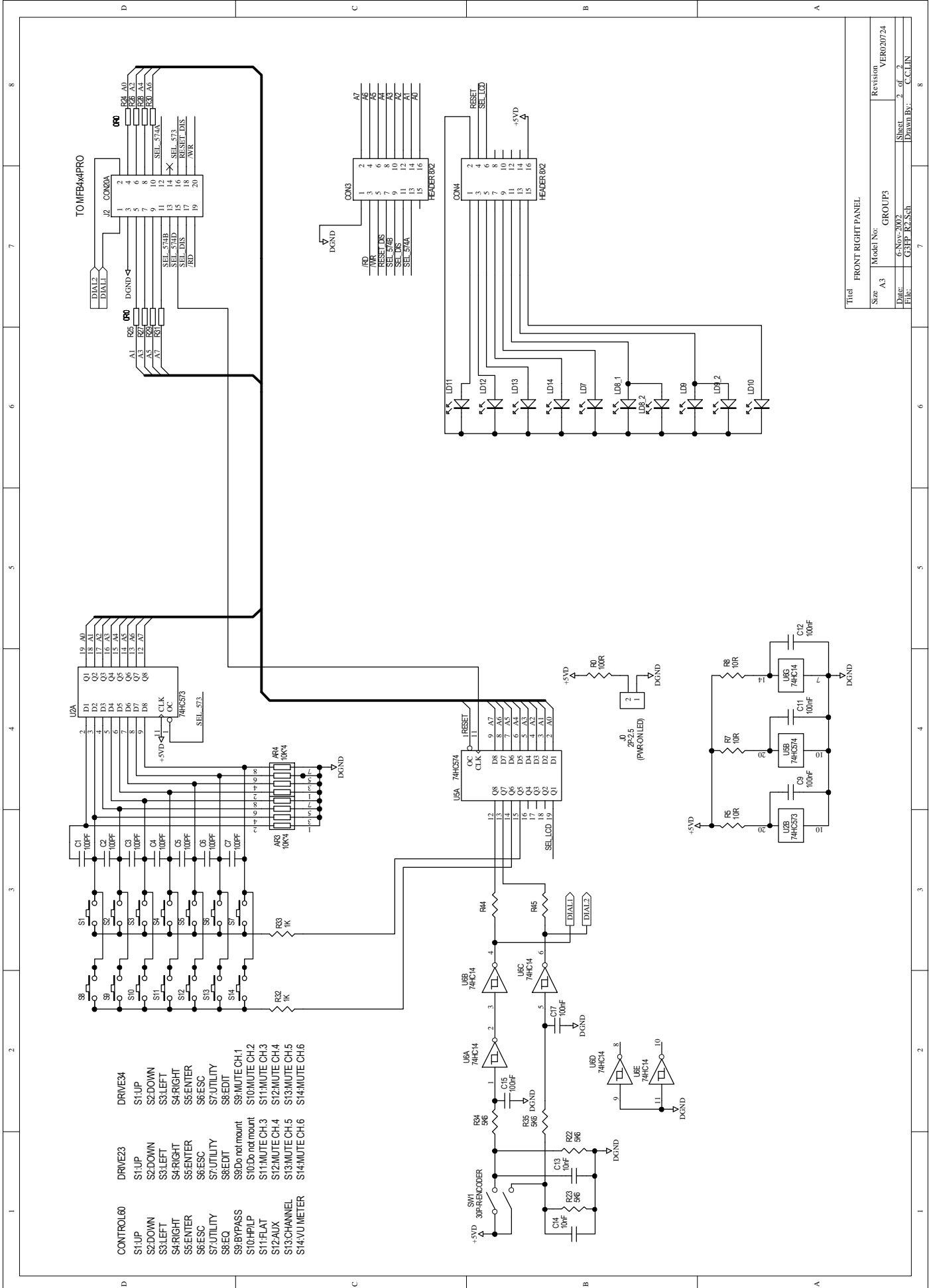
3.Schematic Diagram



Title		FRONT LEFT PANEL	
Size	A3	Model No.	GROUP3
Date:	6/25/2017	Revision	VER020724
File:	CEP-L25.Sch	Sheet	1 of 2
		Drawn By:	C.C.LIN

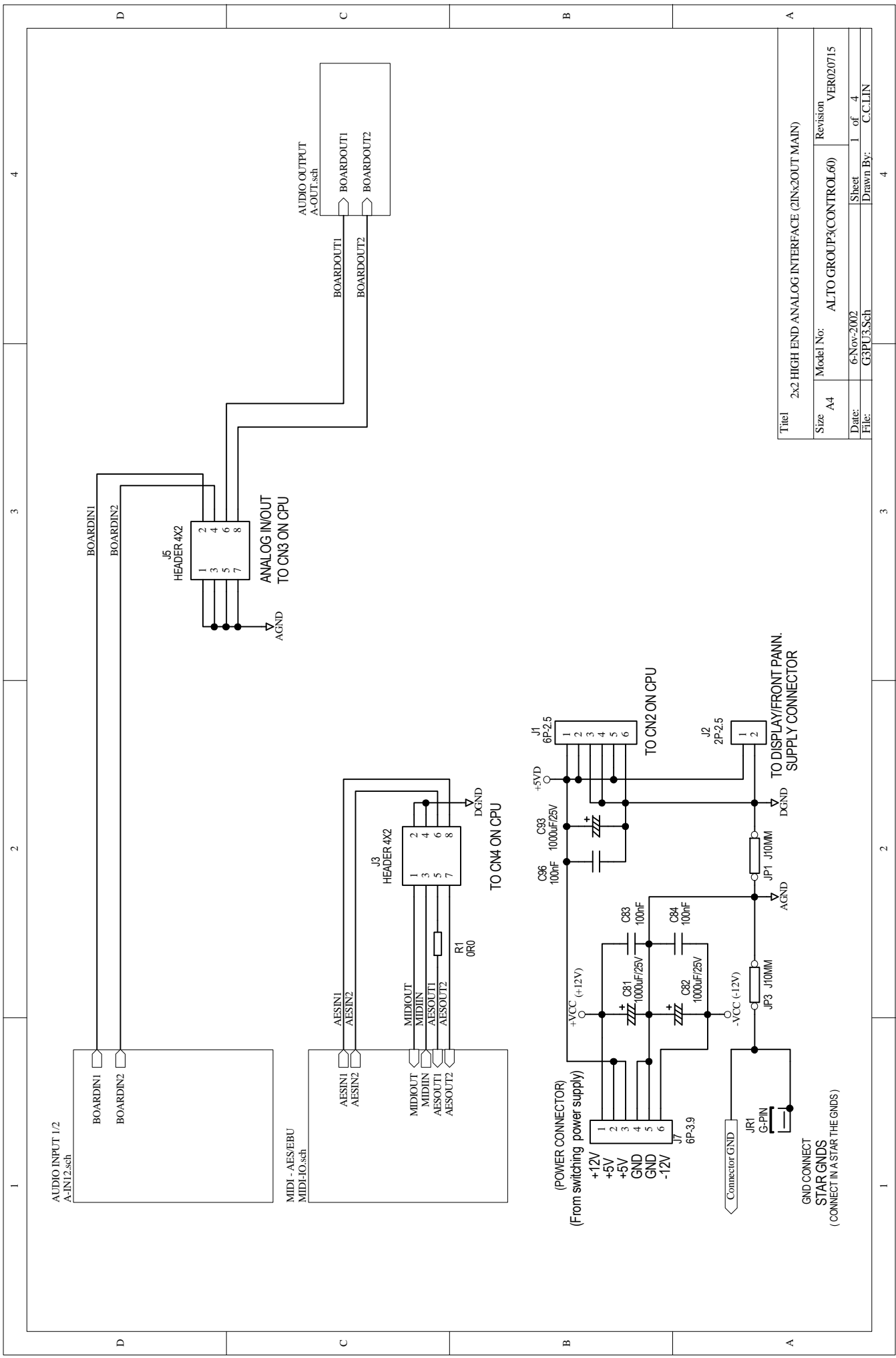
1 2 3 4 5 6 7 8

D C B A



- DRIVE23
 - S1:UP
 - S2:DOWN
 - S3:LEFT
 - S4:RIGHT
 - S5:ENTER
 - S6:ESC
 - S7:UTILITY
 - S8:EDIT
 - S9:BYPASS
 - S10:Do not mount
 - S11:FLAT
 - S12:AUX
 - S13:CHANNEL
 - S14:VU METER
- DRIVE34
 - S1:UP
 - S2:DOWN
 - S3:LEFT
 - S4:RIGHT
 - S5:ENTER
 - S6:ESC
 - S7:UTILITY
 - S8:EDIT
 - S9:MUTE CH.1
 - S10:MUTE CH.2
 - S11:MUTE CH.3
 - S12:MUTE CH.4
 - S13:MUTE CH.5
 - S14:MUTE CH.6
- CONTROL60
 - S1:UP
 - S2:DOWN
 - S3:LEFT
 - S4:RIGHT
 - S5:ENTER
 - S6:ESC
 - S7:UTILITY
 - S8:EDIT
 - S9:Do not mount
 - S10:Do not mount
 - S11:MUTE CH.3
 - S12:MUTE CH.4
 - S13:MUTE CH.5
 - S14:MUTE CH.6

Title		FRONT RIGHT PANEL	
Size	A3	Model No.	GROUP3
Date:	06/05/2002	Revision	VER020724
File:	CSFP-RA-Sub	Sheet	2 of 2
		Drawn By:	C.C.LIN



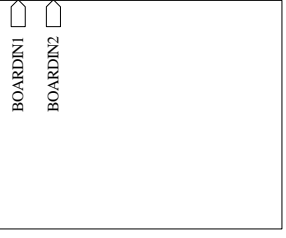
4

3

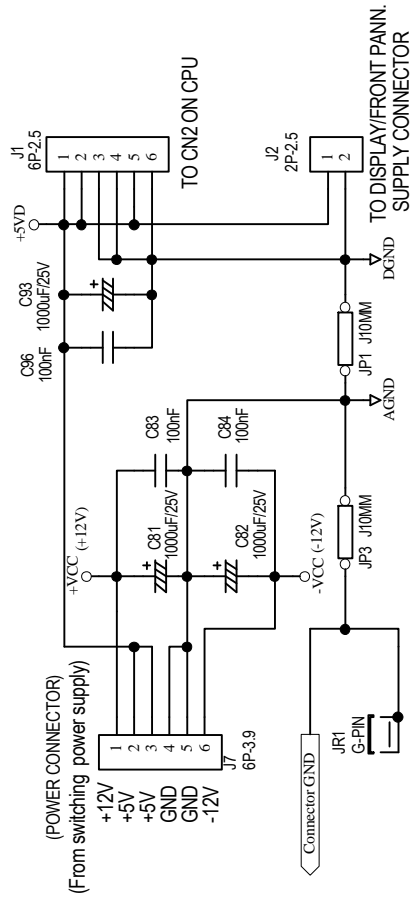
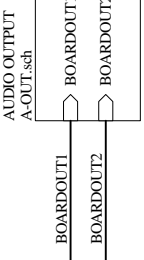
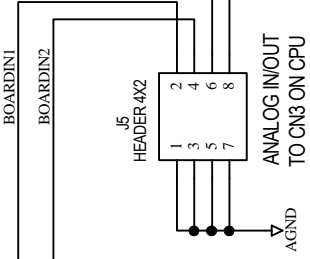
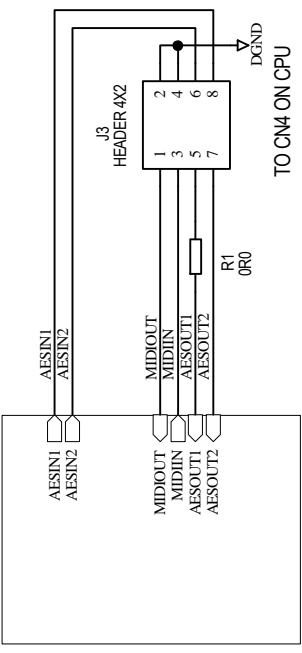
2

1

AUDIO INPUT 1/2
A-IN1.2.sch



MIDI - AES/EBU
MIDI-IO.sch



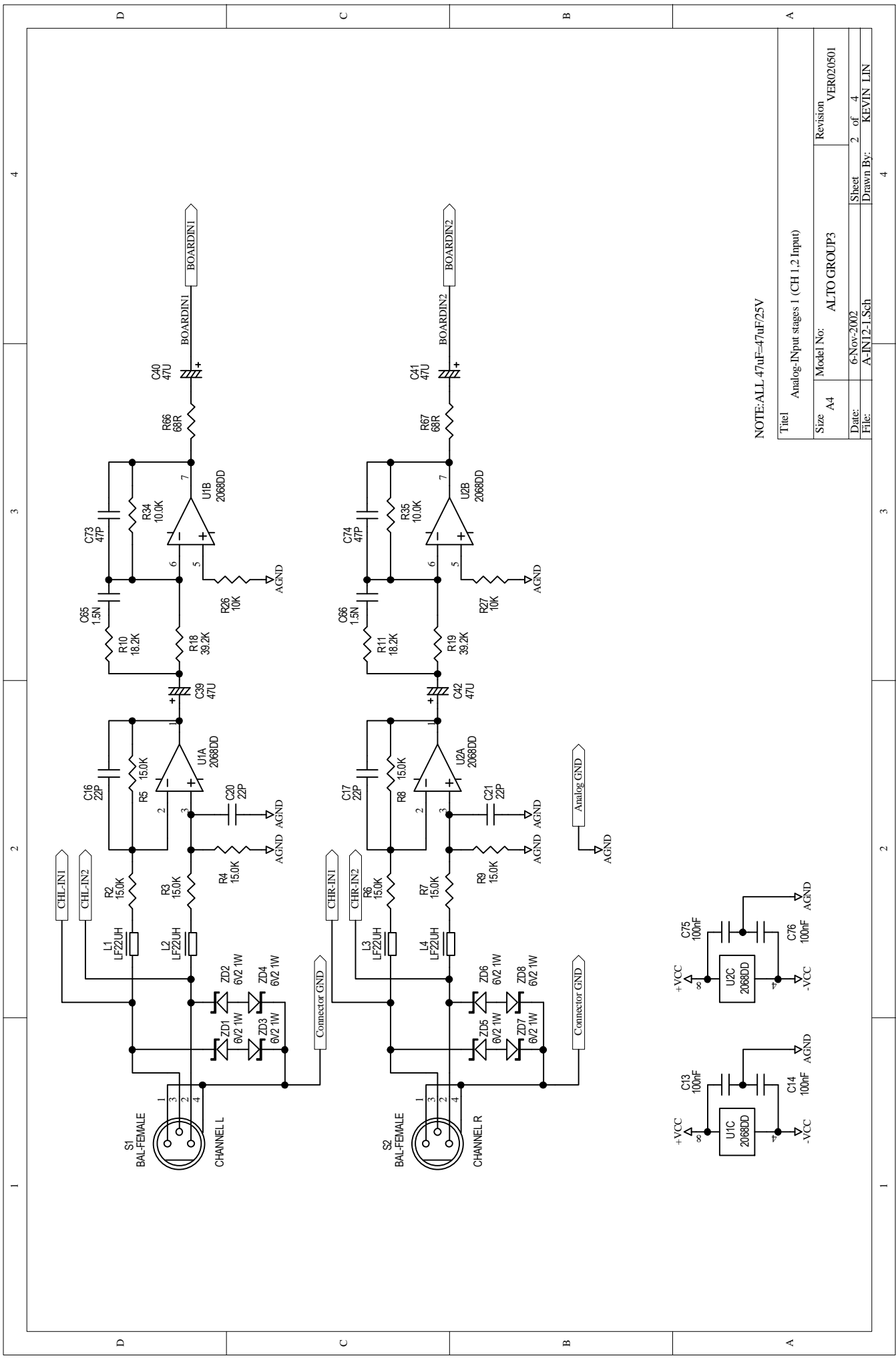
GND CONNECT
STAR GND
(CONNECT IN A STAR THE GND)

4

3

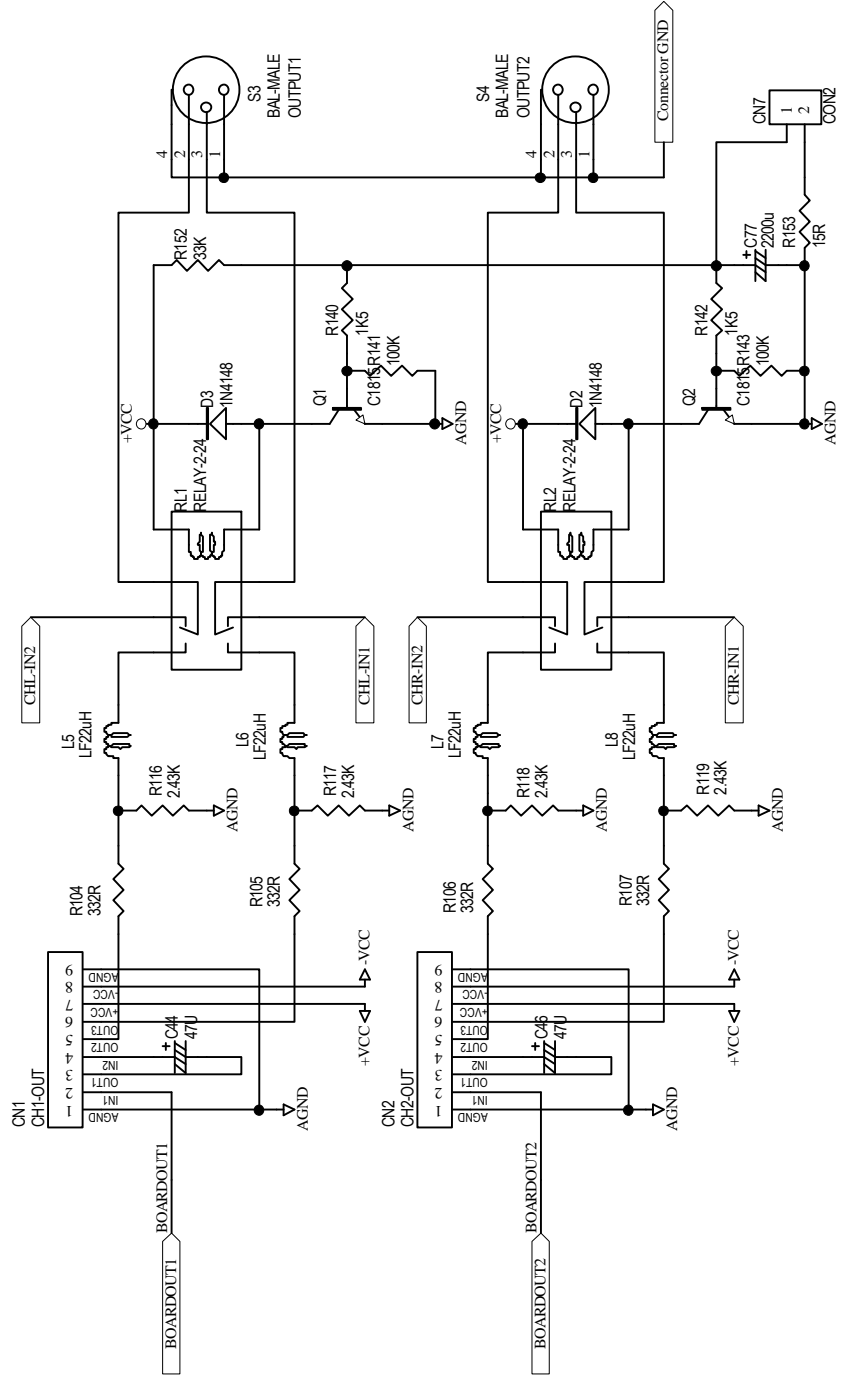
2

1



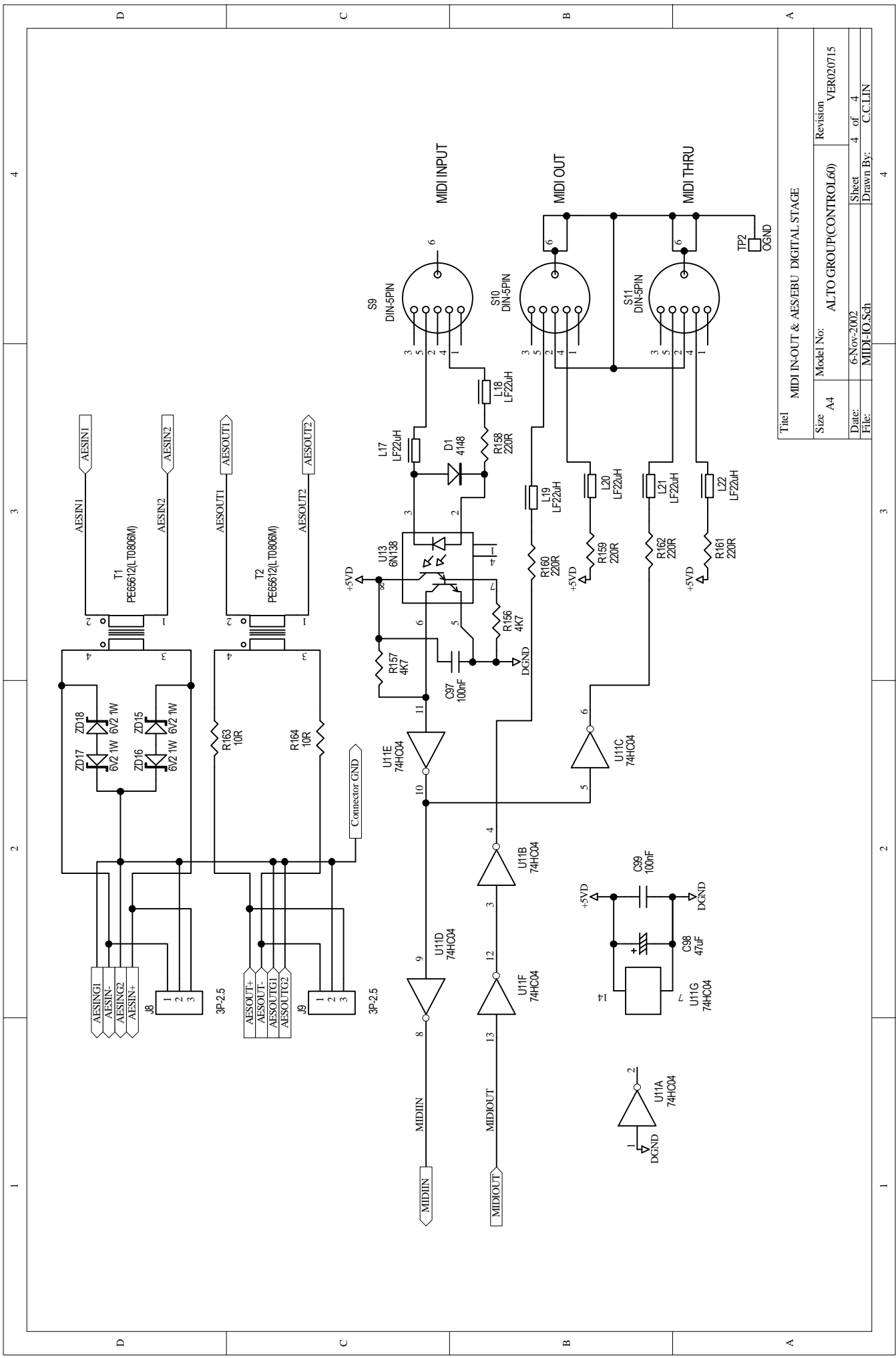
NOTE: ALL 47uF=47uF/25V

Title		Analog-Input stages 1 (CH 1,2 Input)	
Size	A4	Model No:	ALTO GROUP3
Date:	6-Nov-2002	Revision	VER020501
File:	A-IN12-1.Sch	Sheet	2 of 4
		Drawn By:	KEVIN LIN



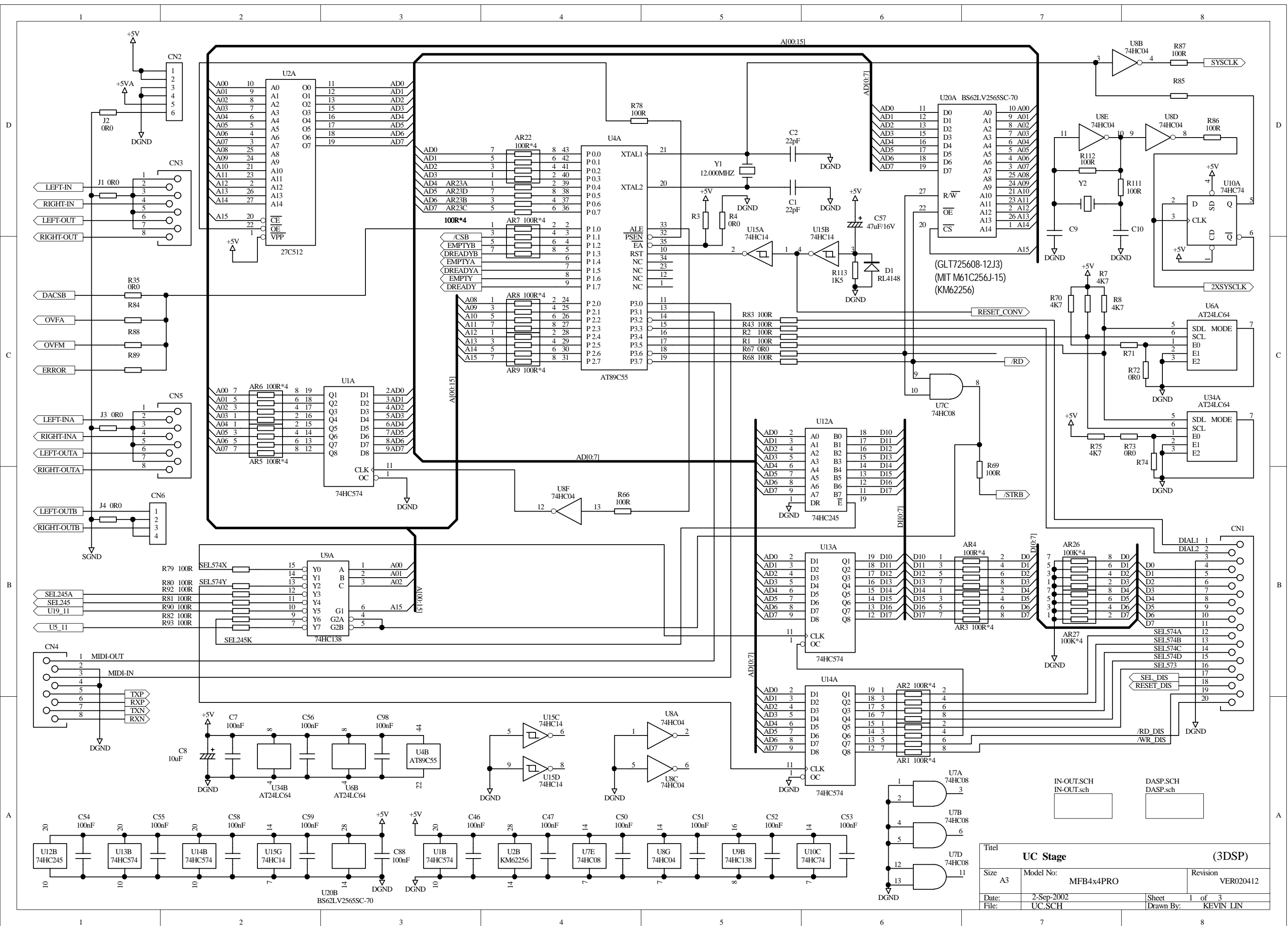
Title: Analog-OUTPUT

Size	A4	Model No:	ALTO GROUP3(CONTROL60)	Revision	VER020715
Date:	6-Nov-2002	Sheet	3	of	4
File:	A-OUT1.Sch	Drawn By:	C.CLIN		

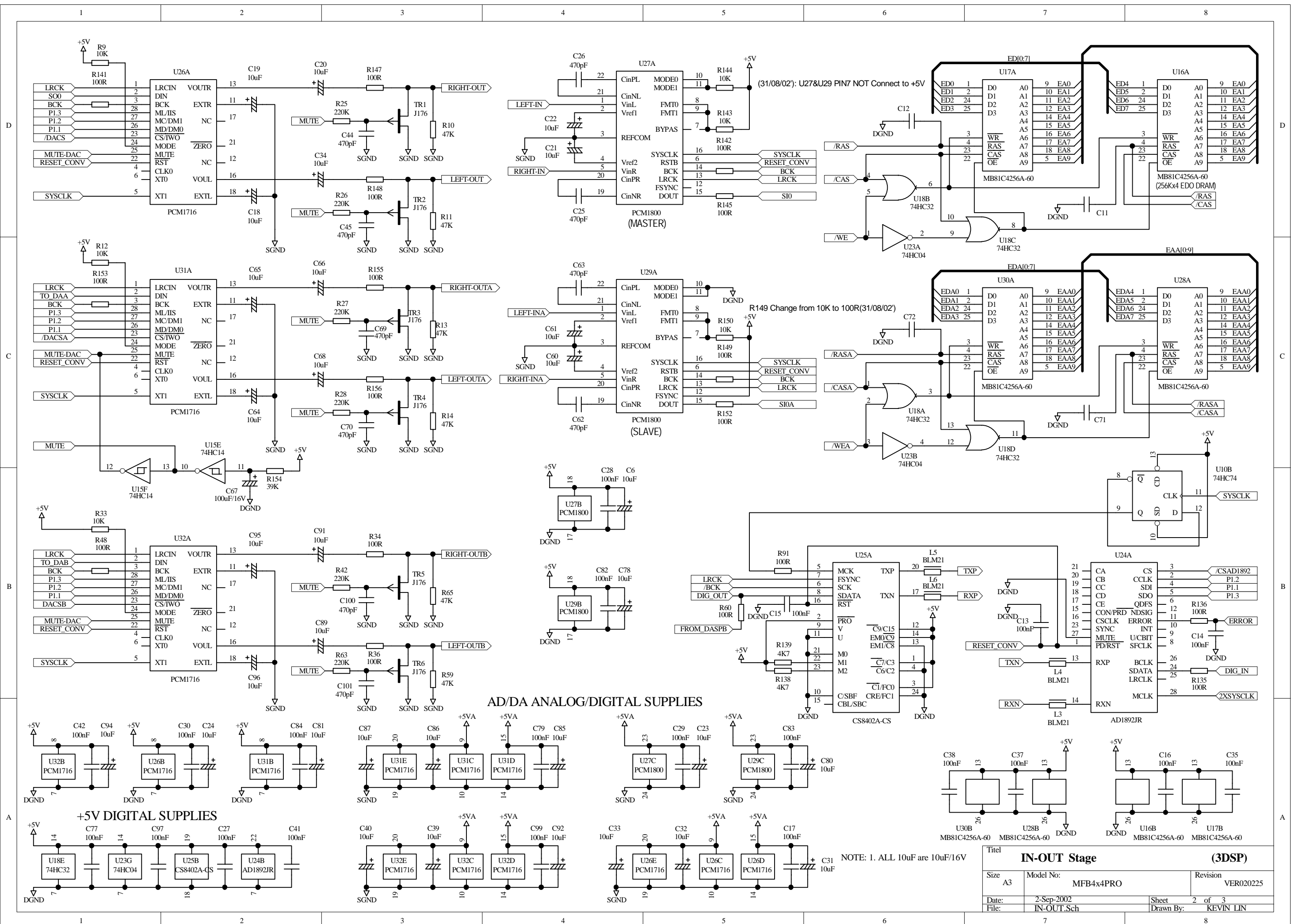


Title: MIDI IN-OUT & AES/EBU DIGITAL STAGE

Size: A4	Model No: ALTO GROUP(CONTROL60)	Revision: VER020715
Date: 6-Nov-2002	Sheet: 4 of 4	
File: MIDI-I/O.Sch	Drawn By: C.C.LIN	



Titel			UC Stage (3DSP)		
Size	Model No:	MFB4x4PRO		Revision	VER020412
Date:	2-Sep-2002	Sheet	1 of 3		
File:	UC.SCH	Drawn By:	KEVIN LIN		

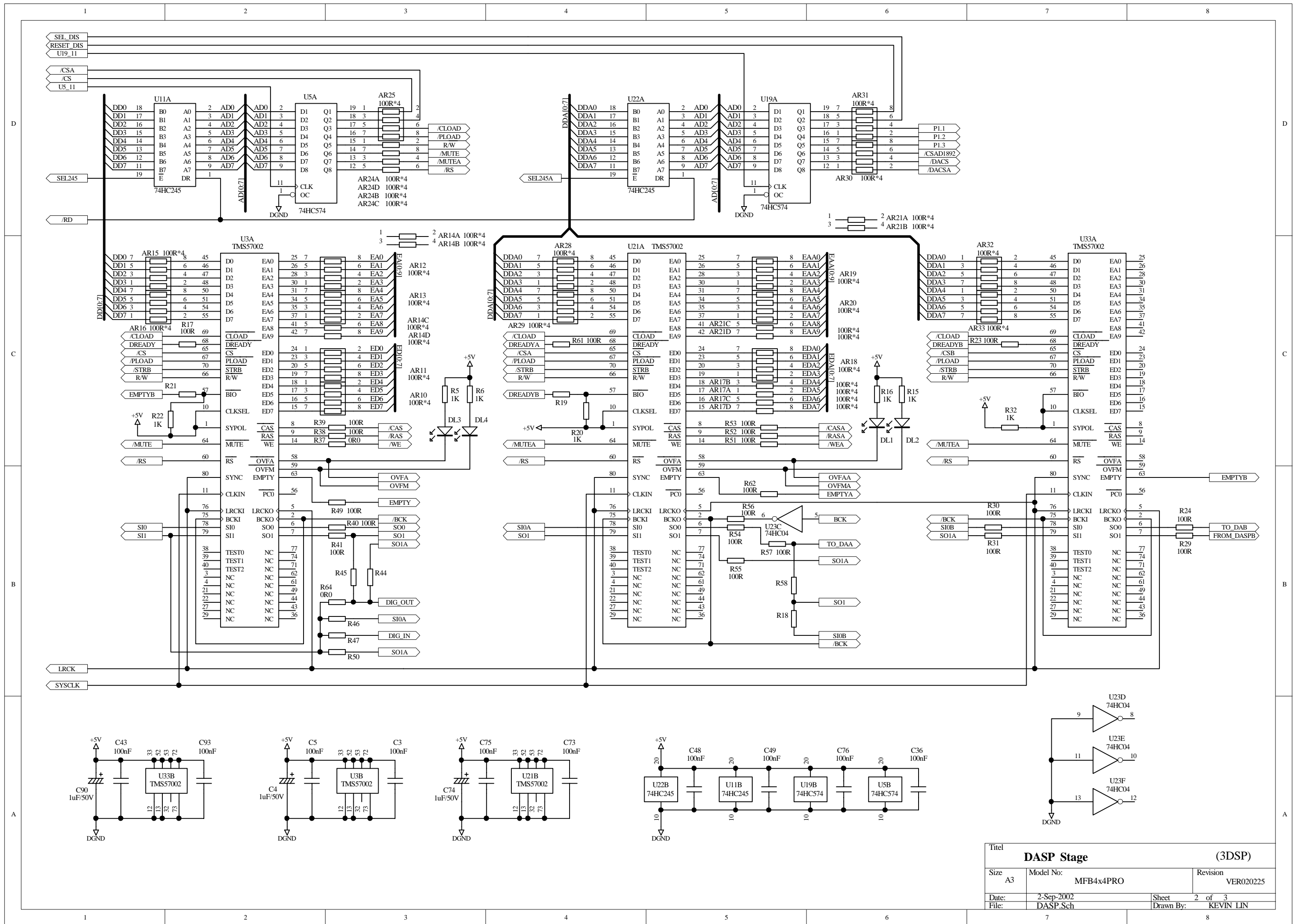


AD/DA ANALOG/DIGITAL SUPPLIES

+5V DIGITAL SUPPLIES

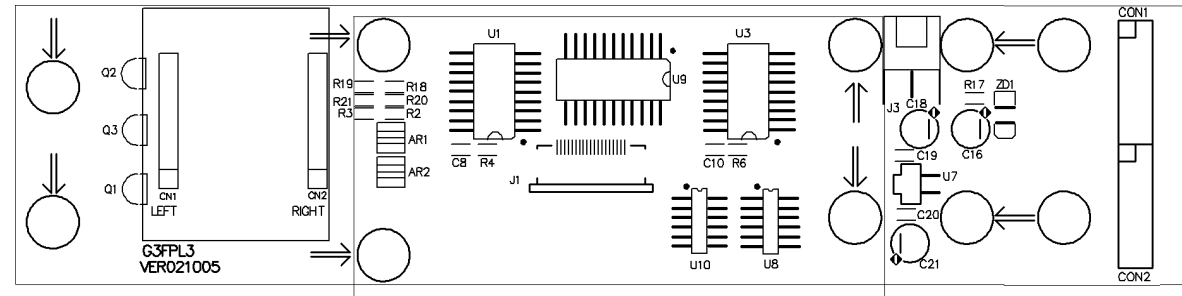
Title		IN-OUT Stage (3DSP)	
Size	A3	Model No:	MFB4x4PRO
Date:	2-Sep-2002	Revision	VER020225
File:	IN-OUT.Sch	Sheet	2 of 3
		Drawn By:	KEVIN LIN

NOTE: 1. ALL 10uF are 10uF/16V

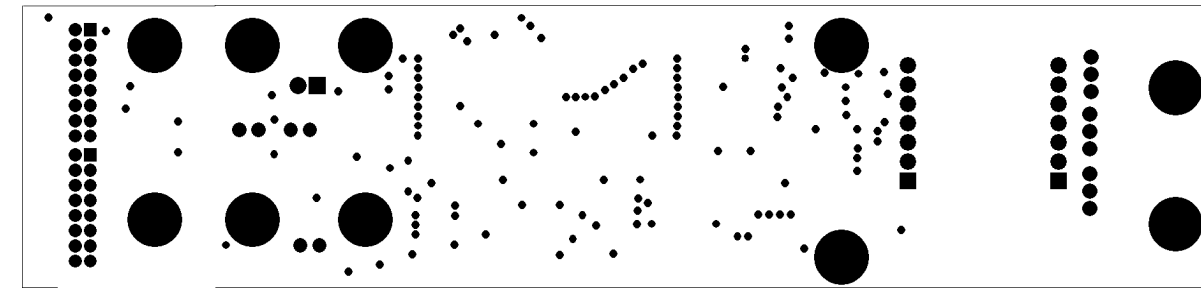


Titel		DASP Stage		(3DSP)	
Size	A3	Model No:	MFB4x4PRO	Revision	VER020225
Date:	2-Sep-2002	Sheet	2 of 3		
File:	DASP.Sch	Drawn By:	KEVIN LIN		

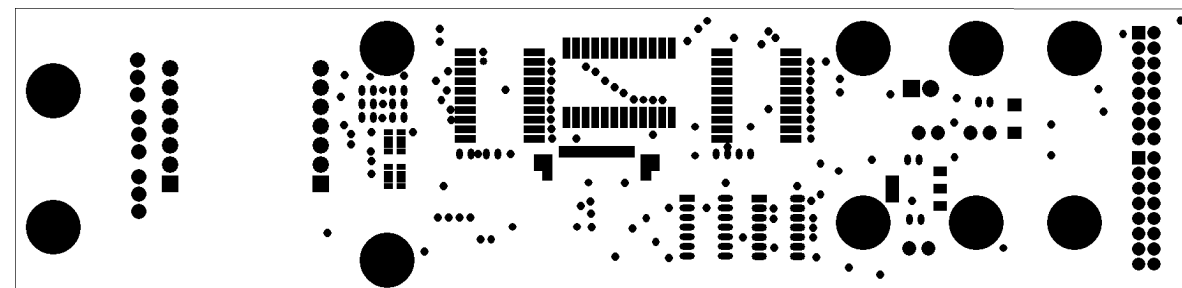
4. Printed Circuit Diagram



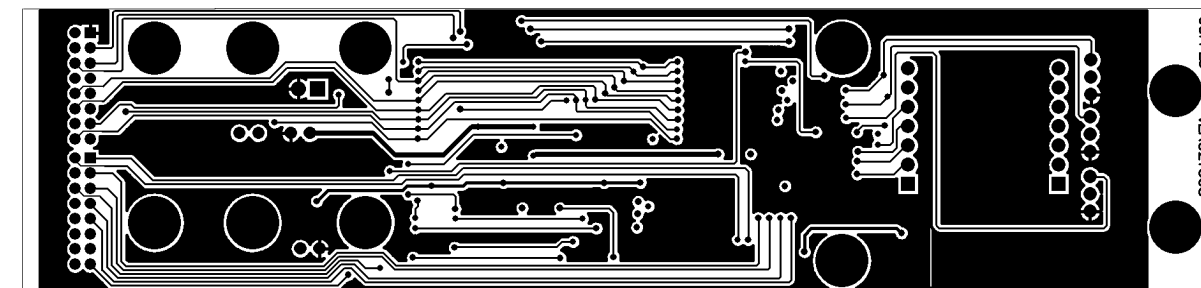
G3FPL3 Top Silkscreen



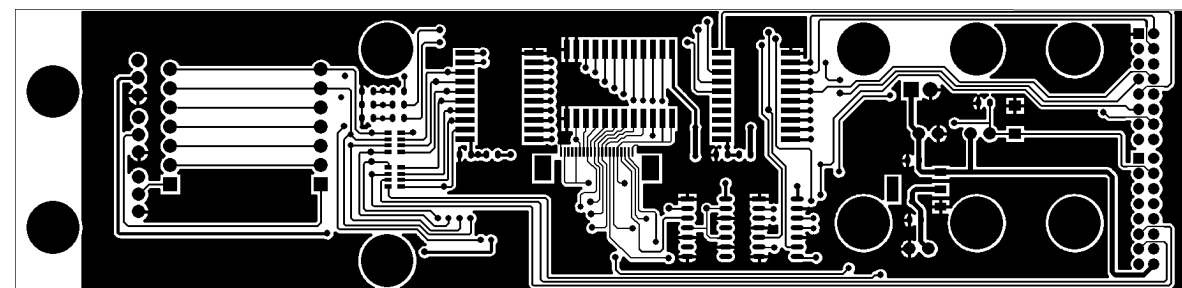
G3FPL3 Bottom Solder Mask



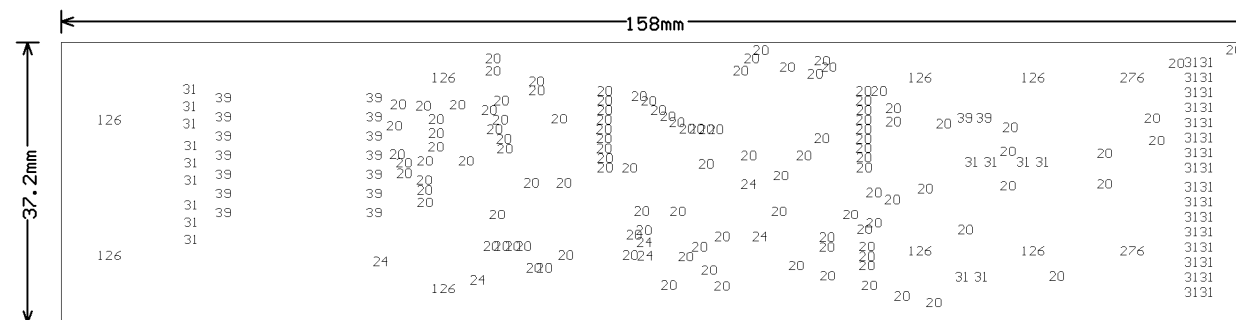
G3FPL3 Top Solder Mask



G3FPL3 Bottom Layer

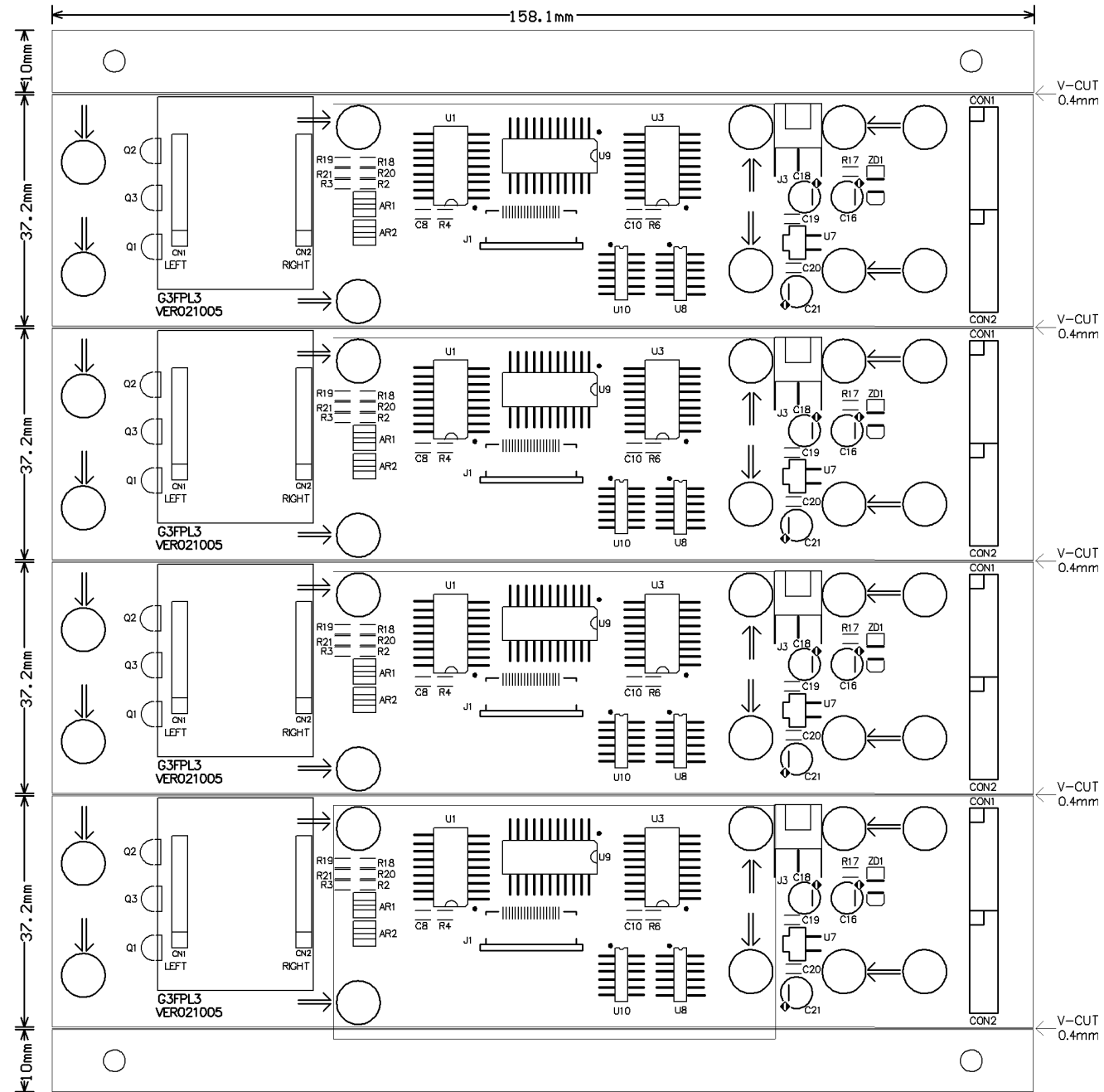


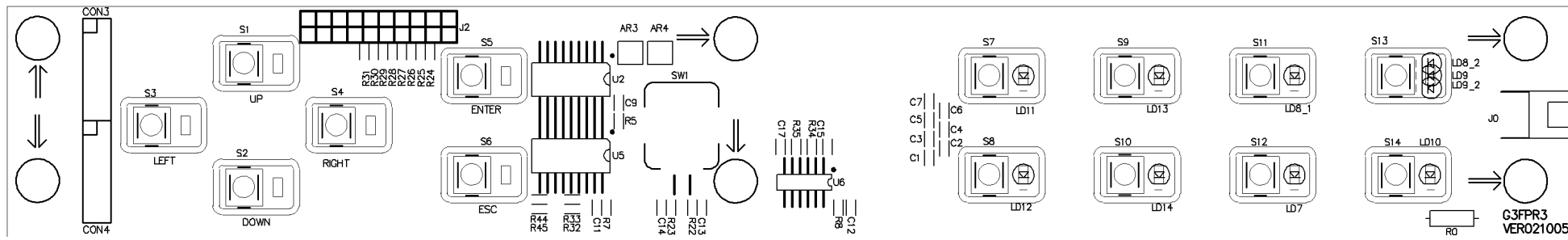
G3FPL3 Top Layer



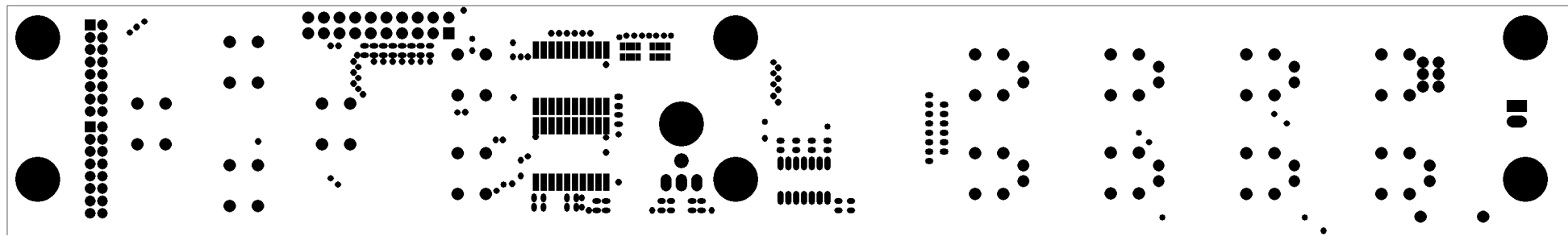
G3FPL3 Drill Drawing

Tool	Hole Size	Hole Count Plated	
T1	20mil (0.508mm)	119	
T2	24mil (0.6096mm)	7	
T3	31mil (0.7874mm)	47	
T4	39mil (0.9906mm)	16	
T5	126mil (3.2004mm)	8	NPTH
T6	276mil (7.0104mm)	2	NPTH
Totals		198	

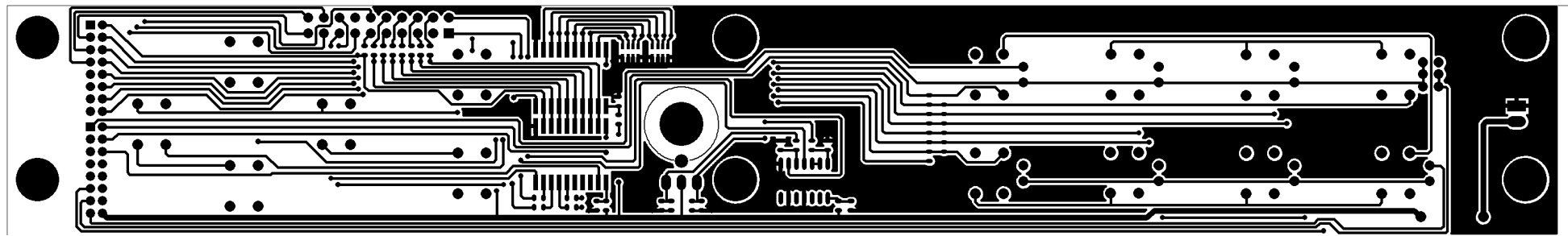




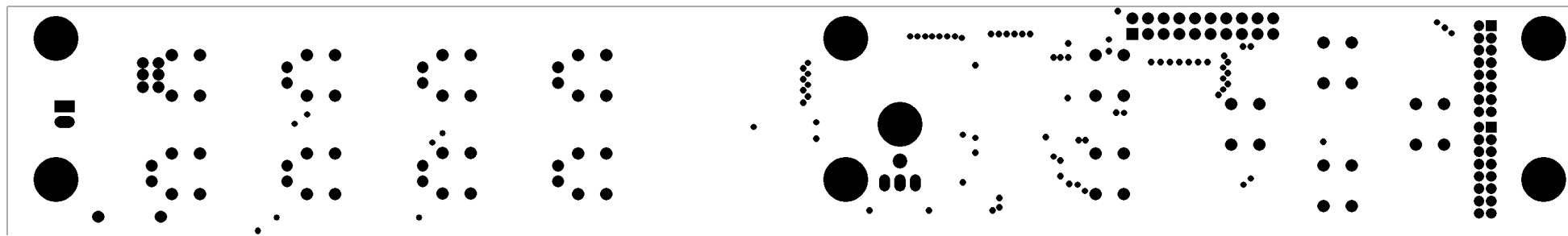
G3FPR3 Top Silkscreen



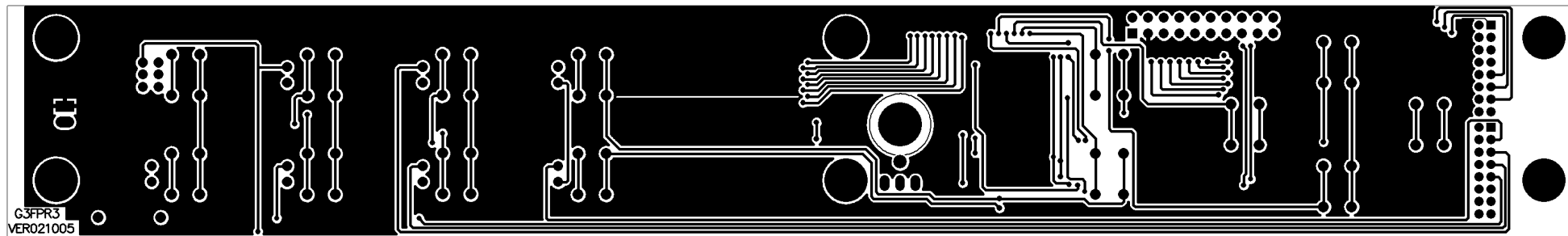
G3FPR3 Top Solder Mask



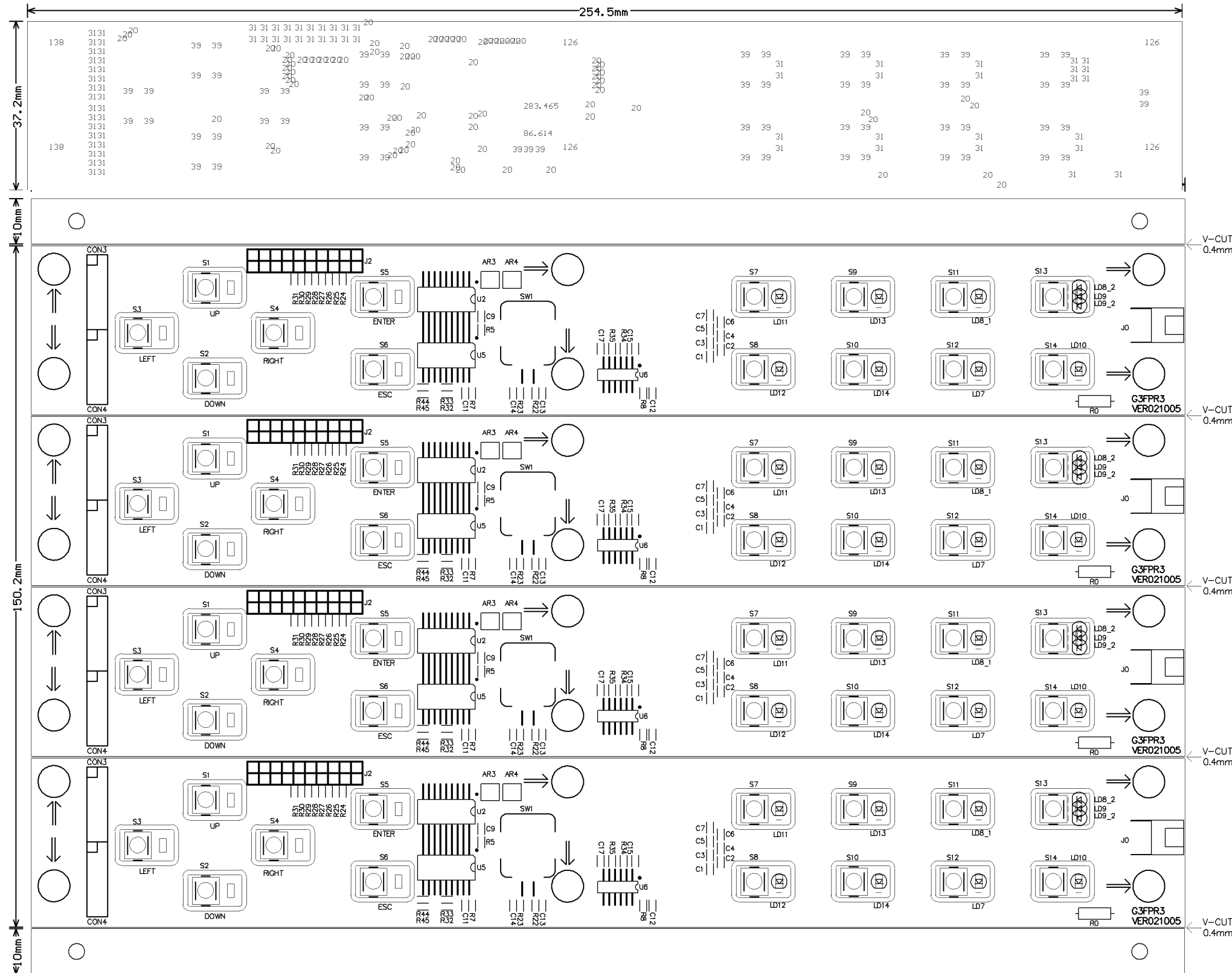
G3FPR3 Top Layer



G3FPR3 Bottom Solder Mask

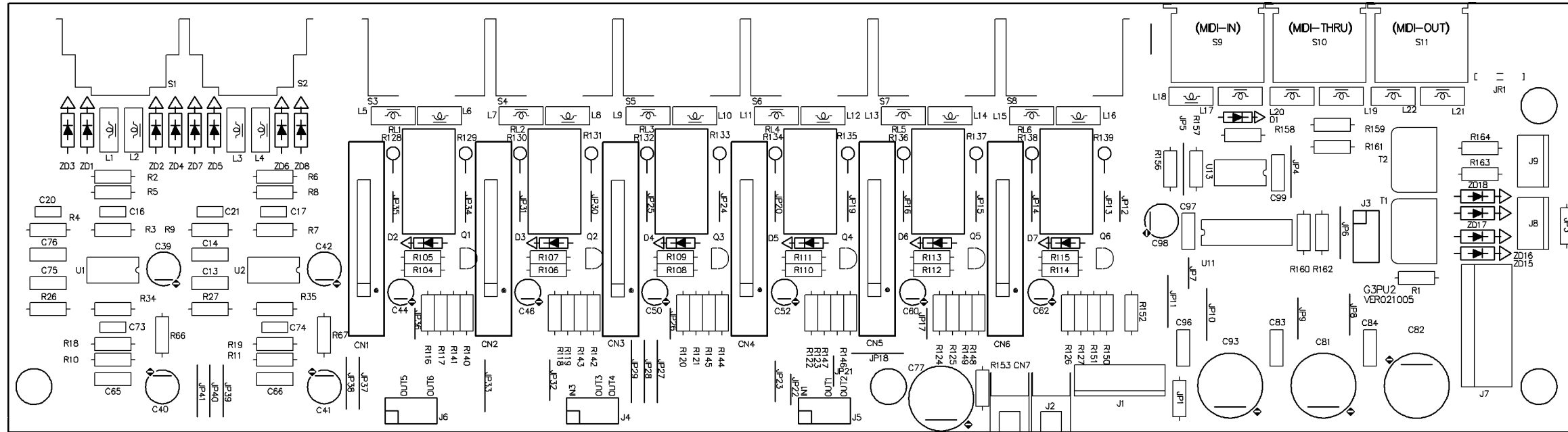


G3FPR3 Bottom Layer

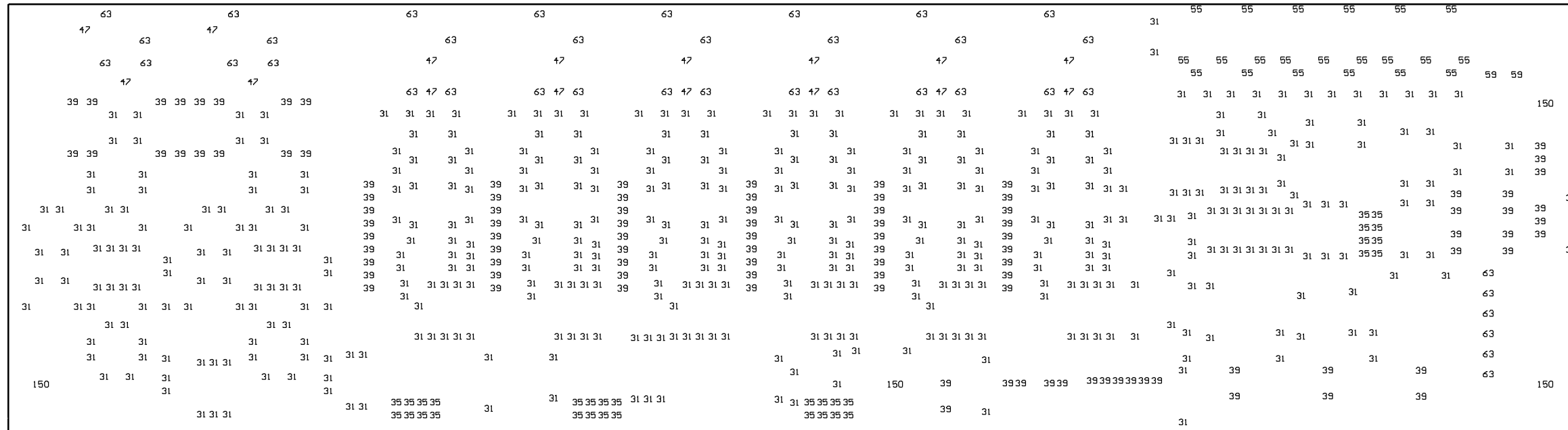


G3FPR3 Drill Drawing

Tool	Hole Size	Hole Count Plated	
T1	20mil (0.508mm)	84	
T2	31mil (0.7874mm)	74	
T3	39mil (0.9906mm)	61	
T4	87mil (2.2098mm)	1	
T5			
T6	280mil (7.112mm)	1	
T7			
T8	126mil (3.2004mm)	4	NPTH
T9	138mil (3.5052mm)	2	NPTH
Totals		227	



G3PU2 Top Scilkscreen



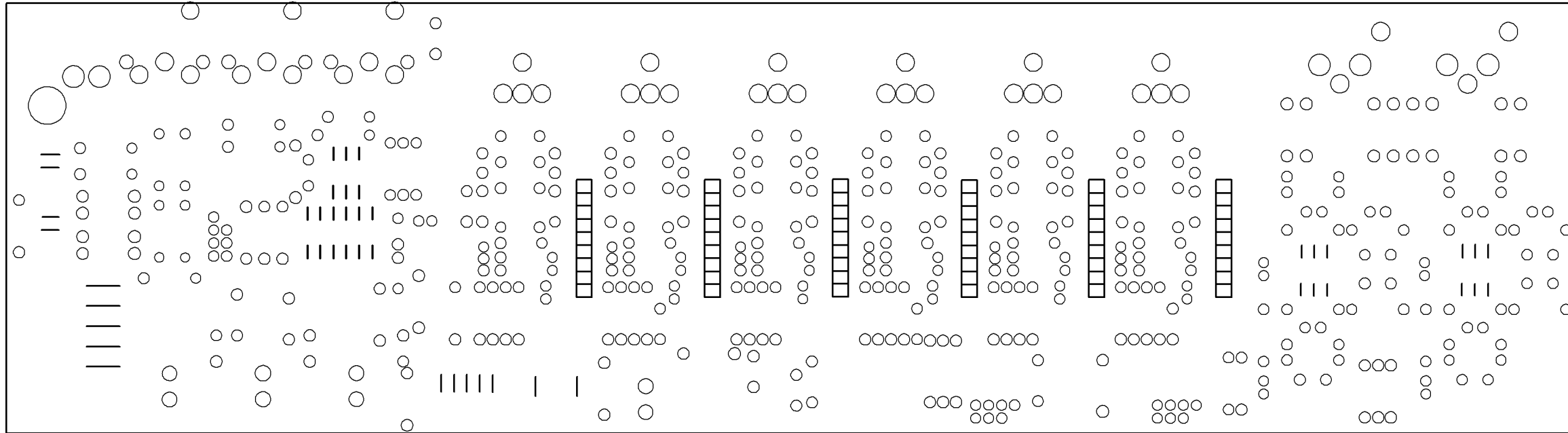
G3PU2 Drill Drawing

Tool	Hole Size	Hole Count Plated
T1	31mil (0.7874mm)	464
T2	35mil (0.889mm)	32

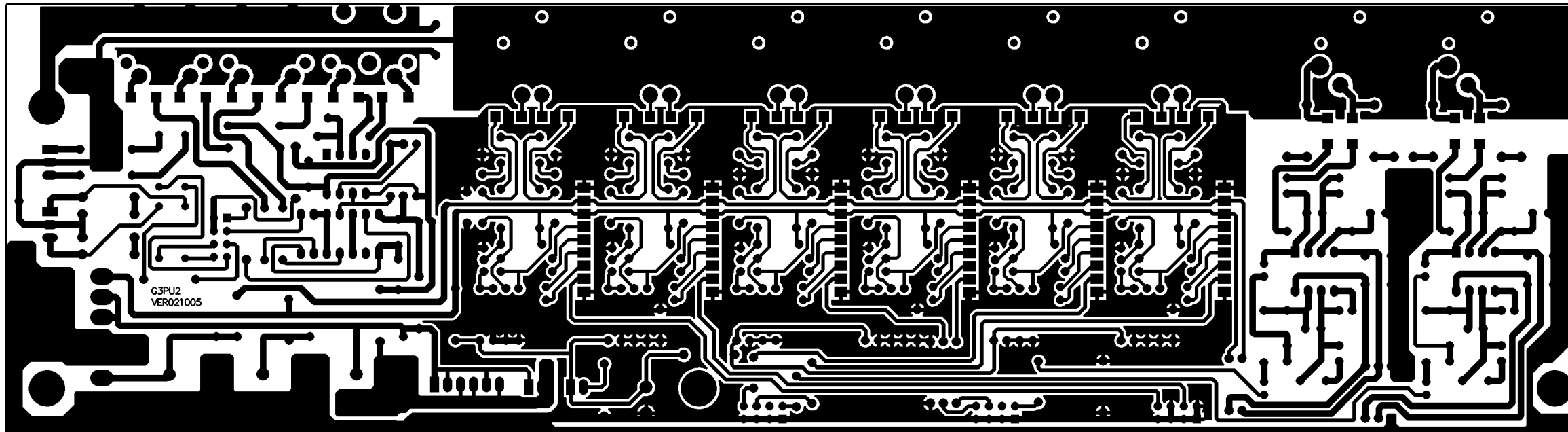
T3	39mil (0.9906mm)	102
T4	47mil (1.1938mm)	16
T5	55mil (1.397mm)	21
T6	59mil (1.4986mm)	2

T7	63mil (1.6002mm)	26
T8	150mil (3.81mm)	4
T9	63mil (1.6002mm)	12
Totals		679

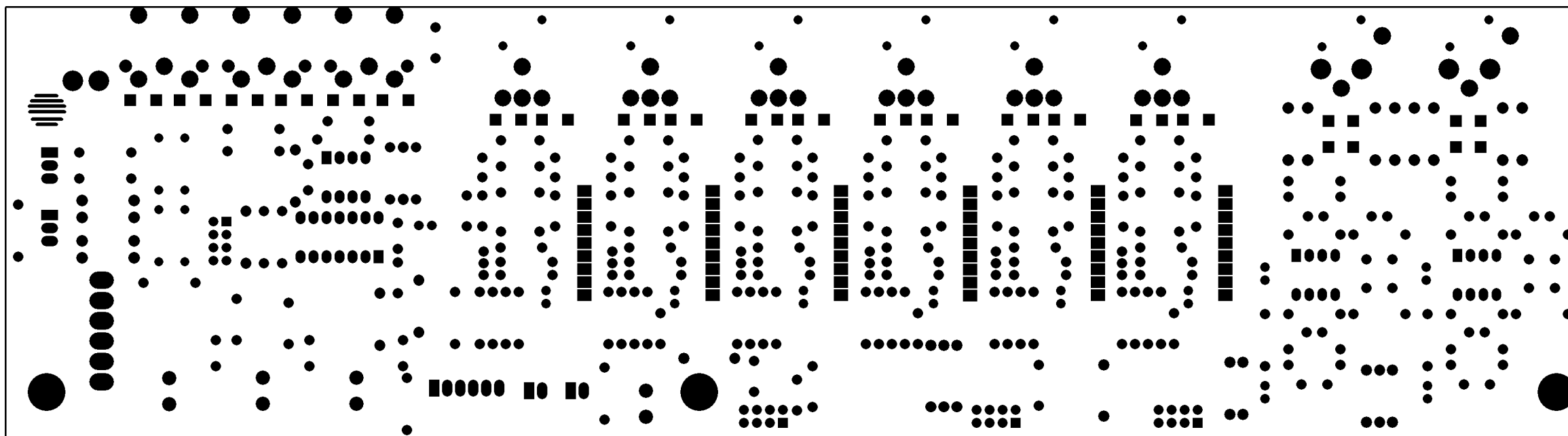
NPTH



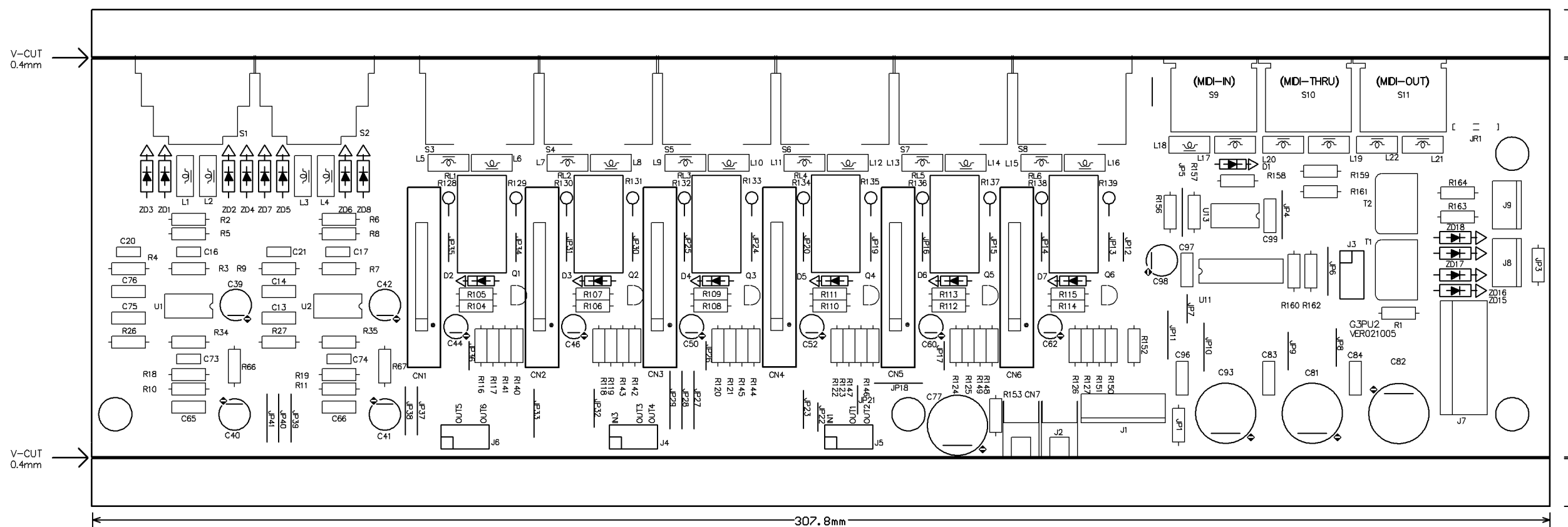
G3PU2 Bottom Scilkscreen

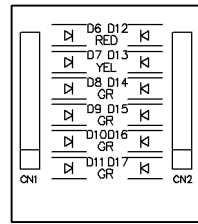


G3PU2 Bottom Layer

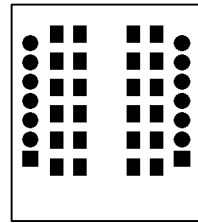


G3PU2 Bottom Solder Mask

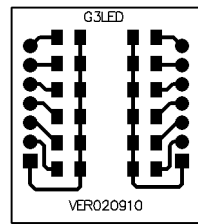




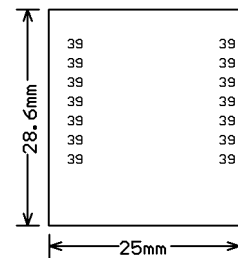
G3LED Top Silkscreen



G3LED Top Solder Mask

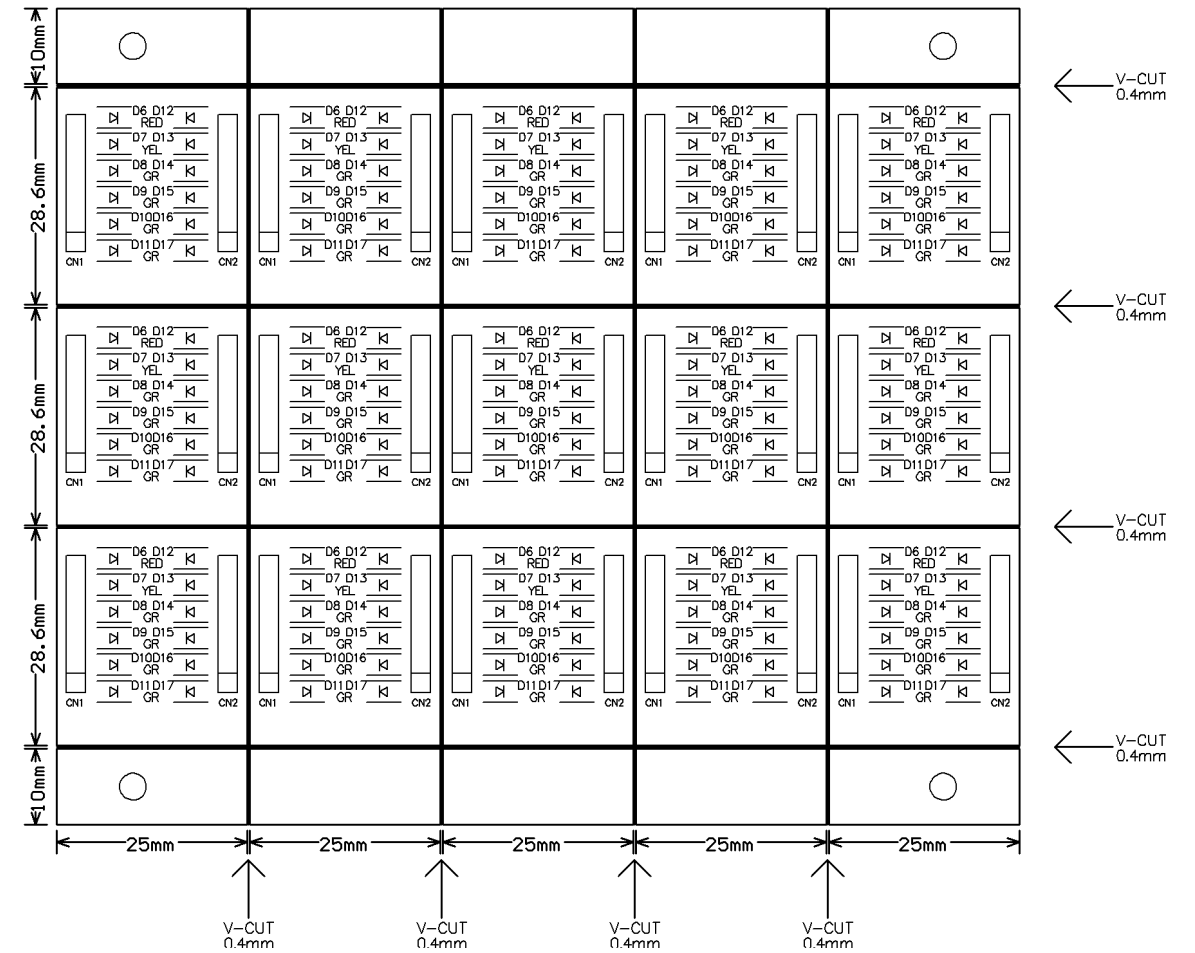


G3LED Top Layer

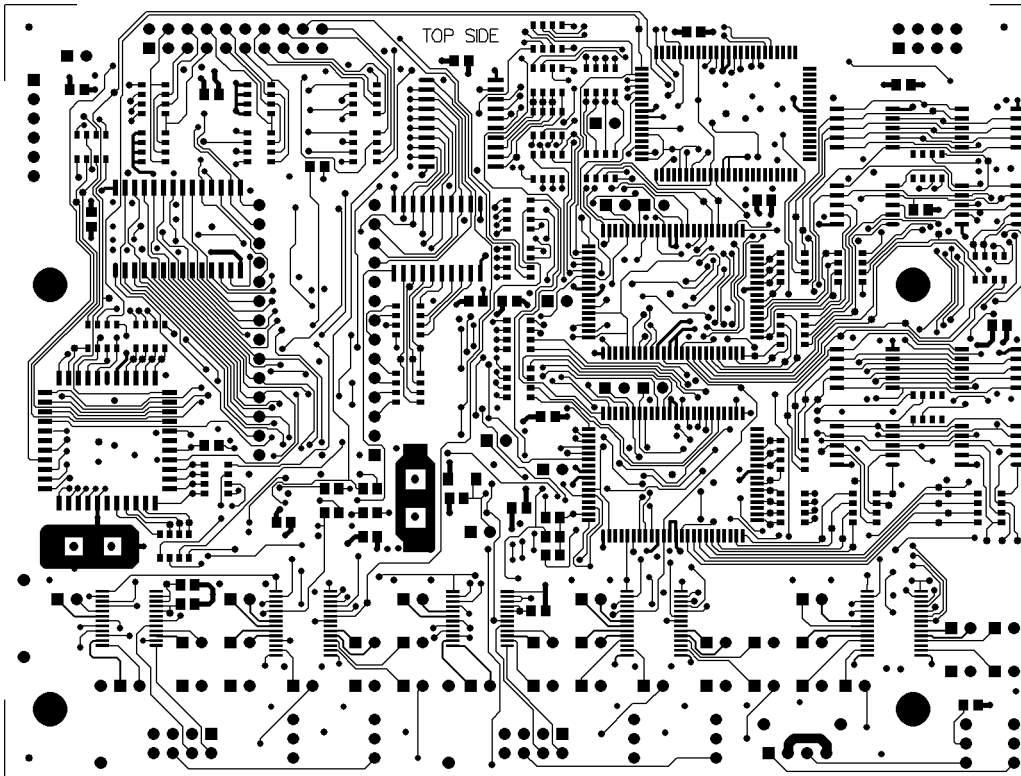


G3LED Drill Drawing

Tool	Hole Size	Hole Count Plated
T1	39mil (0.9906mm)	14
Totals		14

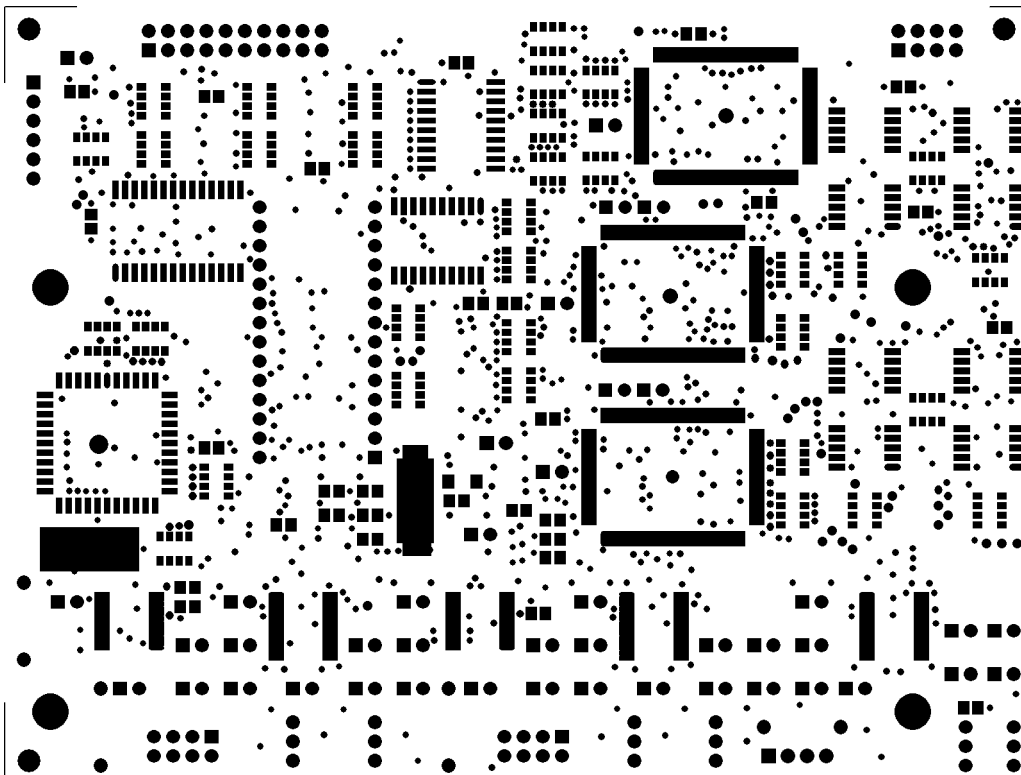


PCB#MFB4x4PRO TOP LAYER

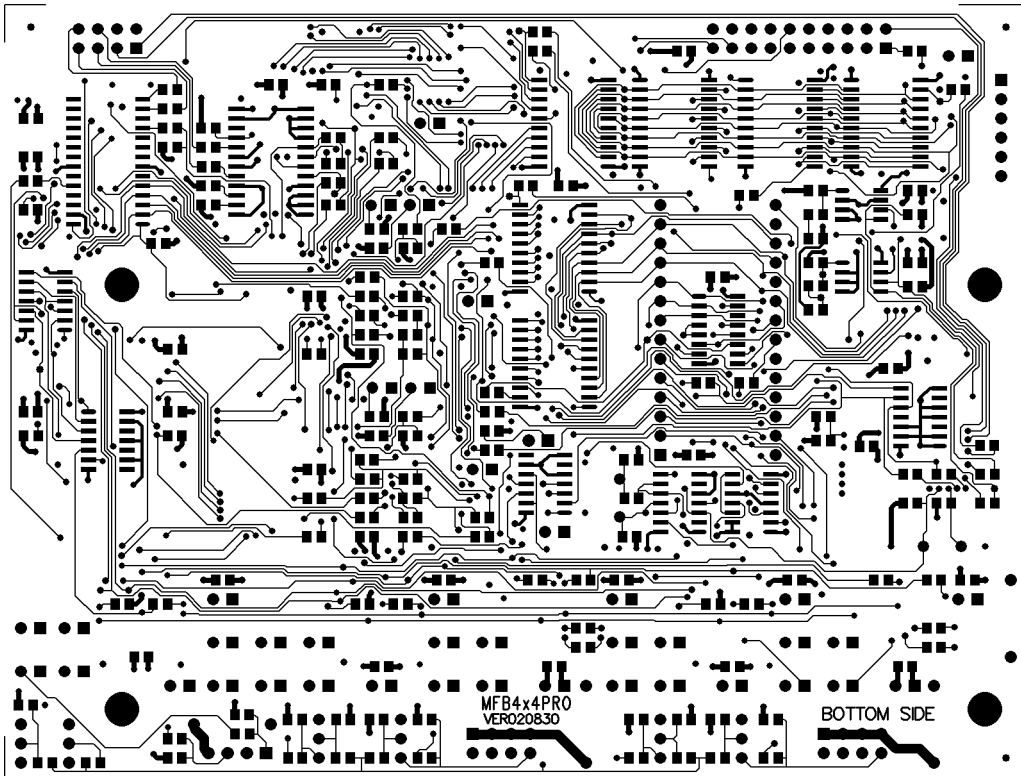


SEED-cod. MFB4x4PRO VER020830

PCB#MFB4x4PRO TOP SOLDER MASK

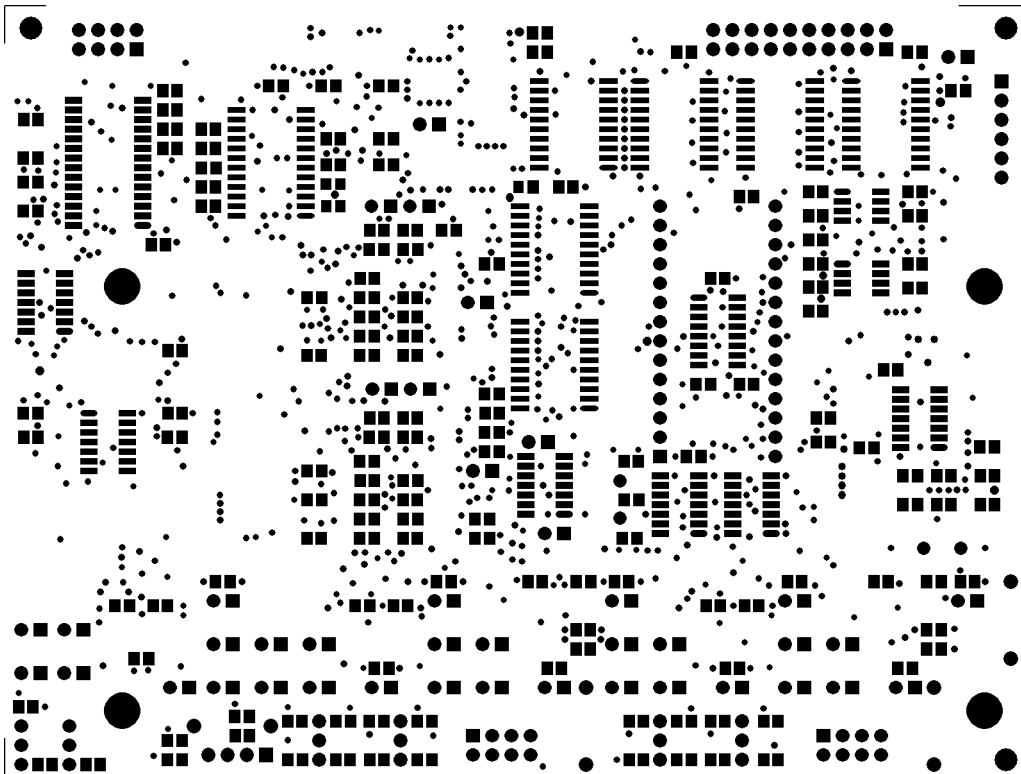


PCB#MFB4x4PRO BOTTOM LAYER



SEED-cod. MFB4x4PRO VERO20830

PCB#MFB4x4PRO BOTTOM SOLDER MASK

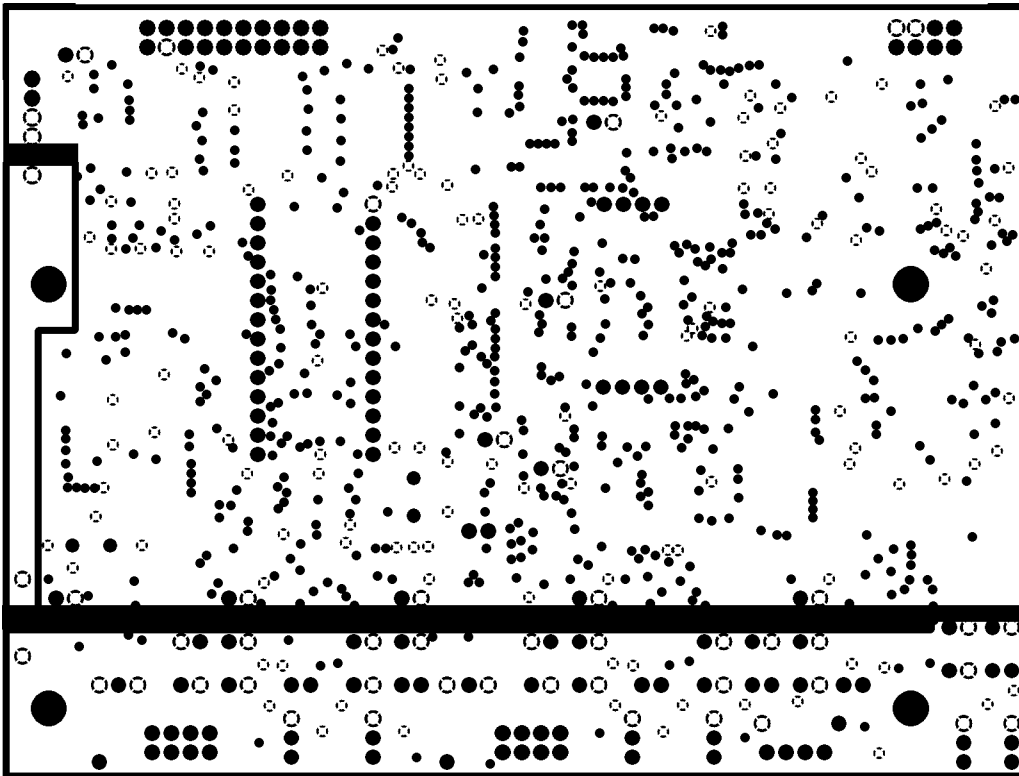


PCB#MFB4x4PRO INTERNAL PLANE1 (VCC)



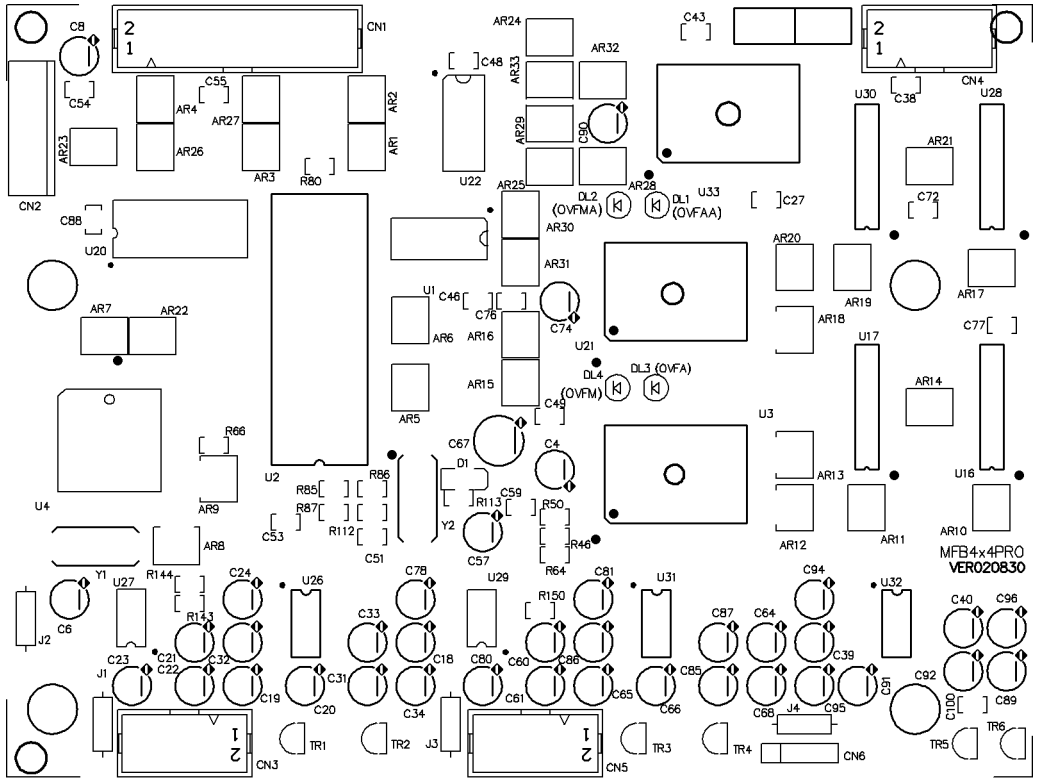
INTERNAL PLANE1(VCC)

PCB#MFB4x4PRO INTERNAL PLANE2 (GND)



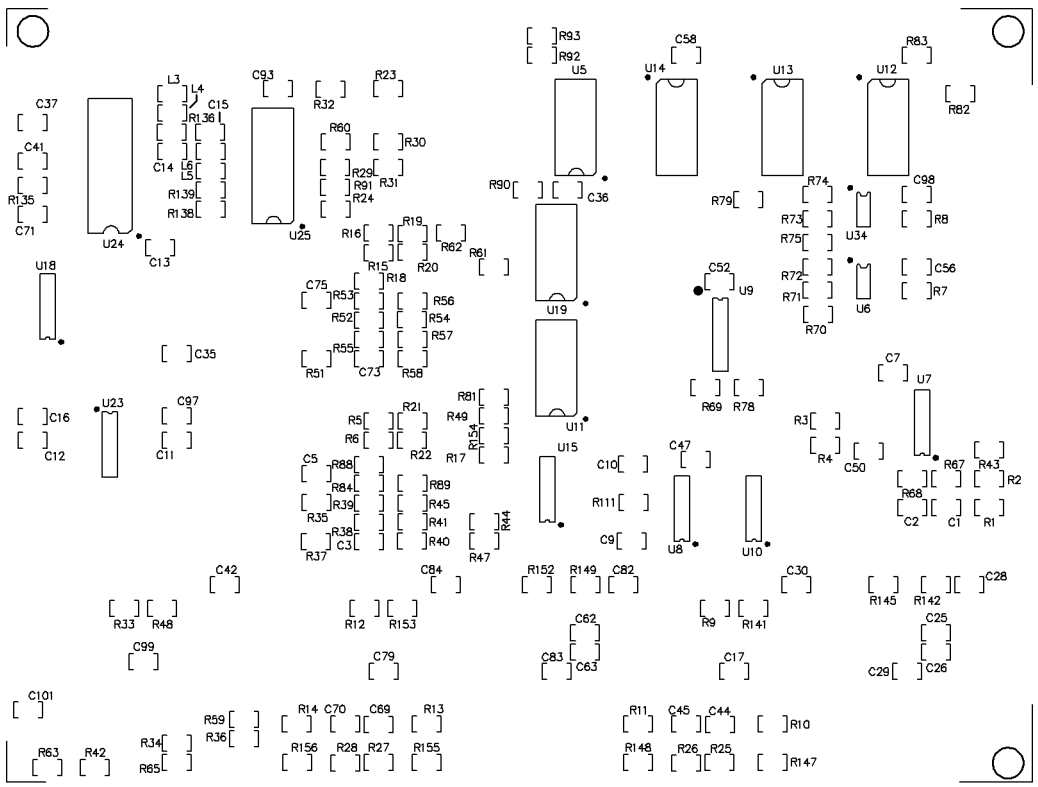
INTERNAL PLANE2(GND)

PCB#MFB4x4PRO SILKSCREEN TOP LAYER



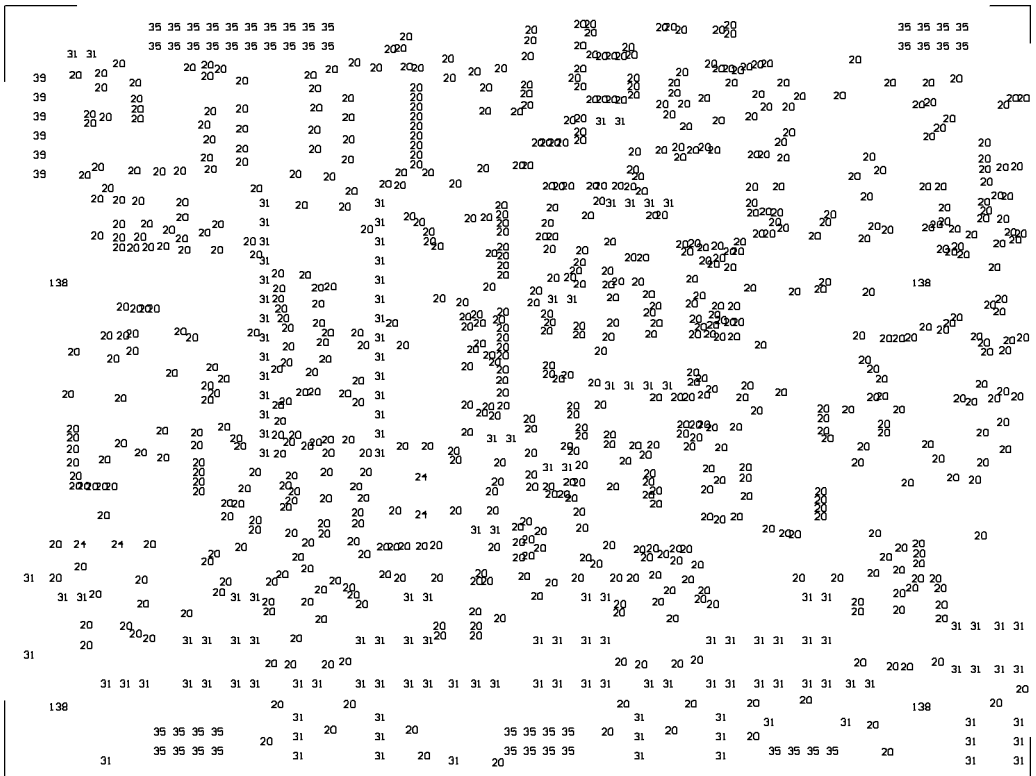
SILKSCREEN TOP

PCB#MFB4x4PRO SILKSCREEN BOTTOM LAYER



SILKSCREEN BOTTOM

PCB#MFB4x4PRO DRILL DRAWING



 NCDrill File Report For: MFB4x4PRO.PCB 31-Aug-2002

Layer Pair : TopLayer to BottomLayer

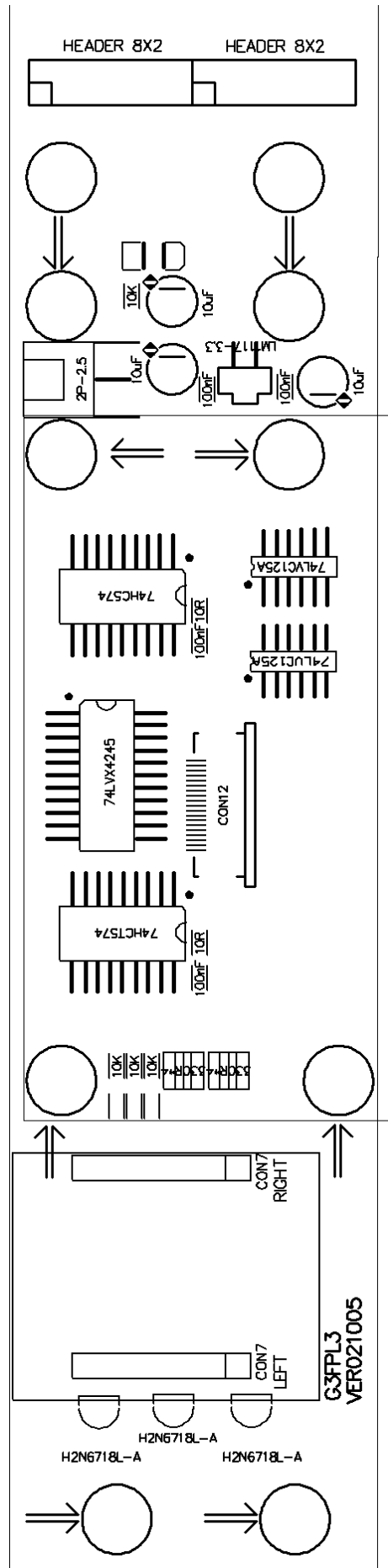
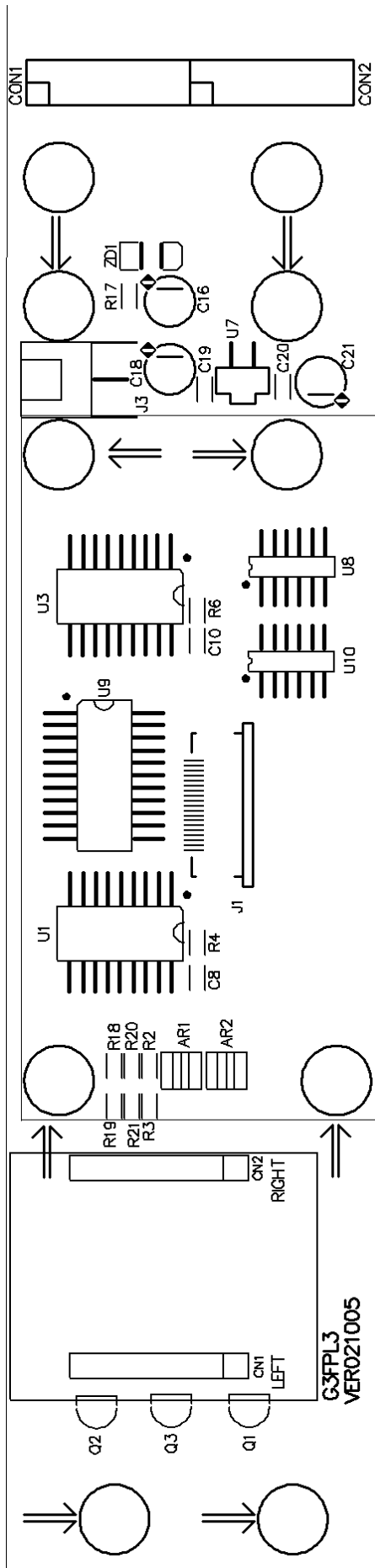
ASCII File : NCDrillOutput.TXT

EIA File : NCDrillOutput.DRL

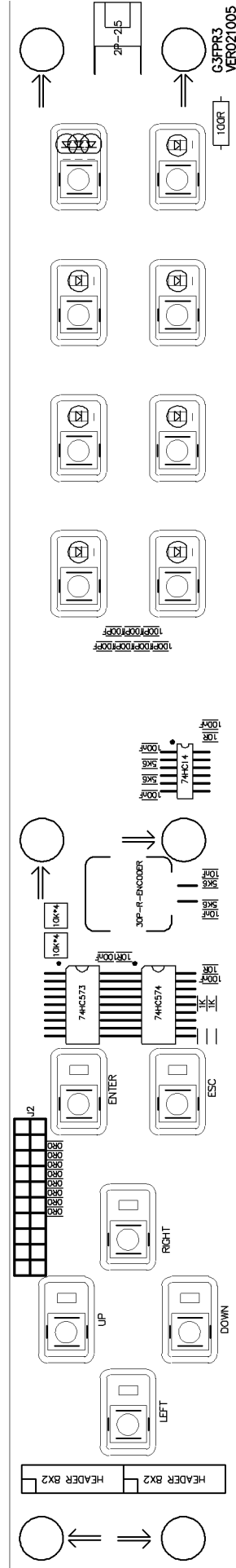
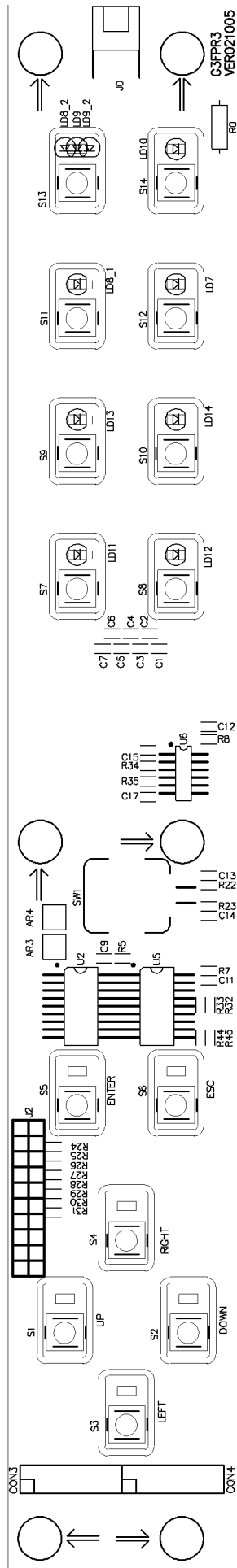
Tool	Hole Size	Hole Count	Plated
T1	20mil (0.508mm)	742	
T2	24mil (0.6096mm)	4	
T3	31mil (0.7874mm)	138	
T4	35mil (0.889mm)	48	
T5	39mil (0.9906mm)	6	
T6	138mil (3.5052mm)	4	NPTH

 Totals 942

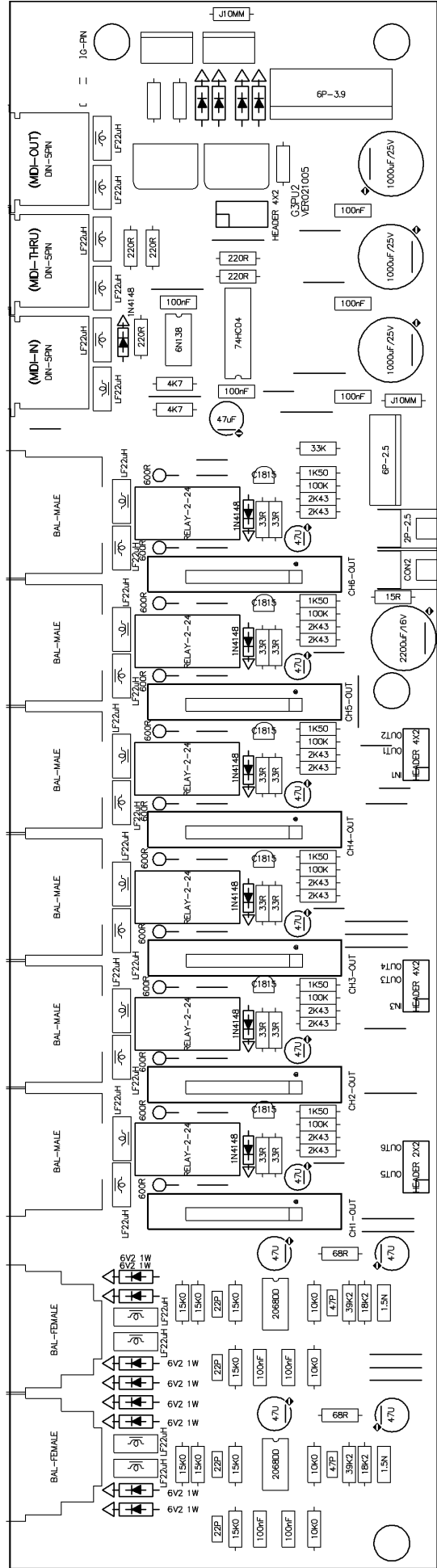
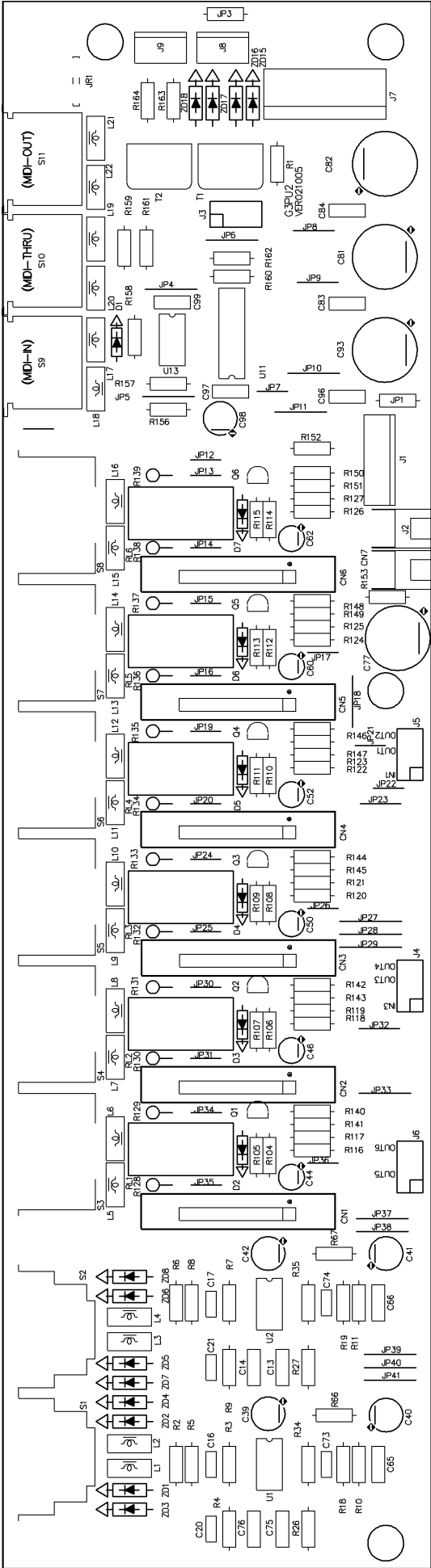
G3FPL3 (VER021005)

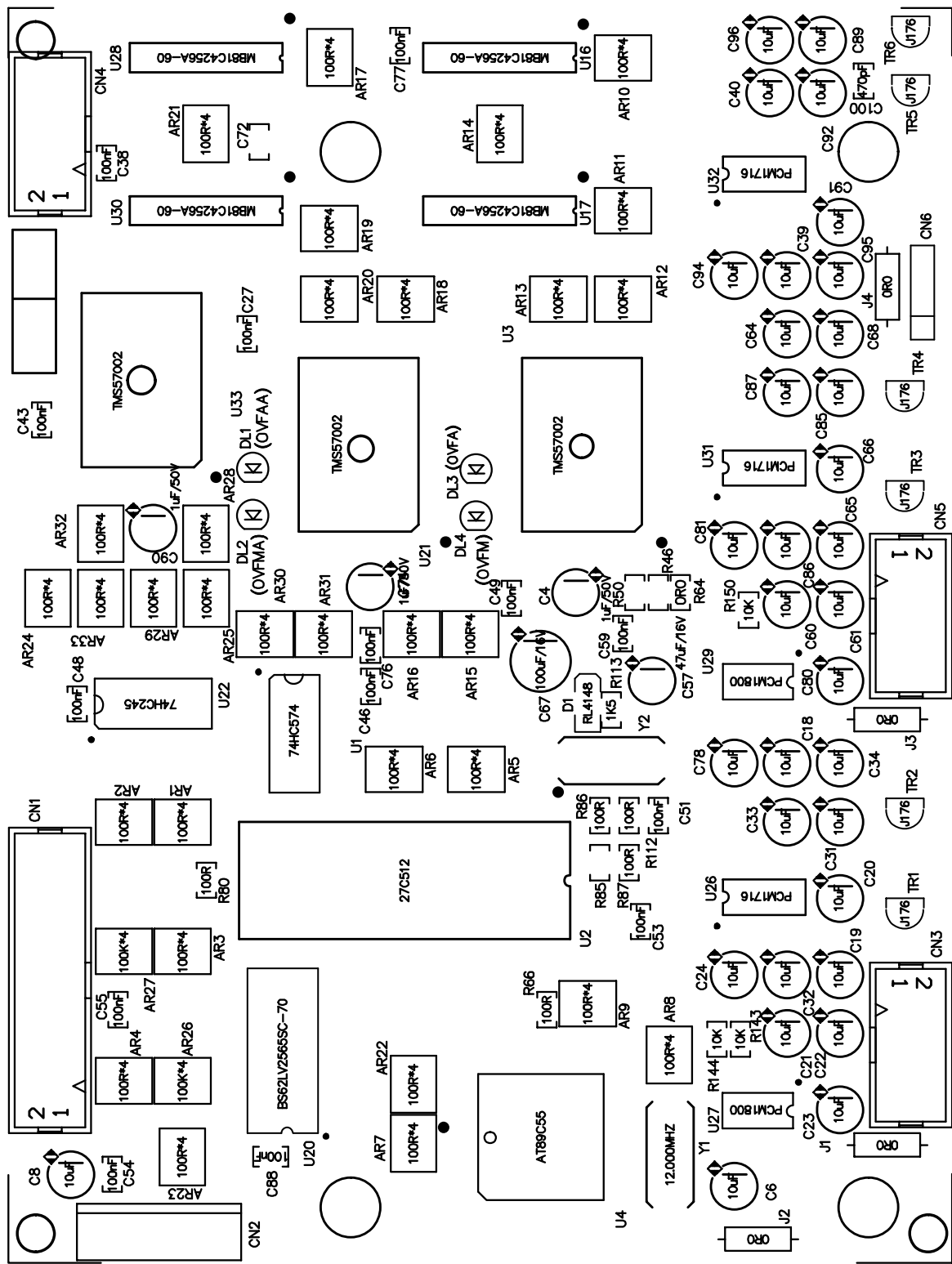


G3FPR3 (VER021005)

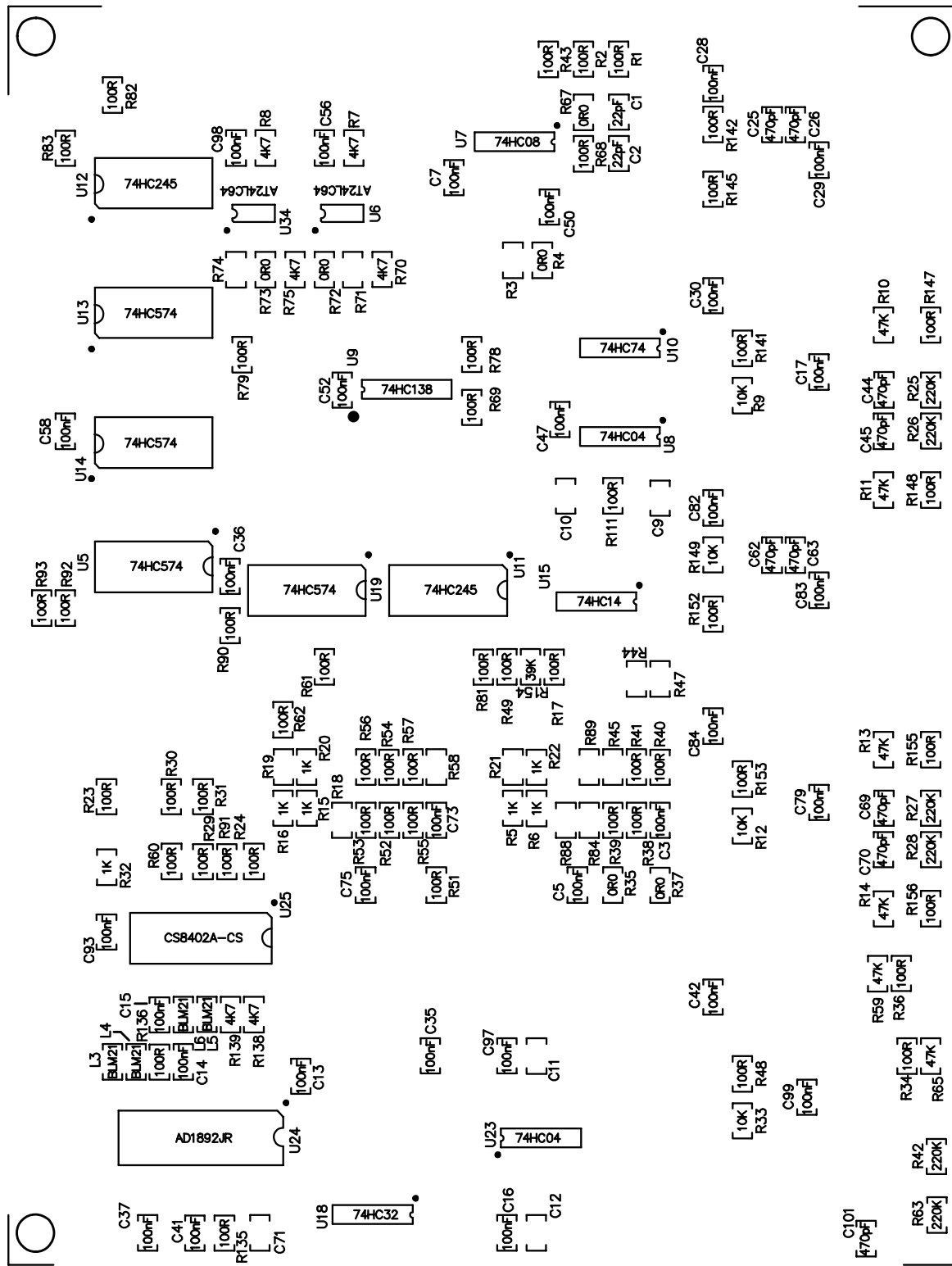


G3PU2 (VER021005)



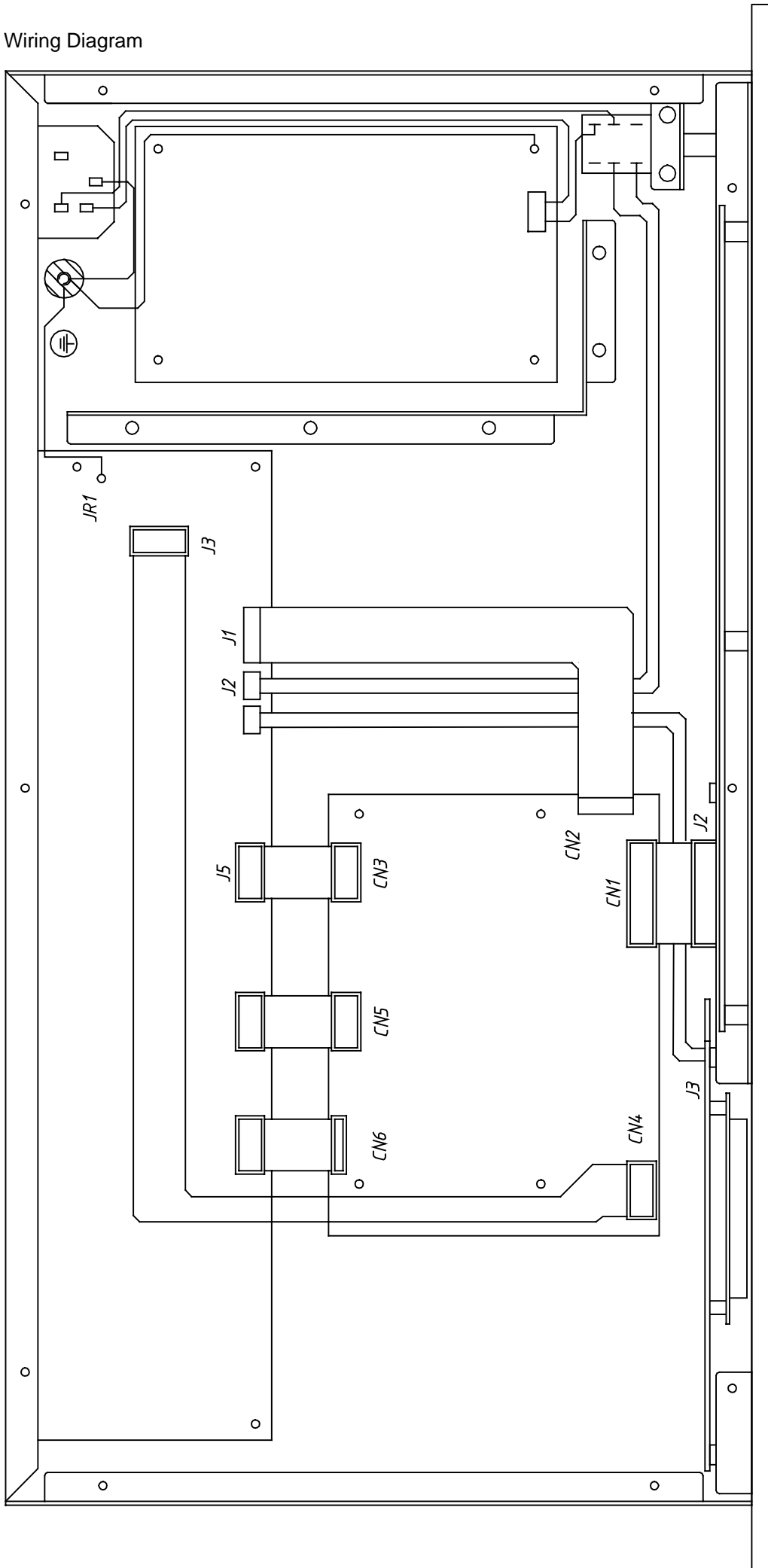


SILKSCREEN TOP



SILKSCREEN BOTTOM

Wiring Diagram



Multi-Level BOM Structure Listing

Report No.: IEB0_P02
 Prepared by 980029[廖芙蓉]

Date 2003/04/12
 Page No.: 1 / 16

Item No. PF00711 Version
 DESCRIPTION: ALTO DRIVE2.3 UNIT: PCS
 ALTO DRIVE2.3 ALTO 85-264V 歐規 CHINA Date: 2002/12/25

Version	Item No	Loss %	Ver.	Unit	Cardinal	Effective Date
Component Remark	Item Descri				Usage Rate	@:Phantom Layer
					Attrition	Rate
0001-----	MA02930 panel			PCS	1.0000	2002/12/25
	ALTO DRIVER2.3 ALTO				1	Y
					0.00	%
0001-----	MA02929 panel			PCS	1.0000	2003/01/06
	ALTO DRIVE2.3				1	N
					0.00	%
0001-----	MA03528 panel			PCS	1.0000	2003/01/03
	CONTROL60				1	N
					0.00	%
0001-----	MA03086 panel			PCS	1.0000	2002/07/12
	CONTROL60				1	N
					0.00	%
0001-----	MI01380 panel			PCS	1.0000	2003/04/11
	44.2*6.5*483				1	N
					0.00	%
0002-----	MB02022 rear board			PCS	1.0000	2002/12/25
	ALTO DRIVE2.3				1	Y
					0.00	%
0001-----	MB02019 rear board			PCS	1.0000	2002/03/05
	ALTO DRIVE2.3				1	N
					0.00	%
0001-----	MB02021 rear board			PCS	1.0000	2002/03/05
	ALTO DRIVE2.3				1	N
					0.00	%
0001-----	MJ00831 iron board			PCS	1.0000	2002/03/05
	1*490*274				1	N
					0.00	%
0001-----	MJ00058 iron board			PCS	1.0000	2002/03/04
	1*2135*1220 20.45kg			KG	19	N
					0.00	%
0003-----	MC00388 top cover			PCS	1.0000	2002/12/25
	CONTROL60				1	Y
					0.00	%
0001-----	MC00386 top cover			PCS	1.0000	2003/01/20
	CONTROL60				1	N
					0.00	%
0001-----	MC00387 top cover			PCS	1.0000	2002/03/06
	CONTROL60				1	N
					0.00	%
0001-----	MJ00059 iron board			PCS	1.0000	2002/03/06
	1.2*2135*1220 24.54kg			KG	20	N
					0.00	%
0004-----	ME00016 colour nut			PCS	1.0000	2002/12/25
	4m/m				1	Y
					0.00	%
0005-----	MF00038 washer			PCS	1.0000	2002/12/25
	4* 7*1t				1	Y
					0.00	%
0006-----	MF00048 washer			PCS	2.0000	2002/12/25
	4* 8*0.5t				1	Y
					0.00	%
0007-----	MG00041 screw			PCS	13.0000	2003/01/10
	M3*6				1	Y
					0.00	%
0008-----	MG00166 screw			PCS	1.0000	2002/12/25
	M3*10				1	Y
					0.00	%
0009-----	NC00089 wood washer			PCS	1.0000	2002/12/25
	4* 10*1				1	Y
					0.00	%
0001-----	NC00088 insulation			KG	1.0000	2003/02/25
	10*1				1	N
					0.00	%
0001-----	NC00014 insulator			KG	100.0000	2002/04/04
	0.65M*60M*1t				39000000	N
					0.00	%

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 DESCRIPTION: ALTO DRIVE2.3 UNIT: PCS
 ALTO DRIVE2.3 ALTO 85-264V 歐規 CHINA Date: 2002/12/25

Version	Item No	Loss %	Ver.	Unit	Cardinal	Effective Date
Component Remark	Item Descri				Usage Rate	@:Phantom Layer Attrition Rate
0010-----	NI02249 caushion TW-1(TO-220)		00000	PCS	1.0000 1	2002/12/25 Y
0011-----	MG00281 screw M3*6			PCS	8.0000 1	2002/12/25 Y
0012-----	MG00025 screw M3*6			PCS	16.0000 1	2002/12/25 Y
0013-----	MG00061 screw M3*10			PCS	8.0000 1	2002/12/25 Y
0014-----	HA02242 wire 6P-6P 200mm UL1007 18AWG			PCS	1.0000 1	2002/12/25 Y
0015-----	HA01696 header wiring IF:W40 3P 350			PCS	1.0000 1	2002/12/25 Y
0016-----	HA01638 row-wire connector wiring 2P 280			PCS	1.0000 1	2002/12/25 Y
0017-----	HA01503 header wiring 2P-2P 250			PCS	1.0000 1	2002/12/25 Y
0018-----	HA01590 row-wire connecting wiring 6P-6P 190			PCS	1.0000 1	2002/12/25 Y
0019-----	HA02077 header wiring 8P-8P 130mm PH=1.27mm			PCS	2.0000 1	2002/12/25 Y
0020-----	HA02243 wire 8P-8P 320mm UL2651 28AWG PH1.27			PCS	1.0000 1	2002/12/25 Y
0021-----	HC00008 AC outlet 3515 A TYPE(RF-2004-C-4.8)			PCS	1.0000 1	2002/12/25 Y
0022-----	HA02191 wire 170mm			PCS	1.0000 1	2002/12/25 Y
0023-----	HA02190 wire 150mm			PCS	1.0000 1	2002/12/25 Y
0024-----	HA01174 signle terminal wiring CF:W146 80 green/yellow			PCS	1.0000 1	2002/12/25 Y
0025-----	HA00861 power cord Europe 3P LT-312+LT-501			PCS	1.0000 1	2002/12/25 Y
0026-----	HI00028 power switch PWL-2P2T-T(WP-2-B1)			PCS	1.0000 1	2002/12/25 Y
0027-----	NI00307 key 15*12			PCS	1.0000 1	2002/12/25 Y
0028-----	NI01160 switch cap 14.5*10 YELLOW C			PCS	1.0000 1	2002/12/25 Y
0029-----	SA00065 L.E.D LG2043 green			PCS	1.0000 1	2002/12/25 Y
0030-----	HA01388 row-wire connector wiring 2P 100			PCS	1.0000 1	2002/12/25 Y
0031-----	NI00217 insulator CONTROL30			PCS	1.0000 1	2002/12/25 Y

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 ALTO DRIVE2.3 ALTO 85-264V 歐規 CHINA Date: 2002/12/25

Version	Item No	Loss %	Ver.	Unit	Cardinal	Effective Date
Component Remark	Item Descri				Usage Rate	@:Phantom Layer Attrition Rate
0001-----	NI00216 insulator 0.5*130*100			PCS	1.0000 1 0.00 %	2003/02/25 N
0001-----	NI00375 film 45*60.5*0.5mm			PCS	1.0000 1 0.00 %	2002/04/06 N
0032-----	NI00200 insulator 0.5*100*130(DX24)			PCS	1.0000 1 0.00 %	2002/12/25 Y
0001-----	NI00375 film 45*60.5*0.5mm			PCS	1.0000 1 0.00 %	2003/02/25 N
0033-----	NI00828 knob 12*7*10.7 072C blue			PCS	12.0000 1 0.00 %	2002/12/25 Y
0034-----	NI02223 light piller 9*5*2.5			PCS	6.0000 1 0.00 %	2002/12/25 Y
0035-----	NI02238 knob 3*W6*25.5 072C			PCS	6.0000 1 0.00 %	2002/12/25 Y
0036-----	NI02117 knob 30*12.5			PCS	1.0000 1 0.00 %	2002/12/25 Y
0037-----	NI02232 lacid plastic panel CONTROL60			PCS	1.0000 1 0.00 %	2002/12/25 Y
0001-----	NI00830 lacid plastic panel 3.5*106*33mm CONTROL60			PCS	1.0000 1 0.00 %	2002/08/23 N
0038-----	TG00029 voltage transformer SNP-9541 40W(AC-DC)			PCS	1.0000 1 0.00 %	2002/12/25 Y
0039-----	NI02085 power switch 22*9.69			PCS	1.0000 1 0.00 %	2002/12/25 Y
0040-----	NI00501 foot cushion 12.7*9*3t(SF-004)			PCS	4.0000 1 0.00 %	2002/12/25 Y
0041-----	NA00137 clip-chain bag 5*7			PCS	1.0000 1 0.00 %	2002/12/25 Y
0042-----	NA00123 PE bag 300*580*0.04			PCS	1.0000 1 0.00 %	2002/12/25 Y
0043-----	HJ00006 desiccant 30g			PCS	1.0000 1 0.00 %	2002/12/25 Y
0044-----	NF00061 assurance card LTO			PCS	1.0000 1 0.00 %	2002/12/25 Y
0045-----	NB02168 box ALTO DRIVE2.3			PCS	1.0000 1 0.00 %	2003/01/06 Y
0046-----	NB02165 barrier ALTO DRIVE2.3			PCS	1.0000 1 0.00 %	2003/01/07 Y
0047-----	NB02166 barrier ALTO DRIVE2.3			PCS	1.0000 1 0.00 %	2003/01/07 Y
0048-----	NB02088 box (1H) ALTO 19"			PCS	1.0000 4 0.00 %	2003/01/07 Y
0049-----	NE05004 label ALTO			PCS	4.0000 1 0.00 %	2002/12/25 Y

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 ALTO DRIVE2.3 ALTO 85~264V 歐規 CHINA Date: 2002/12/25

Version	Item No	Loss %	Ver.	Unit	Cardinal	Effective Date
Component Remark	Item Descri				Usage Rate	@:Phantom Layer Attrition Rate
0050-----	NE10445 label			PCS	4.0000 1	2002/12/25 Y
0001-----	ALTO DRIVE2.3 NH00090 paper			PCS	0.00 1	% N
0001-----	30*11mm NH00012 bond paper			M	330.0000 40000	2002/05/07 N
0051-----	0.04*1M HD00006 fuse TSD			PCS	1.0000 1	2002/12/25 Y
0052-----	315mA 250V 5.2*20mm CSA/S/UL/VDE MB01408 rear board			PCS	1.0000 1	2002/12/25 Y
0001-----	CONTROL60 MB01405 rear board			PCS	0.00 1	% N
0001-----	CONTROL60 MB01401 rear board			PCS	1.0000 1	2003/01/18 N
0001-----	CONTROL MJ00059 iron board			PCS	0.00 18	% N
0002-----	1.2*2135*1220 24.54kg ME00036 iron pillar			KG	12.0000 1	2003/01/11 Y
0003-----	hexagon6.35*M3*9.2 MI00009 partition			PCS	1.0000 1	2003/01/11 Y
0001-----	CONTROL30 MJ00058 iron board			PCS	0.00 234	% N
0004-----	1*2135*1220 20.45kg ME00001 screw			KG	1.0000 1	2003/01/11 Y
0005-----	M4*10*0.7PH MI01357 fixed board			PCS	0.00 1	% Y
0001-----	CLE2.0 MJ00063 Zn-plated board			PCS	1.0000 2542	2002/04/14 N
0053-----	1.2*2135*1220 24.54kg HK03324 K-PC board			PCS	1.0000 1	2002/12/25 Y
0001-----	P-G3FPL-DIP HK03323 K-PC board			PCS	0.00 1	% Y
0001-----	P-G3FPL-SMD HB00778 pc board			PCS	1.0000 1	2002/11/12 Y
0002-----	G3FPL3(1*4)_VER021005 RD00061 SMDfixed resistor 1/10W			PCS	0.00 2.0000	% 2002/11/28
	10 ±5% 0603 R4,R6				1 0.00	Y %
0003-----	RD00101 SMDfixed resistor 1/10W			PCS	4.0000 1	2002/11/12 Y
	10K ±5% 0603 R17,R18,R20,R2				0.00	%
0004-----	CI00075 SMDceramic capacitor0603			PCS	4.0000 1	2002/11/12 Y
	0.1uF/50V Y5V +80,-20% C10,C19,C20,C8				0.00	%

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 ALTO DRIVE2.3 ALTO 85-264V 歐規 CHINA Date: 2002/12/25

Version	Item No	Loss %	Ver.	Unit	Cardinal	Effective Date
Component Remark	Item Descri				Usage Rate	@:Phantom Layer Attrition Rate
0005-----	RE00009 resistor 330 *4 ±5% 8P 0603 AR1,AR2			PCS	2.0000 1 0.00 %	2002/11/12 Y
0006-----	SG00072 SMD integrated circuit 74LVC125AD U10,U8			PCS	2.0000 1 0.00 %	2002/11/12 Y
0007-----	SG00078 SMD integrated circuit SN74HC574DW U1,U3			PCS	2.0000 1 0.00 %	2002/11/12 Y
0008-----	SG00105 SMD integrated circuit SN74LVX4245ADW(T1) U9			PCS	1.0000 1 0.00 %	2002/11/12 Y
0009-----	SF00009 voltage stabilized transistor LM1117MP-3.3 (3.3V, SOT223) U7			PCS	1.0000 1 0.00 %	2002/11/12 Y
0010-----	HC00332 SMD FPC MOLEX 52745-2090 J1			PCS	1.0000 1 0.00 %	2002/11/12 Y
0002-----	HK03327 K-PC board P-G3LED-SMD			PCS	1.0000 1 0.00 %	2002/11/27 Y
0001-----	HB00781 PC board G3LED(1*15)_VER020910			PCS	1.0000 1 0.00 %	2002/11/12 Y
0002-----	SE00002 SMD L.E.D red 67-21SURC/S530-A2/TR8 1210			PCS	2.0000 1 0.00 %	2002/11/12 Y
0003-----	SE00004 SMD L.E.D yellow 67-21UYC/S530-A2/TR8 1210 LD13,LD7			PCS	2.0000 1 0.00 %	2002/11/12 Y
0004-----	SE00003 SMD L.E.D green 67-21SYGC/S530-E1/TR8 1210 LD10,LD11,LD14,LD15,LD16,LD17,LD8,LD9			PCS	8.0000 1 0.00 %	2002/11/12 Y
0003-----	CB00024 electrotytic capacitor 10uF/16V 4*7 C16,C18,C21			PCS	3.0000 1 0.00 %	2002/11/27 Y
0004-----	SB00095 transistor H2N6718L-A Q1,Q2,Q3			PCS	3.0000 1 0.00 %	2002/11/27 Y
0005-----	HC00223 row pin 2.54 180° 7P 3/8/3mm CN1,CN2			PCS	2.0000 1 0.00 %	2002/11/27 Y
0006-----	HC00263 row-wire header 2P 2.5mm 90°			PCS	1.0000 1 0.00 %	2002/11/27 Y

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 ALTO DRIVE2.3 ALTO 85~264V 歐規 CHINA Date: 2002/12/25

Version	Item No	Loss %	Ver.	Unit	Cardinal	Effective Date
Component Remark	Item Descri				Usage Rate	@:Phantom Layer Attrition Rate
J3						
0007-----	HE00015 LCD模組 LCD			PCS	1.0000 1	2002/11/27 Y
0008-----	@MJ00890 fixed board CONTROL60 LCD			PCS	1.0000 1	2002/11/27 Y
0001-----	MJ00889 iron boaed 1*71.2*39.8			PCS	1.0000 1	2003/02/25 N
0001-----	MJ00999 AL board 1*2000*1000 5.44kg			PCS KG	1.0000 705	2002/06/09 N
0009-----	MG00243 copper tube M3-0.5PH*5single length11			PCS	4.0000 1	2002/11/27 Y
0010-----	MG00036 screw M3*4			PCS	4.0000 1	2002/11/27 Y
0011-----	ME00015 colour nut 3m/m			PCS	4.0000 1	2002/11/27 Y
0012-----	MI00153 front board 37.5*41*11mm CONTROL60			PCS	1.0000 1	2003/01/06 %
0001-----	MJ00833 iron board 1.2*365*72			PCS	1.0000 1	2003/02/24 N
0001-----	MJ00063 Zn-plated board 1.2*2135*1220 24.54kg			PCS KG	1.0000 99	2002/03/04 N
0013-----	MI00876 front board CONTROL60			PCS	1.0000 1	2003/01/06 %
0001-----	MJ00063 Zn-plated board 1.2*2135*1220 24.54kg			PCS KG	1.0000 102	2003/02/25 N
0002-----	ME00038 iron pillar hexagon6.35*M3*8.4			PCS	6.0000 1	2003/02/25 N
0003-----	ME00043 iron pillar hexagon6.35*M3*0.5PH*14			PCS	2.0000 1	2003/02/25 N
0014-----	MG00041 screw M3*6			PCS	13.0000 1	2003/01/10 %
0054-----	HK03334 K-PC board P-G3FPR-2-DIP			PCS	1.0000 1	2002/12/25 Y
0001-----	HK03325 K-PC board P-G3FPR-SMD			PCS	1.0000 1	2002/11/12 Y
0001-----	HB00780 pc board G3FPR3(1*4)_VER021005			PCS	1.0000 1	2002/11/12 Y
0002-----	RD00059 SMDfixed resistor 1/10W 0 ±5% 0603			PCS	8.0000 1	2002/11/12 Y
	R24,R25,R26,R27,R28,R29,R30,R31				0.00	%
0003-----	RD00061 SMDfixed resistor 1/10W 10 ±5% 0603			PCS	3.0000 1	2002/11/28 Y
	R5,R7,R8				0.00	%

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Version	Item No	Loss %	Ver.	Unit	Cardinal	Effective Date
Component Remark	Item Descri				Usage Rate	@:Phantom Layer Attrition Rate
0004-----	RD00083 SMDfixed resistor 1/10W 1.0K ±5% 0603 R32,R33			PCS	2.0000 1 0.00 %	2002/11/12 Y
0005-----	RD00095 SMDfixed resistor 1/10W 5.6K ±5% 0603 R22,R23,R34,R35			PCS	4.0000 1 0.00 %	2002/11/12 Y
0006-----	CI00059 SMDceramic capacitor0603 100PF/50V NPO ±5% C1,C2,C3,C4,C5,C6,C7			PCS	7.0000 1 0.00 %	2002/11/12 Y
0007-----	CI00071 SMDceramic capacitor0603 0.01uF/50V X7R ±10% C13,C14			PCS	2.0000 1 0.00 %	2002/11/12 Y
0008-----	CI00075 SMDceramic capacitor0603 0.1uF/50V Y5V +80,-20% C11,C12,C15,C17,C9			PCS	5.0000 1 0.00 %	2002/11/28 Y
0009-----	RE00001 SMDrow resistor1/16W 10K *4 ±5% 8P 0603 AR3,AR4			PCS	2.0000 1 0.00 %	2002/11/12 Y
0010-----	SG00068 SMD integrated circuit 74HC14DT U6			PCS	1.0000 1 0.00 %	2002/11/12 Y
0011-----	SG00103 SMD integrated circuit 74HC573DT U2			PCS	1.0000 1 0.00 %	2002/11/12 Y
0012-----	SG00078 SMD integrated circuit SN74HC574DW U5			PCS	1.0000 1 0.00 %	2002/11/12 Y
0002-----	RA00184 fixed resistor 1/4W 100 M type			PCS	1.0000 1 0.00 %	2002/11/12 Y
0003-----	HI00107 switch RE111-20B3-15F-15P SW1			PCS	1.0000 1 0.00 %	2002/11/12 Y
0004-----	HC00065 row-wire header 2P 2.5mm 90° J0			PCS	1.0000 1 0.00 %	2002/11/12 Y
0005-----	HC00161 row-pin(single)#5200 2.0 180° 2*8P(gold-plated) 4/8.5mm CON3,CON4			PCS	2.0000 1 0.00 %	2002/11/12 Y
0006-----	SA00072 L.E.D 3 red LI2340/A LD10,LD11,LD12,LD7,LD8-1,LD9			PCS	6.0000 1 0.00 %	2002/11/12 Y

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 ALTO DRIVE2.3 ALTO 85~264V 歐規 CHINA Date: 2002/12/25

Version	Item No	Loss %	Ver.	Unit	Cardinal	Effective Date
Component Remark	Item Descri				Usage Rate	@:Phantom Layer Attrition Rate
0007-----	HI00041 button swith 6*6*5			PCS	12.0000 1 0.00 %	2002/11/12 Y
	S1, S11, S12, S13, S14, S2, S3, S4, S5, S6, S7, S8					
0008-----	HA02167 wire			PCS	1.0000 1 0.00 %	2003/01/13
	20P-20P 85mm 灰 PH=1.27mm					
0009-----	HC00458 label			PCS	1.0000 1 0.00 %	2003/03/04
	2.54 180° 3P5/7.5mm					
0055-----	HK03335 K-PC board			PCS	1.0000 1 0.00 %	2002/12/25 Y
	P-G3PU2-4-DIP					
0001-----	HK03327 K-PC board			PCS	1.0000 1 0.00 %	2002/11/12 Y
	P-G3LED-SMD					
0001-----	HB00781 PC board			PCS	1.0000 1 0.00 %	2002/11/12 Y
	G3LED(1*15)_VER020910					
0002-----	SE00002 SMD L.E.D			PCS	2.0000 1 0.00 %	2002/11/12 Y
	red 67-21SURC/S530-A2/TR8 1210					
0003-----	SE00004 SMD L.E.D			PCS	2.0000 1 0.00 %	2002/11/12 Y
	yellow 67-21UYC/S530-A2/TR8 1210 LD13, LD7					
0004-----	SE00003 SMD L.E.D			PCS	8.0000 1 0.00 %	2002/11/12 Y
	green 67-21SYGC/S530-E1/TR8 1210 LD10, LD11, LD14, LD15, LD16, LD17, LD8, LD9					
0002-----	HB00790 pc board			PCS	1.0000 1 0.00 %	2002/11/27 Y
	G3PU2_VER021005					
0003-----	HA01920 jumper wire			PCS	19.0000 1 0.00 %	2002/11/12 Y
	6mm JP12, JP13, JP14, JP15, JP16, JP17, JP19, JP20, JP21, JP22, JP24, JP25, JP26, JP30, JP31, JP34, JP35, JP36, JP7					
0001-----	HA02249 wire			M	0.0160 1 0.00 %	2002/09/19 N
	0.6			KG		
0004-----	HA01922 jumper wire			PCS	4.0000 1 0.00 %	2002/11/12 Y
	8mm JP23, JP32, JP8, JP9					
0001-----	HA02249 wire			M	0.0180 1 0.00 %	2002/09/19 N
	0.6			KG		
0005-----	HA01925 jumper wire			PCS	14.0000 1 0.00 %	2002/11/12 Y
	10mm JP1, JP10, JP11, JP18, JP3, JP33, JP37, JP38, JP39, JP4, JP40, JP41, JP5, JP6					
0001-----	HA02249 wire			M	0.0200 1 0.00 %	2002/09/19 N
	0.6			KG		
0006-----	HA01928 jumper wire			PCS	3.0000 1 0.00 %	2002/11/12 Y
	12mm JP27, JP28, JP29					

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 ALTO DRIVE2.3 ALTO 85~264V 歐規 CHINA Date: 2002/12/25

Version	Item No	Loss %	Ver.	Unit	Cardinal	Effective Date
Component Remark	Item Descri				Usage Rate	@:Phantom Layer Attrition Rate
0001-----	HA02249 wire 0.6			M KG	0.0220 1 0.00 %	2002/09/19 N
0007-----	RA00161 fixed resistor 1/4W 15 M type R153			PCS	1.0000 1 0.00 %	2002/11/12 Y
0008-----	RA00178 fixed resistor 1/4W 68 M type R66,R67			PCS	2.0000 1 0.00 %	2002/11/12 Y
0009-----	RA00194 fixed resistor 1/4W 220 M type R158,R159,R160,R161,R162			PCS	5.0000 1 0.00 %	2002/11/12 Y
0010-----	RA00206 fixed resistor 1/4W 560 F type R128,R129,R130,R131,R132,R133,R134,R135			PCS	8.0000 1 0.00 %	2002/11/12 Y
0011-----	RA00231 fixed resistor 1/4W 4.7K M type R156,R157			PCS	2.0000 1 0.00 %	2002/11/12 Y
0012-----	RA00170 fixed resistor 1/4W 33 M type R104,R105,R106,R107,R108,R109,R110,R111			PCS	8.0000 1 0.00 %	2002/12/19 Y
0013-----	RA00475 precise resistor 1/4W 1.50K M type R140,R142,R144,R146			PCS	4.0000 1 0.00 %	2002/11/12 Y
0014-----	RA00481 precise resistor 1/4W 2.43K M type R116,R117,R118,R119,R120,R121,R122,R123			PCS	8.0000 1 0.00 %	2002/11/12 Y
0015-----	RA00515 precise resistor 1/4W 10.0K M type R26,R27,R34,R35			PCS	4.0000 1 0.00 %	2002/11/12 Y
0016-----	RA00524 precise resistor 1/4W 15.0k M type R2,R3,R4,R5,R6,R7,R8,R9			PCS	8.0000 1 0.00 %	2002/11/12 Y
0017-----	RA00530 precise resistor 1/4W 18.2K M type R10,R11			PCS	2.0000 1 0.00 %	2002/11/12 Y
0018-----	RA00544 precise resistor 1/4W 33.0K M type R152			PCS	1.0000 1 0.00 %	2002/11/12 Y
0019-----	RA00549 precise resistor 1/4W 39.2K M type			PCS	2.0000 1 0.00 %	2002/11/12 Y

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Item No. PF00711 Version
 DESCRIPTION: ALTO DRIVE2.3 UNIT: PCS
 ALTO DRIVE2.3 ALTO 85~264V 歐規 CHINA Date: 2002/12/25

Version	Item No	Loss %	Ver.	Unit	Cardinal	Effective Date
Component Remark	Item Descri				Usage Rate	@:Phantom Layer Attrition Rate
	R18,R19					
0020-----	RA00567 precise resistor 1/4W 100K M type R141,R143,R145,R147			PCS	4.0000 1 0.00 %	2002/11/12 Y
0021-----	CA00008 ceramic capacitor 22PF NPO C16,C17,C20,C21			PCS	4.0000 1 0.00 %	2002/11/12 Y
0022-----	CA00015 ceramic capacitor 47PF NPO C73,C74			PCS	2.0000 1 0.00 %	2002/11/12 Y
0023-----	CF00070 capacitor 0.0015uF/63V 2.5%(PFR5 152H63J11L4) C65,C66			PCS	2.0000 1 0.00 %	2002/11/12 Y
0024-----	CH00017 heap-layer capacitor (stand) 0.1uF/50V Y5V PH5 C13,C14,C75,C76,C83,C84,C86,C97,C99			PCS	9.0000 1 0.00 %	2002/11/12 Y
0025-----	CB00039 electrotytic capacitor 47uF/25V C39,C40,C41,C42,C44,C46,C50,C52,C98			PCS	9.0000 1 0.00 %	2002/11/12 Y
0026-----	CB00071 electrotytic capacitor 1000uF/25V C81,C82,C93			PCS	3.0000 1 0.00 %	2002/11/12 Y
0027-----	CB00079 electrotytic capacitor 2200uF/25V 13*25 C77			PCS	1.0000 1 0.00 %	2003/01/15 Y
0028-----	SA00093 rectifier diode 1N4148 0.5A D1,D2,D3,D4,D5			PCS	5.0000 1 0.00 %	2002/11/12 Y
0029-----	SA00100 zener diode 1W 6.2V 1N4735 ZD1,ZD2,ZD3,ZD4,ZD5,ZD6,ZD7,ZD8			PCS	8.0000 1 0.00 %	2002/11/12 Y
0030-----	SB00034 transistor 2SC1815GR Q1,Q2,Q3,Q4			PCS	4.0000 1 0.00 %	2002/11/12 Y
0031-----	CG00018 filter-EMI FILTER LF-22UH(WAH TAYI) L1,L10,L11,L12,L17,L18,L19,L2,L20,L21,L22,L3,L4,L5,L6, L7,L8,L9			PCS	18.0000 1 0.00 %	2002/11/12 Y
0032-----	SD00121 integrated circuit JRC NJM2068DD U1,U2			PCS	2.0000 1 0.00 %	2003/01/15 Y

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 DESCRIPTION: ALTO DRIVE2.3 UNIT: PCS
 ALTO DRIVE2.3 ALTO_85~264V 歐規 CHINA Date: 2002/12/25

Version	Item No	Loss %	Ver.	Unit	Cardinal	Effective Date
Component Remark	Item Descri				Usage Rate	@:Phantom Layer Attrition Rate
0033-----	SB00013 light-electron transistor 6N138 (QTC) U13			PCS	1.0000 1 0.00 %	2002/11/12 Y
0034-----	SD00062 integrated circuit 74HC04N U11			PCS	1.0000 1 0.00 %	2002/11/12 Y
0035-----	HI00008 raley RY-12W-K 12V RL1,RL2,RL3,RL4			PCS	4.0000 1 0.00 %	2002/11/12 Y
0036-----	HC00263 row-wire header 2P 2.5mm 90° J2			PCS	1.0000 1 0.00 %	2002/11/12 Y
0037-----	HC00065 row-wire header 2P 2.5mm 90° CN7			PCS	1.0000 1 0.00 %	2002/11/12 Y
0038-----	HC00080 row-wire header 6P 2.5mm 180° J1			PCS	1.0000 1 0.00 %	2002/11/12 Y
0039-----	HC00437 row-wire stock 6P 3.96mm 180° J7			PCS	1.0000 1 0.00 %	2002/11/12 Y
0040-----	HC00356 row-pin(double)#2200 2.54 180° 2*4P(gold-plated) 6/11.6mm J3,J4,J5			PCS	3.0000 1 0.00 %	2003/01/15 Y
0041-----	HC00219 DIN socket 5PIN(JY-5005) S10,S11,S9			PCS	3.0000 1 0.00 %	2002/11/12 Y
0042-----	HC00112 MIC jack for balance 99M-107SP-1-2 90° PUSH S1,S2			PCS	2.0000 1 0.00 %	2002/11/12 Y
0043-----	HC00111 MIC jack for balance 99M-108SP1 S3,S4,S5,S6			PCS	4.0000 1 0.00 %	2002/11/12 Y
0044-----	HC00339 connect terminal 6.5m/m (PCF250) JR1			PCS	1.0000 1 0.00 %	2002/11/12 Y
0056-----	HK03330 K-PC board P-BAL0216-DIP			PCS	4.0000 1 0.00 %	2002/12/25 Y
0001-----	HK03329 K-PC board P-BAL0216-SMD			PCS	1.0000 1 0.00 %	2002/11/12 Y

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Item No. PF00711 Version
 DESCRIPTION: ALTO DRIVE2.3 UNIT: PCS
 ALTO DRIVE2.3 ALTO_85-264V 歐規 CHINA Date: 2002/12/25

Version	Item No	Loss %	Ver.	Unit	Cardinal	Effective Date
Component Remark	Item Descri				Usage Rate	@:Phantom Layer Attrition Rate
0001-----	HB00705 PCB			PCS	1.0000 1	2002/11/12 Y
0002-----	BAL0216(1*20)_VER020505 C100051 SMDceramic capacitor0603 22PF/50V NPO ±5% C22,C24,C77			PCS	0.00 3.0000 1	% 2002/11/12 Y
0003-----	C100128 capacitor 0.1uF/25V Y5V +80,-20% C20,C21			PCS	2.0000 1	2002/11/12 Y
0004-----	RD00343 resistor 75 ±1% 0603 C92,C93			PCS	2.0000 1	2002/11/12 Y
0005-----	RD00214 SMDprecise resistor 1/10W 10.0K ±1% 0603 R28,R36,R37,R38,R39,R41			PCS	6.0000 1	2002/11/12 Y
0006-----	RD00344 resistor 11.5K ±1% 0603 R68,R69,R70,R72			PCS	4.0000 1	2002/11/12 Y
0007-----	RD00358 resistor 18.2K ±1% 0603 R12			PCS	1.0000 1	2002/11/12 Y
0008-----	RD00317 resistor 39.2K ±1% 0603 R20			PCS	1.0000 1	2002/11/12 Y
0009-----	SG00118 SMD integrated circuit MC33079DT(ST)MC33079D(ON) U3			PCS	1.0000 1	2002/11/12 Y
0002-----	CF00070 capacitor 0.0015uF/63V 2.5%(PFR5 152H63J11L4) C67			PCS	1.0000 1	2002/11/12 Y
0003-----	CB00037 electrotytic capacitor 47uF/16V 6.3*5 C43,C45			PCS	2.0000 1	2002/11/12 Y
0004-----	HC00406 row pin 2.54 90°9P 6/14mm 1.2mm CN1			PCS	1.0000 1	2002/11/12 Y
0057-----	HK02966 K-PC board P-MFB4*4PRO-DIP_AM/2DSP			PCS	1.0000 1	2002/12/25 Y
0001-----	HK02965 K-PC board P-MFB4*4PRO-SMD_2DSP			PCS	0.00 1.0000	% 2002/10/06 Y
0001-----	HB00627 PCB MFB4x4PRO(1*2)_VRB020412			PCS	1.0000 1	2002/10/06 N

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Item No. PF00711 Version
 DESCRIPTION: ALTO DRIVE2.3 UNIT: PCS
 ALTO DRIVE2.3 ALTO 85~264V 歐規 CHINA Date: 2002/12/25

Version	Item No	Loss %	Ver.	Unit	Cardinal Usage Rate	Effective Date
Component Remark	Item Descri				Attrition Rate	@:Phantom Layer
0002-----	RD00002 SMDfixed resistor 1/10W 0 ±5% 0805 R35, R37, R3, R50, R67, R72, R73			PCS	7.0000 1 0.00 %	2002/12/19 N
0003-----	RD00006 SMDfixed resistor 1/10W 100 ±5% 0805 R1, R111, R112, R135, R136, R141, R145, R147, R148, R149, R152, R153, R155, R156, R17, R2, R23, R24, R29, R30, R34, R36, R38, R39, R40, R41, R142, R43, R48, R49, R51, R52, R53, R54, R55, R56, R57, R60, R61, R62, R66, R68, R69, R78, R79, R80, R81, R82, R83, R86, R87, R90, R91, R92, R93			PCS	55.0000 1 0.00 %	2002/10/06 N
0004-----	RD00018 SMDfixed resistor 1/10W 1.0K ±5% 0805 R15, R16, R20, R22, R32, R5, R6			PCS	7.0000 1 0.00 %	2002/10/06 N
0005-----	RD00020 SMDfixed resistor 1/10W 1.5K ±5% 0805 R113			PCS	1.0000 1 0.00 %	2002/10/06 N
0006-----	RD00027 SMDfixed resistor 1/10W 4.7K ±5% 0805 R138, R139, R7, R70, R75, R8			PCS	6.0000 1 0.00 %	2002/10/06 N
0007-----	RD00032 SMDfixed resistor 1/10W 10K ±5% 0805 R12, R143, R144, R150, R33, R9			PCS	6.0000 1 0.00 %	2002/10/06 N
0008-----	RD00043 SMDfixed resistor 1/10W 39K ±5% 0805 R154			PCS	1.0000 1 0.00 %	2002/10/06 N
0009-----	RD00044 SMDfixed resistor 1/10W 47K ±5% 0805 R10, R11, R13, R14, R59, R65			PCS	6.0000 1 0.00 %	2002/10/06 N
0010-----	RD00052 SMDfixed resistor 1/10W 220K ±5% 0805 R25, R26, R27, R28, R42, R63			PCS	6.0000 1 0.00 %	2002/10/06 N
0011-----	RE00003 SMDrow resistor1/8W 100 *4 ±5% 8P YC-324 AR1, AR10, AR11, AR12, AR13, AR14, AR15, AR16, AR17, AR18, AR19, AR2, AR20, AR21, AR22, AR23, AR24, AR25, AR28, AR29, AR3, AR30, AR31, AR32, AR33, AR4, AR5, AR6, AR7, AR8, AR9			PCS	31.0000 1 0.00 %	2002/10/06 N
0012-----	RE00004 SMDrow resistor1/8W 100K *4 ±5% 8P YC-324 AR26, AR27			PCS	2.0000 1 0.00 %	2002/10/06 N
0013-----	CI00007 SMDceramic capacitor0805 22PF/50V NPO C1, C2			PCS	2.0000 1 0.00 %	2002/10/06 N

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 DESCRIPTION: ALTO DRIVE2.3 UNIT: PCS
 ALTO DRIVE2.3 ALTO 85~264V 歐規 CHINA Date: 2002/12/25

Version	Item No	Loss %	Ver.	Unit	Cardinal	Effective Date
Component Remark	Item Descri				Usage Rate @:Phantom Layer	Attrition Rate
0014-----	CI00019 SMDceramic capacitor0805 470PF/50V NPO ±5% C100,C101,C25,C26,C44,C45,C62,C63,C69,C70			PCS	10.0000 1 0.00 %	2002/10/06 N
0015-----	CI00029 SMDceramic capacitor0805 0.1uF/50V Y5V C13,C14,C15,C16,C17,C27,C28,C29,C3,C30,C35,C36,C37, C38,C41,C42,C43,C46,C47,C48,C49,C5,C50,C51,C52,C53, C54,C55,C56,C58,C59,C7,C73,C75,C76,C77,C79,C82,C83, C84,C88,C93,C97,C98,C99			PCS	45.0000 1 0.00 %	2002/10/06 N
0016-----	SE00011 SMD rectifier diode RLS4148 0.5A (LL-34) D1			PCS	1.0000 1 0.00 %	2002/10/06 N
0017-----	SG00067 SMD integrated circuit 74HC04DT U23,U8			PCS	2.0000 1 0.00 %	2002/10/06 N
0018-----	SG00073 SMD integrated circuit 74HC08DT U7			PCS	1.0000 1 0.00 %	2002/10/06 N
0019-----	SG00068 SMD integrated circuit 74HC14DT U15			PCS	1.0000 1 0.00 %	2002/10/06 N
0020-----	SG00074 SMD integrated circuit 74HC32DT U18			PCS	1.0000 1 0.00 %	2002/10/06 N
0021-----	SG00066 SMD integrated circuit 74HC74DT U10			PCS	1.0000 1 0.00 %	2002/10/06 N
0022-----	SG00132 integrated circuit 74HC138DT U9			PCS	1.0000 1 0.00 %	2002/10/06 N
0023-----	SG00093 SMD integrated circuit 74HC245DT U11,U12,U22			PCS	3.0000 1 0.00 %	2002/10/06 N
0024-----	SG00078 SMD integrated circuit SN74HC574DW U1,U13,U14,U19,U5			PCS	5.0000 1 0.00 %	2002/10/06 N
0025-----	SG00025 SMD integratd circuit 24LC64I/SN U34,U6			PCS	2.0000 1 0.00 %	2002/10/06 N
0026-----	SG00102 SMD integrated circuit BS62LV256SC-70 U20			PCS	1.0000 1 0.00 %	2002/10/06 N

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Item No. PF00711 Version
 DESCRIPTION: ALTO DRIVE2.3
 ALTO DRIVE2.3 ALTO 85~264V 歐規 CHINA

UNIT: PCS
 Date: 2002/12/25

Version	Item No	Loss %	Ver.	Unit	Cardinal	Effective Date
Component Remark	Item Descri				Usage Rate	@:Phantom Layer Attrition Rate
0027-----	SG00011 SMD integratd circuit PCM1716E U26,U31			PCS	2.0000 1 0.00 %	2002/10/06 N
0028-----	SG00010 SMD integratd circuit PCM1800E U27,U29			PCS	2.0000 1 0.00 %	2002/10/06 N
0029-----	SG00114 smd integrated circuit TMS57002DPHA U21,U3			PCS	2.0000 1 0.00 %	2002/10/06 N
0030-----	SG00115 smd integrated circuit MB81C4256A-60PJ U16,U17,U28,U30			PCS	4.0000 1 0.00 %	2002/10/06 N
0031-----	C000006 SMD inductor BLM21A102SPT L3,L4,L5,L6			PCS	4.0000 1 0.00 %	2002/10/06 N
0032-----	HC00227 ICjack (SMD) PLCC44 (D03-44T.A.4)			PCS	1.0000 1 0.00 %	2002/10/06 N
0002-----	RA00158 fixed resistor 1/4W 0 M type J1,J2,J3,J4			PCS	4.0000 1 0.00 %	2002/10/06 Y
0003-----	CB00009 electrolytic capacitor 1uF/50V 4*7 C4,C74			PCS	2.0000 1 0.00 %	2002/10/06 Y
0004-----	CB00024 electrotytic capacitor 10uF/16V 4*7 C18,C19,C20,C21,C22,C23,C24,C31,C32,C33,C34,C6,C60, C61,C64,C65,C66,C68,C78,C8,C80,C81,C85,C86,C87			PCS	25.0000 1 0.00 %	2002/10/06 Y
0005-----	CB00036 electrolytic capacitor 47uF/16V 6.3*7 C57			PCS	1.0000 1 0.00 %	2002/10/06 Y
0006-----	CB00053 electrolytic capacitor 100uF/16V 6.3*7 C67			PCS	1.0000 1 0.00 %	2002/10/06 Y
0007-----	SC00003 quartz crystalloid 12.000MHZ HC-49/US ±20PPM Y1			PCS	1.0000 1 0.00 %	2002/10/06 Y
0008-----	SA00053 L.E.D high intensity 3m/m round(red)long foot 26mm DL1,DL2,DL3,DL4			PCS	4.0000 1 0.00 %	2002/10/06 Y

Multi-Level BOM Structure Listing

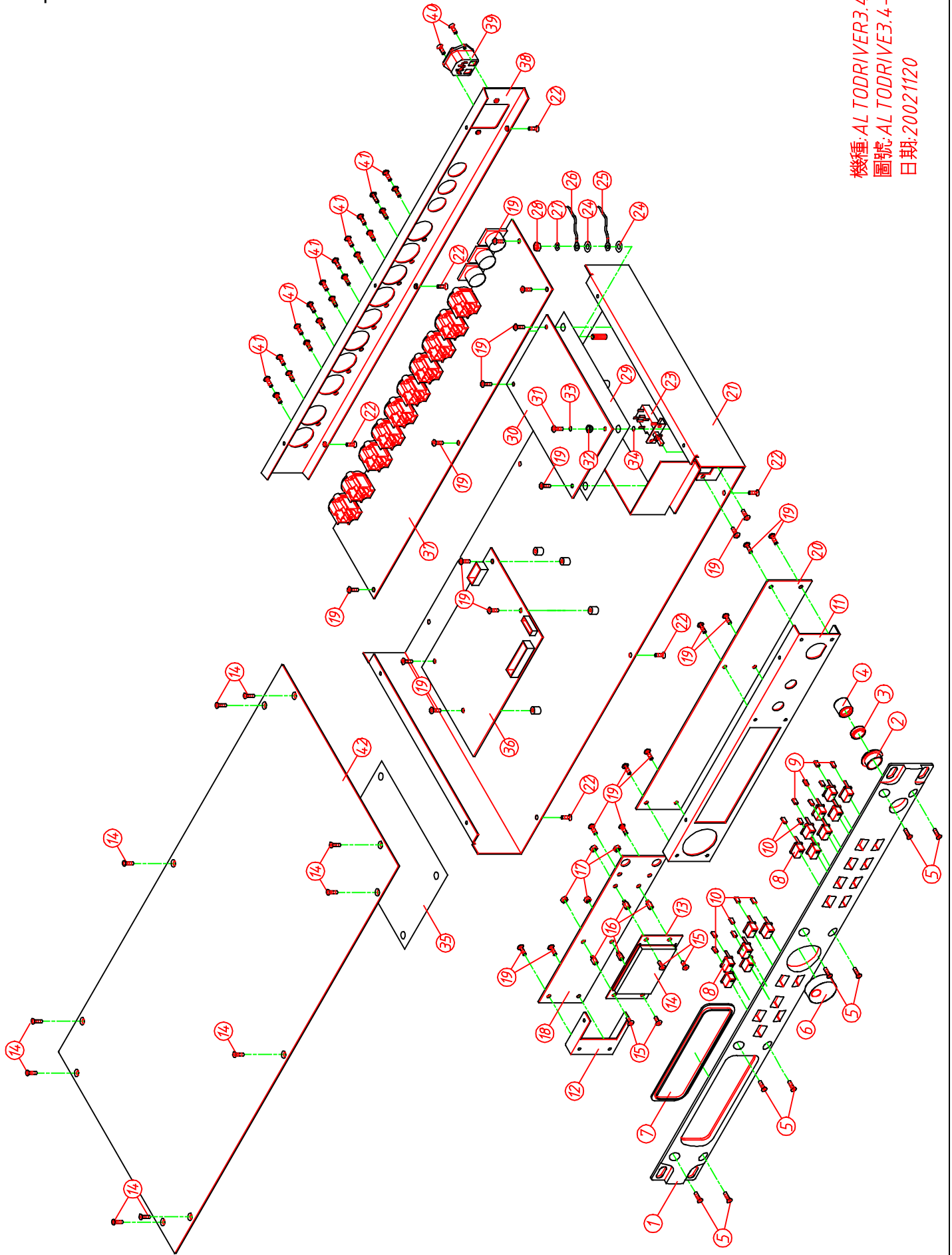
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 Prepared by 980029[廖芙蓉]

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Item No. PF00711 Version
 DESCRIPTION: ALTO DRIVE2.3 UNIT: PCS
 ALTO DRIVE2.3 ALTO 85-264V 歐規 CHINA Date: 2002/12/25

Version	Item No	Loss %	Ver.	Unit	Cardinal	Effective Date
Component Remark	Item Descri				Usage Rate	@:Phantom Layer Attrition Rate
0009-----	HC00356 row-pin(double)#2200 2.54 180° 2*4P(gold-plated) 6/11.6mm CN3,CN4,CN5			PCS	3.0000 1 0.00 %	2002/10/06 Y
0010-----	HC00154 row-pin(double)#2200 2.54 180° 2*10P(gold-plated) 6/11.6mm CN1			PCS	1.0000 1 0.00 %	2002/10/06 Y
0011-----	HC00080 row-wire header 6P 2.5mm 180° CN2			PCS	1.0000 1 0.00 %	2002/10/06 Y
0012-----	HC00359 row-pin(single)#1100 2.54 180° 4P(gold-plated) 6/11.6mm CN6			PCS	1.0000 1 0.00 %	2002/10/06 Y
0013-----	NI01779 LED spacer support LEDS-1 1mm			PCS	4.0000 1 0.00 %	2002/10/06 Y
0014-----	SG00125 integrated circuit P89C51RD2HBA			PCS	1.0000 1 0.00 %	2003/01/16
0015-----	NE10567 label ALTO DRIVE2.3-MI			PCS	1.0000 1 0.00 %	2003/01/16
0001-----	NH00035 bond paper 0.06*1M			M	1.0000 410 0.00 %	2003/02/16 N
0002-----	NI00017 membrane 0.055*1M			M	1.0000 410 0.00 %	2003/02/16 N
0058-----	NE05308 label ALTO DRIVE2.3			PCS	1.0000 1 0.00 %	2002/12/25 Y
0001-----	NH00012 bond paper 0.04*1M			M	1.0000 80 0.00 %	2002/12/21 N
0002-----	NI00014 membrane 0.035*1M			M	1.0000 80 0.00 %	2002/12/21 N
0059-----	NE02717 label MADE IN CHINA			PCS	2.0000 1 0.00 %	2002/12/25 Y
0001-----	NI00067 R-25#透明龍 cellophane paper			M	1.0000 700 0.00 %	2003/01/30 N
0002-----	NI00027 membrane 0.105*1M			M	1.0000 700 0.00 %	2003/01/30 N
0060-----	NF01200 instruction ALTO DRIVE2.3 ALTO			PCS	1.0000 1 0.00 %	2003/01/24
0001-----	NH00149 paper 889*640mm			張令	1.5000 1 0.00 %	2003/02/07 Y

8.Exploded Views



機種:AL TODRIVER3.4
圖號:AL TODRIVER3.4-00
日期:20021120