



**ADC 820T
ANALOG-TO-DIGITAL
CONVERTER
(B020000 and Up)**

INSTRUCTIONS

Tektronix, Inc.
P.O. Box 500
Beaverton, Oregon 97077

Serial Number _____

OEM WARRANTY
COMMUNICATIONS DIVISION
ADC 820T

The ADC 820T is warranted against defective materials and workmanship under normal use and service for a period of ninety days from date of initial shipment. Tektronix will repair or replace, at its option, those products determined to be defective within the warranty period and returned, freight prepaid, to Tektronix Factory Service, Delivery Station 93-186, P.O. Box 500, Beaverton, Oregon 97077.

Tektronix shall be under no obligation to furnish warranty service if:

- a. Attempts to repair or service the equipment are made by other than Tektronix personnel.
- b. Modifications are made by other than Tektronix personnel.

The foregoing warranty shall be enforceable only by the original buyer and not by the buyer's customer.

There is no implied warranty for fitness of purpose.

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ADC 820T

DESCRIPTION

The TEKTRONIX ADC 820T is an 8-bit, 20-MHz analog-to-digital converter, optimized for digital video processing and designed for the OEM market. The ADC 820T consists of a single 6" X 8" circuit board with a dual 40-contact edge connector with 0.1" spacing. No parts on the board project more than 1.125" above the board. The board is manufactured with and by UL-approved materials and processes. The ADC 820T is distinctive for its high speed, excellent resolution and accuracy, low power consumption, high reliability, and construction simplicity. Monotonicity¹ of the output word is guaranteed.

INTERFACE REQUIREMENTS

Signal Input Considerations

The dc-coupled, 75 Ω , analog signal input at pin 57 has a full scale dynamic range of 1.214 V p-p (170 IRE for video signals), centered around 0 V. To ensure monotonicity, resolution, and accuracy, standard video input signals must be externally dc-restored, so that sync tips are at -0.607 V, a -321 mV offset for NTSC or -307 mV for PAL systems.

A good 75- Ω impedance match will give at least -46 dB return loss over the video passband. A maximum ± 2 V signal can be tolerated at the input before damage will result.

Strobe (or Clock) Input Considerations

The strobe inputs at pins 37 and 38 are balanced ECL, with a maximum common mode of ± 1 V, and a frequency response up to 20 MHz. Pulldown resistors (100 Ω to -2 V) are provided onboard for each strobe input. Nominal input level to recognize a high state is -0.96 V. To recognize a low state, it is -1.66 V.

Output Capabilities

Parallel digital outputs, Bit 0 (LSB) through Bit 7 (MSB), are provided on pins 17, 15, 13, 11, 9, 7, 5, and 3 respectively. Each output is TTL-level compatible and capable of driving up to ten standard TTL loads. Two Data Available lines are available at pins 19 (Data Available B0-B3) and pin 21 (Data Available B4-B7). These outputs are also TTL-compatible and capable of driving ten standard TTL loads each. Each pulse is at least 20 ns wide. Refer to the following discussion for the timing of the data and output pulses with respect to the clocking signal.

¹Monotonicity, as used in this document, refers to the ability of the digital output to follow changes in the analog input signals, with no output polarity reversals.

Timing Relationships

The key timing reference t_n is the 50% point of the rising edge of the clocking pulse. The MSBs (Bits 4 through 7) are valid 30 ns after t_n and last until 15 ns after the next rising edge of the clock pulse (t_{n+1}). The LSBs (Bits 0 through 3) are valid 57 ns after t_n and last until 37 ns after t_{n+1} .

The leading edge of the Data Available B4-B7 pulse occurs 10 ns after t_n and lasts at least 20 ns. The Data Available B0-B3 pulse occurs 35 ns after t_n and lasts at least 20 ns. See Figure 1.

To avoid losing data at conversion rates above 15 MHz, both Data Available pulses, B0-B3 for the four LSB's and B4-B7 for the four MSB's, should be used to strobe the output data into external circuitry.

At conversion rates up to 15 MHz, Data Available B4-B7 will adequately strobe all eight bits into external circuitry. Both pulses together can be used at these slower rates as well.

Power Supply Requirements

The ADC 820T is designed to operate from commonly available analog and digital power supplies of +12 V, -12 V, +5 V, and -5.2 V. Power supply lines should be carefully decoupled and as noise-free as possible. Each power supply is named for its nominal value, with the tolerable limits and current delivery capabilities called out in the specifications table. No more than 7 watts of power are required to run the ADC 820T.

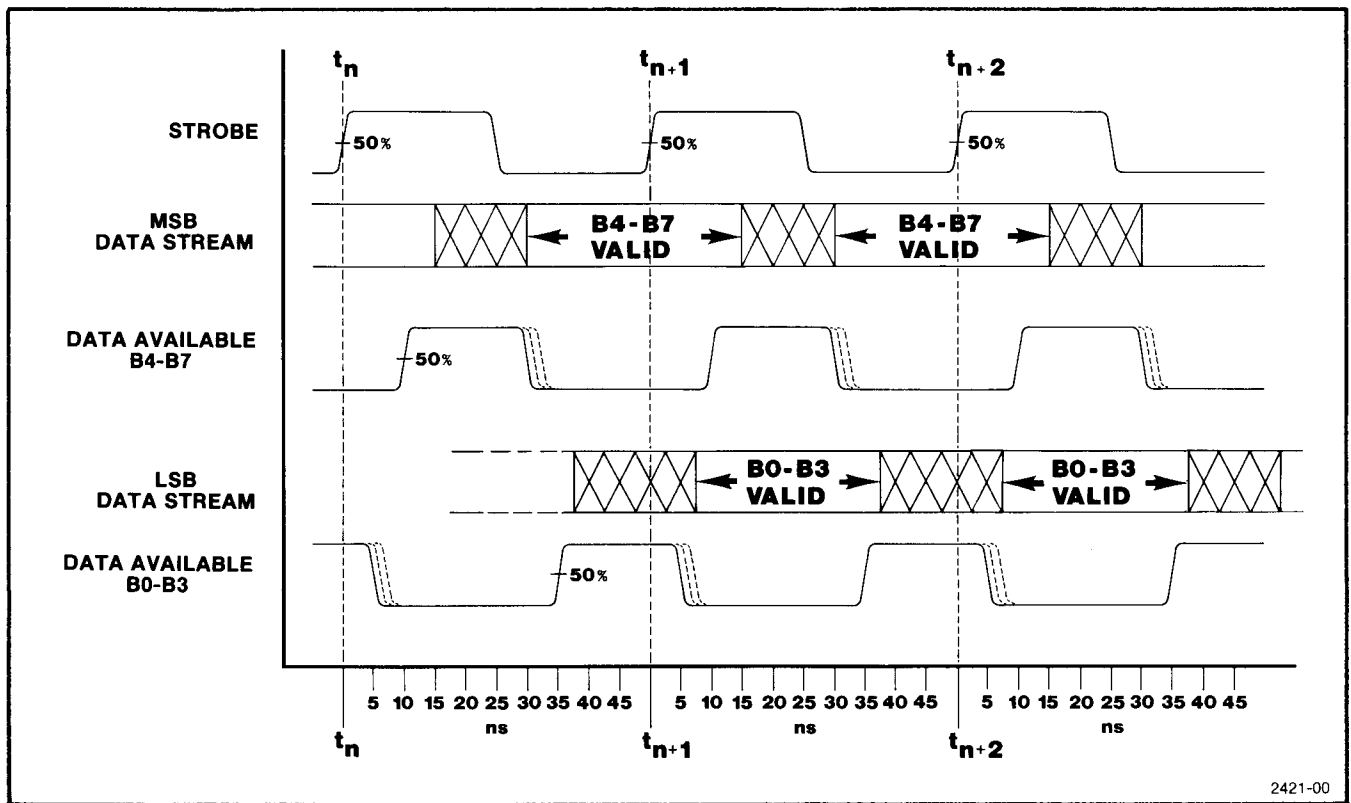


Fig. 1. ADC 820T Timing Diagrams at maximum conversion rate of 20 MHz.

INSTALLATION

System-Matching Electrical Adjustments

Differences between factory and user power supply and strobe characteristics may produce slight performance changes. Optimum results may be obtained by performing the following adjustments:

- Step 1: Install the ADC 820T in its normal operating situation.
- Step 2: Connect the outputs of the ADC 820T to a highly-accurate digital-to-analog converter, such as the TEKTRONIX DAC 850T. Monitor the DAC output with a wide-band oscilloscope, such as a Tektronix 7603 with appropriate vertical amplifier and time base unit plug-ins.
- Step 3: Apply a sawtooth or triangular waveform of approximately 1 V peak-to-peak amplitude and between 1 kHz and 100 kHz to the ADC 820T input. (For video applications, a linearity test signal without subcarrier modulation may be used.)
- Step 4: Adjust Bias control R316 (labeled "B" on the circuit board; also, refer to Figure 3, the Parts Location Illustration) for minimum aberrations in the most negative portions of the waveform.
- Step 5: Adjust Offset control R324 (labeled "O") and Span control R317 (labeled "S") for minimum aberrations in the overall waveform.
- Step 6: Repeat Steps 4 and 5 until no further improvement is realized.

Thermal Considerations

The ADC 820T will operate within its stated specification when the ambient air temperatures around it are between 0° and 60°C. Convection air flow, temperature rise effects of the physical board orientation, and relationship to other system components should be considered when locating the board within an OEM enclosure.

Physical Orientation

Optimum convection flow and heat relief is achieved with the circuit board edge-mounted such that pin 1 of the edge connector is always at the top. The worst mounting position would be flat, with the component side down.

ADC 820T (B020000 & up)

Mechanical Outline

See Figure 2 for the maximum outside dimensions. Note that the dual-40 edge connector has a keying slot between pins 23, 24 and 25, 26. Components have been kept back from the sides of the board to allow mounting when using card guides.

SERVICE

Please review the warranty in force at the time of purchase. For repair and recalibration, end users should return the ADC 820T to the OEM who supplied their equipment. If the OEM requests service from Tektronix on out-of-warranty products, he will be charged for labor and material at our existing rates. Since the product is a component of a system, the Tektronix product must be isolated from the system by the OEM. End users who purchase directly from Tektronix should return the ADC 820T directly to Factory Service in Beaverton, Oregon 97077.

Connectors

The following connectors will mate satisfactorily with the ADC 820T dual-40, 0.100"-spacing, edge connector:

Style	Vendor	Tektronix Part Number
0.025" Square Pins	Contenintal Connector Corporation, K600-100-80WB	131-0626-00
Pierced Tabs	Viking, 3VH40/1JN5	131-1856-00
Zero Insertion Force (with square pins)	AMP 1-530801-3 (3/16" leads)	none

This list is by no means exhaustive. Examination of connector manufacturer's catalogs may show other compatible connectors.

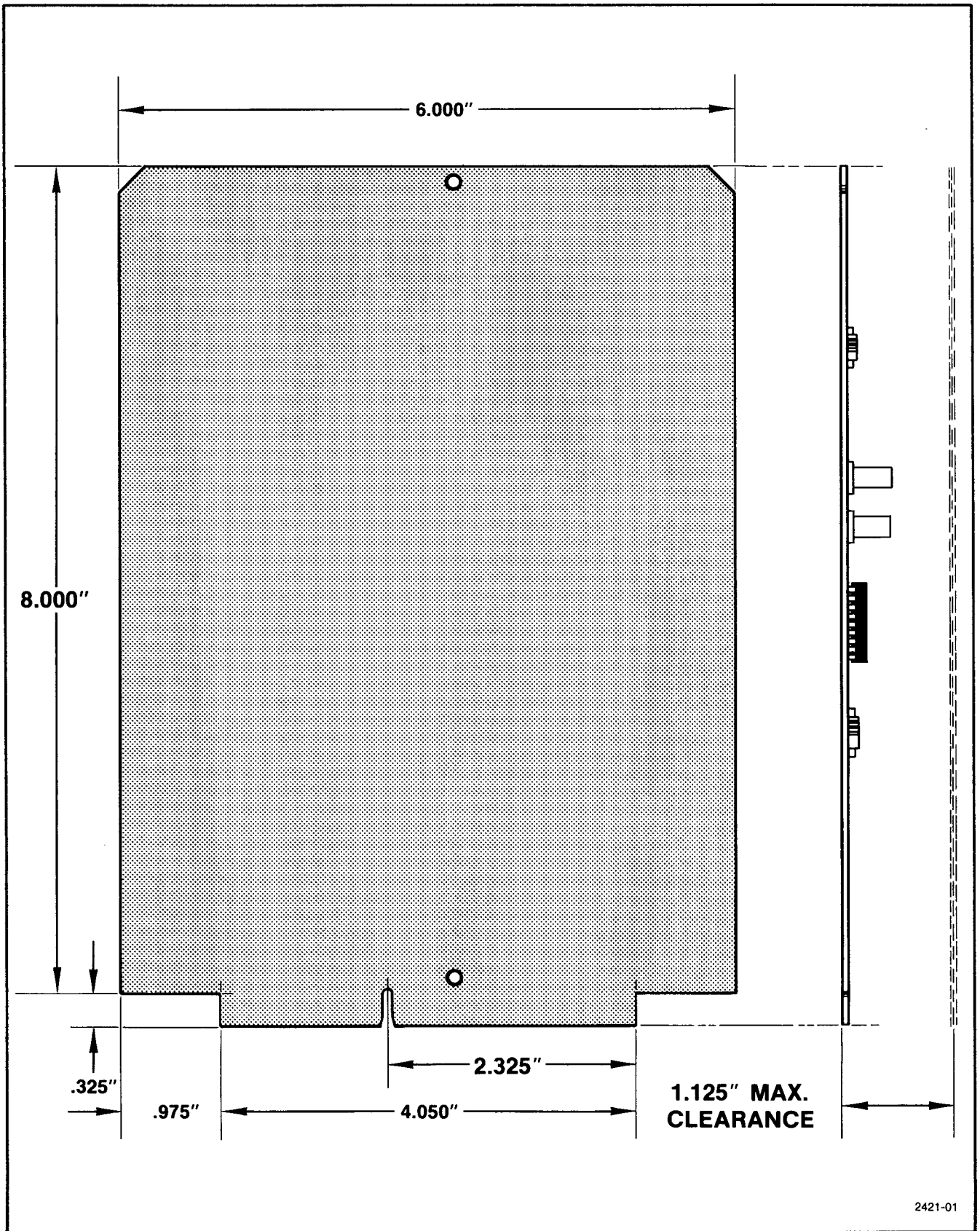
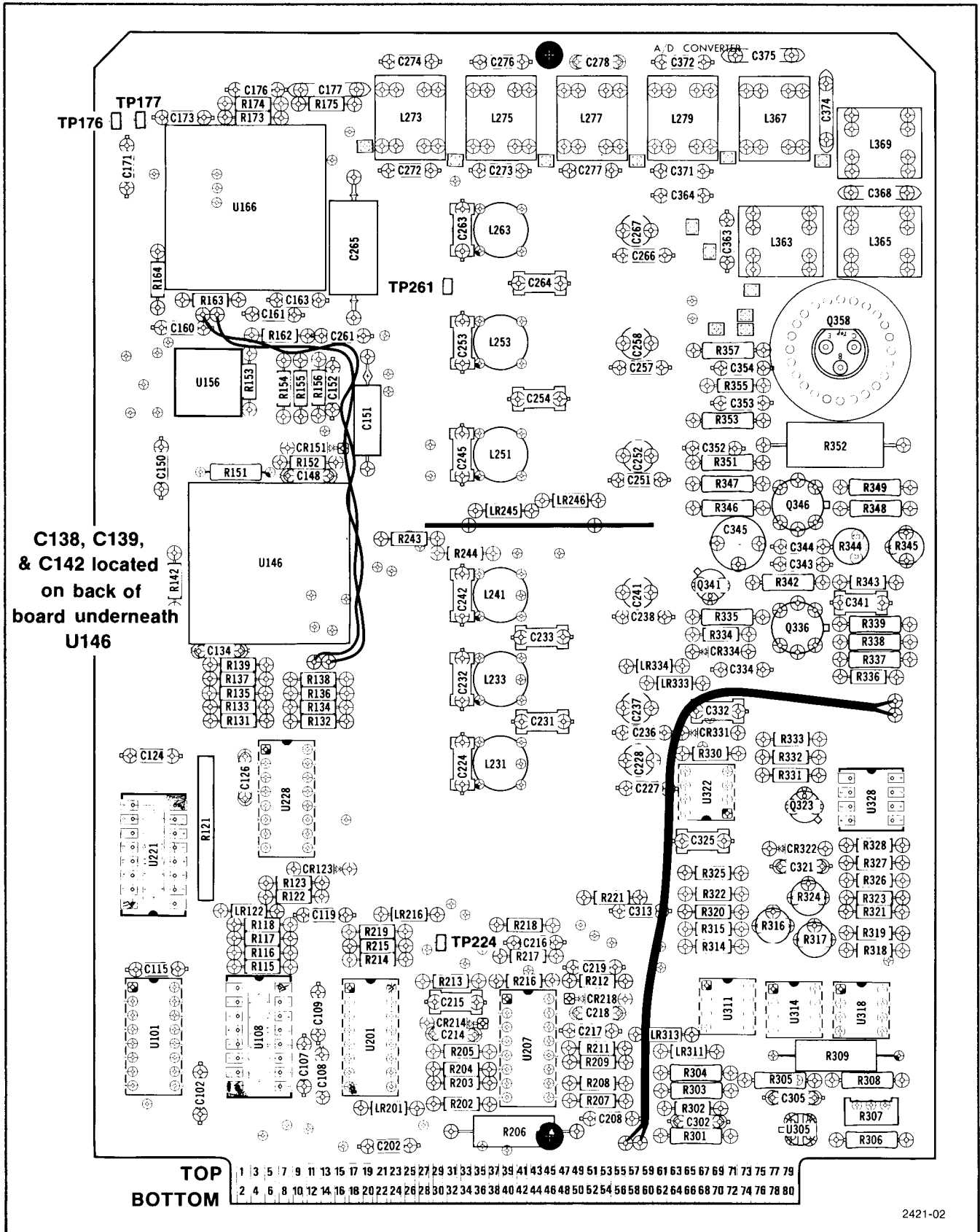


Fig. 2. Circuit Board maximum dimensions.



2421-02

Fig. 3. Part location illustration.

CONNECTOR PIN ASSIGNMENTS

(All odd pin numbers are on the component side of the board. All even numbers are on the opposite side.)

Function	(Top-Side) (Bottom-Side)		Function
	Pin	Pin	
NC	1	2	NC
Bit 7	3	4	Digital Ground
Bit 6	5	6	Digital Ground
Bit 5	7	8	Digital Ground
Bit 4	9	10	Digital Ground
Bit 3	11	12	Digital Ground
Bit 2	13	14	Digital Ground
Bit 1	15	16	Digital Ground
Bit 0	17	18	Digital Ground
Data Available B0-B3	19	20	Digital Ground
Data Available B4-B7	21	22	Digital Ground
NC	23	24	NC
NC	25	26	NC
NC	27	28	NC
Digital Ground	29	30	NC
NC	31	32	NC
NC	33	34	NC
NC	35	36	NC
Strobe	37	38	<u>Strobe</u>
NC	39	40	NC
+5 V	41	42	NC
NC	43	44	NC
NC	45	46	NC
NC	47	48	NC
NC	49	50	NC
NC	51	52	-5.2 V
NC	53	54	NC
NC	55	56	NC
Signal Input	57	58	Signal Input Ground
NC	59	60	NC
NC	61	62	NC
NC	63	64	NC
NC	65	66	+12 V
NC	67	68	NC
NC	69	70	-12 V
NC	71	72	NC
NC	73	74	Analog Ground
NC	75	76	NC
NC	77	78	NC
NC	79	80	NC

SPECIFICATIONS

Characteristic	Performance Requirement
Resolution	8 Bits (0.4%)
Accuracy	Referred to a straight line through cutpoints 15 and 239. (Cutpoint n is defined as the voltage at which it is equally probable that the output word will be $\leq n$ or $\geq n + 1$).
RMS	± 0.25 LSB ($\pm 0.1\%$).
Peak	± 0.5 LSB ($\pm 0.2\%$).
Conversion Rate	20 MHz maximum.
Monotonicity	All 256 codes present and in sequence with no polarity reversals.
Non-Linear Distortions	Measured at 20 MHz with a 40 IRE subcarrier Linearity signal on a TEKTRONIX 520A Vectorscope.
Maximum Differential Gain	1.0%
Maximum Differential Phase	0.5°
Frequency Response	
Amplitude	
0 to 5.2 MHz	0 dB ± 0.25 dB.
7.16 MHz ($2f_{scNTSC}$)	-46 dB or less.
8.86 MHz ($2f_{scPAL}$)	-46 dB or less.
10 MHz and above	-40 dB or less.
Delay	Constant, ± 10 ns, from 0 to 5.2 MHz.

SPECIFICATIONS (cont)

INTERFACE REQUIREMENTS

Characteristic	Performance Requirement
Inputs	
Signal Input	
Full Scale Range	1.214 V p-p (170 IRE p-p) (± 0.607 V).
0 count	-0.607 V (for standard video signals, the sync tip should be dc restored to -0.607 V, a -321 mV offset for NTSC or -307 mV for PAL).
255 count	$+0.607$ V.
Damage Level	± 2 V Max.
Coupling	Dc coupled.
Impedance	75 Ω .
Return Loss	At least -46 dB from 0 to 5 MHz.
Strobe Input	
Frequency	20 MHz or less.
Duty Cycle	0.4 to 0.6.
Characteristics	Balanced ECL, ± 1 V maximum common mode. Onboard pulldowns (100 Ω to -2 V) are provided for each line.
Outputs	
Digital Output Characteristics	
Format	Parallel 8 Bit Straight Binary.
Logic Level	TTL compatible High = 2.4 to 5 V; Low = 0 to 0.4 V.
Drive	Up to 10 Standard TTL loads.

SPECIFICATIONS (cont)

INTERFACE REQUIREMENTS (cont)

Characteristic	Performance Requirement
Timing	t_n is the rising edge of the clock pulse.
MSBs (B4-B7)	Valid from $t_n + 30$ ns to $t_{n+1} + 15$ ns.
LSBs (B0-B3)	Valid from $t_n + 57$ ns to $t_{n+1} + 37$ ns.
Data Available	Note: For conversion rates up to 15 MHz, the leading edge of Data Available B4-B7 should be used to strobe all eight data bits into external circuitry. For conversion rates above 15 MHz, Data Available B0-B3 is recommended for strobing the four LSBs, and the Data Available B4-B7 is recommended for strobing the four MSBs into external circuitry.
Format	Two pulses (B0-B3 and B4-B7).
Timing	
B4-B7	Leading edge occurs at $t_n + 10$ ns.
B0-B3	Leading edge occurs at $t_n + 35$ ns.
Pulse Width	At least 20 ns.
Logic Level	TTL Compatible High is 2.4 V to 5 V; Low is 0 V to 0.4 V.
Drive	Up to 10 standard TTL loads.

SPECIFICATIONS (cont)**POWER SUPPLY REQUIREMENTS**

Characteristic	Performance Requirement
+12 V	+12 V \pm 1.5% (11.82 V to 12.18 V) at 100 mA. (Can be 100 mA higher during the first 5 seconds after turn on.)
-12 V	-12 V \pm 1.5% (-11.82 V to -12.18 V) at 120 mA. (Can be 100 mA higher during the first 5 seconds after turn on.)
+5 V	+5 V \pm 5% (4.75 V to 5.25 V) at 400 mA.
-5.2 V	-5.2 V \pm 4% (-5 V to -5.4 V) at 500 mA.
Power	7 watts or less.

PHYSICAL

Size	6" X 8" X 1".
Connector	Dual-40 contact card edge, with 0.1" spacing.

ENVIRONMENTAL

Temperature Range	0° to 60° C.
Warm-up time	At least 20 minutes.

REPLACEABLE ELECTRICAL PARTS

PARTS ORDERING INFORMATION

Replacement parts are available from or through your local Tektronix, Inc. Field Office or representative.

Changes to Tektronix instruments are sometimes made to accommodate improved components as they become available, and to give you the benefit of the latest circuit improvements developed in our engineering department. It is therefore important, when ordering parts, to include the following information in your order: Part number, instrument type or number, serial number, and modification number if applicable.

If a part you have ordered has been replaced with a new or improved part, your local Tektronix, Inc. Field Office or representative will contact you concerning any change in part number.

Change information, if any, is located at the rear of this manual.

SPECIAL NOTES AND SYMBOLS

X000 Part first added at this serial number
00X Part removed after this serial number

ITEM NAME

In the Parts List, an Item Name is separated from the description by a colon (:). Because of space limitations, an Item Name may sometimes appear as incomplete. For further Item Name identification, the U.S. Federal Cataloging Handbook H6-1 can be utilized where possible.

ABBREVIATIONS

ACTR	ACTUATOR	PLSTC	PLASTIC
ASSY	ASSEMBLY	QTZ	QUARTZ
CAP	CAPACITOR	RECP	RECEPTACLE
CER	CERAMIC	RES	RESISTOR
CKT	CIRCUIT	RF	RADIO FREQUENCY
COMP	COMPOSITION	SEL	SELECTED
CONN	CONNECTOR	SEMICON	SEMICONDUCTOR
ELCTLT	ELECTROLYTIC	SENS	SENSITIVE
ELEC	ELECTRICAL	VAR	VARIABLE
INCAND	INCANDESCENT	WW	WIREWOUND
LED	LIGHT EMITTING DIODE	XFMR	TRANSFORMER
NONWIR	NON WIREWOUND	XTAL	CRYSTAL

CROSS INDEX—MFR. CODE NUMBER TO MANUFACTURER

Mfr. Code	Manufacturer	Address	City, State, Zip
00853	SANGAMO ELECTRIC CO., S. CAROLINA DIV.	P O BOX 128	PICKENS, SC 29671
01121	ALLEN-BRADLEY COMPANY	1201 2ND STREET SOUTH	MILWAUKEE, WI 53204
07910	TELEDYNE SEMICONDUCTOR	12515 CHADRON AVE.	HAWTHORNE, CA 90250
16546	U.S. CAPACITOR CORP/CENTRALAB ELECTRONICS DIV.	4561 COLORADO	LOS ANGELES, CA 90039
28480	HEWLETT-PACKARD CO., CORPORATE HQ.	1501 PAGE MILL RD.	PALO ALTO, CA 94304
32997	BOURNS, INC., TRIMPOT PRODUCTS DIV.	1200 COLUMBIA AVE.	RIVERSIDE, CA 92507
56289	SPRAGUE ELECTRIC CO.		NORTH ADAMS, MA 01247
72982	ERIE TECHNOLOGICAL PRODUCTS, INC.	644 W. 12TH ST.	ERIE, PA 16512
73138	BECKMAN INSTRUMENTS, INC., HELIPOT DIV.	2500 HARBOR BLVD.	FULLERTON, CA 92634
80009	TEKTRONIX, INC.	P O BOX 500	BEAVERTON, OR 97077
80031	ELECTRA-MIDLAND CORP., MEPCO DIV.	22 COLUMBIA ROAD	MORRISTOWN, NJ 07960
90201	MALLORY CAPACITOR CO., DIV. OF P. R. MALLORY AND CO., INC.	3029 E WASHINGTON STREET P O BOX 372	INDIANAPOLIS, IN 46206
91637	DALE ELECTRONICS, INC.	P. O. BOX 609	COLUMBUS, NE 68601

Replaceable Electrical Parts—ADC 820T (SN B020000 & up)

Ckt No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
A3	670-5274-00			CKT BOARD ASSY:A/D CONVERTER	80009	670-5274-00
C102	283-0198-00			CAP., FXD, CER DI:0.22UF, 20%, 50V	72982	8131N075 E224M
C107	283-0198-00			CAP., FXD, CER DI:0.22UF, 20%, 50V	72982	8131N075 E224M
C108	283-0198-00			CAP., FXD, CER DI:0.22UF, 20%, 50V	72982	8131N075 E224M
C109	283-0198-00			CAP., FXD, CER DI:0.22UF, 20%, 50V	72982	8131N075 E224M
C115	283-0198-00			CAP., FXD, CER DI:0.22UF, 20%, 50V	72982	8131N075 E224M
C119	283-0198-00			CAP., FXD, CER DI:0.22UF, 20%, 50V	72982	8131N075 E224M
C124	283-0198-00			CAP., FXD, CER DI:0.22UF, 20%, 50V	72982	8131N075 E224M
C126	283-0649-00			CAP., FXD, MICA D:105PF, 1%, 300V	00853	D153F1050FO
C134	283-0198-00			CAP., FXD, CER DI:0.22UF, 20%, 50V	72982	8131N075 E224M
C138	283-0353-00			CAP., FXD, CER DI:0.1UF, 10%, 50V	16546	W050FH104KPSS
C139	283-0353-00			CAP., FXD, CER DI:0.1UF, 10%, 50V	16546	W050FH104KPSS
C142	283-0353-00			CAP., FXD, CER DI:0.1UF, 10%, 50V	16546	W050FH104KPSS
C148	283-0198-00			CAP., FXD, CER DI:0.22UF, 20%, 50V	72982	8131N075 E224M
C150	283-0198-00			CAP., FXD, CER DI:0.22UF, 20%, 50V	72982	8131N075 E224M
C151	290-0134-00			CAP., FXD, ELCTLT:22UF, 20%, 15V	56289	150D226X0015B2
C152	283-0000-00			CAP., FXD, CER DI:0.001UF, +100-0%, 500V	72982	831-516E102P
C160	283-0198-00			CAP., FXD, CER DI:0.22UF, 20%, 50V	72982	8131N075 E224M
C161	283-0198-00			CAP., FXD, CER DI:0.22UF, 20%, 50V	72982	8131N075 E224M
C163	283-0198-00			CAP., FXD, CER DI:0.22UF, 20%, 50V	72982	8131N075 E224M
C171	283-0198-00			CAP., FXD, CER DI:0.22UF, 20%, 50V	72982	8131N075 E224M
C173	283-0198-00			CAP., FXD, CER DI:0.22UF, 20%, 50V	72982	8131N075 E224M
C176	283-0665-00			CAP., FXD, MICA D:190PF, 1%, 100V	00853	D151F191FO
C177	283-0659-00			CAP., FXD, MICA D:1160PF, 2%, 500V	00853	D195C1161G0
C202	283-0198-00			CAP., FXD, CER DI:0.22UF, 20%, 50V	72982	8131N075 E224M
C208	283-0198-00			CAP., FXD, CER DI:0.22UF, 20%, 50V	72982	8131N075 E224M
C214	283-0635-00			CAP., FXD, MICA D:51PF, 1%, 100V	00853	D151E510FO
C215	281-0508-00			CAP., FXD, CER DI:12PF, +/-0.6PF, 500V	72982	301-000COG0120J
C216	283-0004-00			CAP., FXD, CER DI:0.02UF, +80-20%, 150V	72982	855-558-Z5V0203Z
C217	283-0198-00			CAP., FXD, CER DI:0.22UF, 20%, 50V	72982	8131N075 E224M
C218	283-0649-00			CAP., FXD, MICA D:105PF, 1%, 300V	00853	D153F1050FO
C219	283-0198-00			CAP., FXD, CER DI:0.22UF, 20%, 50V	72982	8131N075 E224M
C224	281-0529-00			CAP., FXD, CER DI:1.5PF, +/-0.25PF, 500V	72982	301-000COK0159C
C227	283-0632-00			CAP., FXD, MICA D:87PF, 1%, 100V	00853	D151E870FO
C228	281-0122-00			CAP., VAR, CER DI:2.5-9PF, 100V	72982	518-000A2.5-9
C231	281-0622-00			CAP., FXD, CER DI:47PF, 1%, 500V	72982	308-000COG0470F
C232	281-0529-00			CAP., FXD, CER DI:1.5PF, +/-0.25PF, 500V	72982	301-000COK0159C
C233	281-0622-00			CAP., FXD, CER DI:47PF, 1%, 500V	72982	308-000COG0470F
C236	283-0632-00			CAP., FXD, MICA D:87PF, 1%, 100V	00853	D151E870FO
C237	281-0122-00			CAP., VAR, CER DI:2.5-9PF, 100V	72982	518-000A2.5-9
C238	283-0632-00			CAP., FXD, MICA D:87PF, 1%, 100V	00853	D151E870FO
C241	281-0122-00			CAP., VAR, CER DI:2.5-9PF, 100V	72982	518-000A2.5-9
C242	281-0529-00			CAP., FXD, CER DI:1.5PF, +/-0.25PF, 500V	72982	301-000COK0159C
C245	281-0529-00			CAP., FXD, CER DI:1.5PF, +/-0.25PF, 500V	72982	301-000COK0159C
C251	283-0633-00			CAP., FXD, MICA D:77PF, 1%, 100V	00853	D151E770FO
C252	281-0122-00			CAP., VAR, CER DI:2.5-9PF, 100V	72982	518-000A2.5-9
C253	281-0529-00			CAP., FXD, CER DI:1.5PF, +/-0.25PF, 500V	72982	301-000COK0159C
C254	281-0632-00			CAP., FXD, CER DI:35PF, 1%, 500V	72982	308-000COG0350F
C257	283-0633-00			CAP., FXD, MICA D:77PF, 1%, 100V	00853	D151E770FO
C258	281-0122-00			CAP., VAR, CER DI:2.5-9PF, 100V	72982	518-000A2.5-9
C261	283-0198-00			CAP., FXD, CER DI:0.22UF, 20%, 50V	72982	8131N075 E224M
C263	281-0529-00			CAP., FXD, CER DI:1.5PF, +/-0.25PF, 500V	72982	301-000COK0159C
C264	281-0632-00			CAP., FXD, CER DI:35PF, 1%, 500V	72982	308-000COG0350F
C265	290-0539-00			CAP., FXD, ELCTLT:47UF, 20%, 20V	90201	THF476M020P1F

(SN B020000 & up) Replaceable Electrical Parts—ADC 820T

Ckt No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
C266	283-0633-00			CAP.,FXD,MICA D:77PF,1%,100V	00853	D151E770FO
C267	281-0122-00			CAP.,VAR,CER DI:2.5-9PF,100V	72982	518-000A2.5-9
C272	283-0771-00			CAP.,FXD,MICA D:334PF,1%,500V	00853	D15-5F3340FO
C273	283-0768-00			CAP.,FXD,MICA D:132PF,1%,500V	00853	D15-5F1320FO
C274	283-0767-00			CAP.,FXD,MICA DI:107PF,1%,500V	00853	D15-5F1070FO
C276	283-0772-00			CAP.,FXD,MICA D:497PF,1%,500V	00853	D15-5F4970FO
C277	283-0766-00			CAP.,FXD,MICA D:47PF,1%,500V	00853	D15-5F470FO
C278	283-0773-00			CAP.,FXD,MICA D:578PF,1%,300V	00853	D15-3F5780FO
C302	283-0059-00			CAP.,FXD,CER DI:1UF,+80-20%,25V	72982	8141N038E105Z
C305	283-0059-00			CAP.,FXD,CER DI:1UF,+80-20%,25V	72982	8141N038E105Z
C313	283-0000-00			CAP.,FXD,CER DI:0.001UF,+100-0%,500V	72982	831-516E102P
C321	283-0059-00			CAP.,FXD,CER DI:1UF,+80-20%,25V	72982	8141N038E105Z
C325	281-0622-00			CAP.,FXD,CER DI:47PF,1%,500V	72982	308-000COG0470F
C332	281-0622-00			CAP.,FXD,CER DI:47PF,1%,500V	72982	308-000COG0470F
C334	283-0198-00			CAP.,FXD,CER DI:0.22UF,20%,50V	72982	8131N075 E224M
C341	281-0508-00			CAP.,FXD,CER DI:12PF,+/-0.6PF,500V	72982	301-000COG0120J
C343	283-0648-00			CAP.,FXD,MICA D:10PF,5%,100V	00853	D151C100DC
C344	283-0648-00			CAP.,FXD,MICA D:10PF,5%,100V	00853	D151C100DC
C345	281-0204-00			CAP.,VAR,PLSTC:2-22PF,100V	80031	C010EA-20E
C352	283-0177-00	XB020140		CAP.,FXD,CER DI:1UF,+80-20%,25V	72982	8131N039 E 105Z
C353	283-0648-00			CAP.,FXD,MICA D:10PF,5%,100V	00853	D151C100DC
C354	283-0177-00	XB020140		CAP.,FXD,CER DI:1UF,+80-20%,25V	72982	8131N039 E 105Z
C363	283-0770-00			CAP.,FXD,MICA D:300PF,1%,500V	00853	D15-5F301FO
C364	283-0774-00			CAP.,FXD,MICA D:639PF,1%,300V	00853	D15-3F6390FO
C368	283-0776-00			CAP.,FXD,MICA D:2130PF,1%,500V	00853	D19-5F2131FO
C371	283-0774-00			CAP.,FXD,MICA D:639PF,1%,300V	00853	D15-3F6390FO
C372	283-0769-00			CAP.,FXD MICA D:278PF,1%,500V	00853	D15-5F2780FO
C374	283-0777-00			CAP.,FXD MICA D:2275PF,1%,500V	00853	D19-5F2275FO
C375	283-0775-00			CAP.,FXD,MICA D:1764 PF,1%,500V	00853	D19-5F17640FO
CR123	152-0322-00			SEMICONV DEVICE:SILICON,15V,HOT CARRIER	28480	5082-2672
CR151	152-0141-02			SEMICONV DEVICE:SILICON,30V,150MA	07910	1N4152
CR214	152-0322-00			SEMICONV DEVICE:SILICON,15V,HOT CARRIER	28480	5082-2672
CR218	152-0322-00			SEMICONV DEVICE:SILICON,15V,HOT CARRIER	28480	5082-2672
CR322	152-0141-02			SEMICONV DEVICE:SILICON,30V,150MA	07910	1N4152
CR331	152-0141-02			SEMICONV DEVICE:SILICON,30V,150MA	07910	1N4152
CR334	152-0141-02			SEMICONV DEVICE:SILICON,30V,150MA	07910	1N4152
L231	120-1135-00			XFMR,RF:MUTUAL INDUCTANCE	80009	120-1135-00
L233	120-1135-00			XFMR,RF:MUTUAL INDUCTANCE	80009	120-1135-00
L241	120-1135-00			XFMR,RF:MUTUAL INDUCTANCE	80009	120-1135-00
L251	120-1135-00			XFMR,RF:MUTUAL INDUCTANCE	80009	120-1135-00
L253	120-1135-00			XFMR,RF:MUTUAL INDUCTANCE	80009	120-1135-00
L263	120-1135-00			XFMR,RF:MUTUAL INDUCTANCE	80009	120-1135-00
L273	114-0346-00			COIL,RF:VARIABLE,1.42 TO 1.69 MH	80009	114-0346-00
L275	114-0347-00			COIL,RF:VARIABLE,2.47 TO 3.08 MH	80009	114-0347-00
L277	114-0347-00			COIL,RF:VARIABLE,2.47 TO 3.08 MH	80009	114-0347-00
L279	114-0345-00			COIL,RF:VARIABLE,3.89 TO 4.75 MH	80009	114-0345-00
L363	120-1136-00			XFMR,RF:VARIABLE,FILTER,POT CORE	80009	120-1136-00
L365	114-0348-00			COIL,RF:VARIABLE,1.37 TO 1.71 MH	80009	114-0348-00
L367	114-0344-00			COIL,RF:VARIABLE,1.68 TO 2.09 MH	80009	114-0344-00
L369	120-1137-00			XFMR,RF:VARIABLE,FILTER,POT CORE	80009	120-1137-00

Replaceable Electrical Parts—ADC 820T (SN B020000 & up)

Ckt No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
LR122	108-0543-00			COIL,RF:1.1UH	80009	108-0543-00
LR201	108-0543-00			COIL,RF:1.1UH	80009	108-0543-00
LR216	108-0543-00			COIL,RF:1.1UH/47UH	80009	108-0543-00
LR245	108-0543-00			COIL,RF:1.1UH/47UH	80009	108-0543-00
LR246	108-0328-00	XB020140		COIL,RF:0.3UH	80009	108-0328-00
LR311	108-0543-00			COIL,RF:1.1UH/47UH	80009	108-0543-00
LR313	108-0543-00			COIL,RF:1.1UH/47UH	80009	108-0543-00
LR333	108-0328-00	XB020140		COIL,RF:0.3UH	80009	108-0328-00
LR334	108-0543-00			COIL,RF:1.1UH/47UH	80009	108-0543-00
Q323	151-0459-01			TRANSISTOR:2N3251,SELECTED	80009	151-0459-01
Q336	151-0354-01			TRANSISTOR:SILICON,PNP,SEL	80009	151-0354-01
Q341	151-0301-02			TRANSISTOR:SILICON,PNP	80009	151-0301-02
Q346	151-0309-01			TRANSISTOR:SILICON,NPN,SEL	80009	151-0309-01
Q358	151-0103-02			TRANSISTOR:SILICON,NPN,SEL	80009	151-0103-02
R115	315-0151-00			RES.,FXD,CMPSN:150 OHM,5%,0.25W	01121	CB1515
R116	315-0151-00			RES.,FXD,CMPSN:150 OHM,5%,0.25W	01121	CB1515
R117	315-0151-00			RES.,FXD,CMPSN:150 OHM,5%,0.25W	01121	CB1515
R118	315-0151-00			RES.,FXD,CMPSN:150 OHM,5%,0.25W	01121	CB1515
R121	307-0503-00			RES.,NTWK,THK FI:(9)510 OHM,20%,0.125W	91637	CSP10E01511M
R122	315-0221-00			RES.,FXD,CMPSN:220 OHM,5%,0.25W	01121	CB2215
R123	315-0750-00			RES.,FXD,CMPSN:75 OHM,5%,0.25W	01121	CB7505
R131	315-0221-00			RES.,FXD,CMPSN:220 OHM,5%,0.25W	01121	CB2215
R132	315-0221-00			RES.,FXD,CMPSN:220 OHM,5%,0.25W	01121	CB2215
R133	315-0221-00			RES.,FXD,CMPSN:220 OHM,5%,0.25W	01121	CB2215
R134	315-0221-00			RES.,FXD,CMPSN:220 OHM,5%,0.25W	01121	CB2215
R135	315-0221-00			RES.,FXD,CMPSN:220 OHM,5%,0.25W	01121	CB2215
R136	315-0221-00			RES.,FXD,CMPSN:220 OHM,5%,0.25W	01121	CB2215
R137	315-0221-00			RES.,FXD,CMPSN:220 OHM,5%,0.25W	01121	CB2215
R138	315-0221-00			RES.,FXD,CMPSN:220 OHM,5%,0.25W	01121	CB2215
R139	315-0221-00			RES.,FXD,CMPSN:220 OHM,5%,0.25W	01121	CB2215
R142	315-0101-00			RES.,FXD,CMPSN:100 OHM,5%,0.25W	01121	CB1015
R151	321-0085-00			RES.,FXD,FILM:75 OHM,1%,0.125W	91637	MPF1816G75 ROOF
R152	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
R153	315-0220-00			RES.,FXD,CMPSN:22 OHM,5%,0.25W	01121	CB2205
R154	315-0202-00			RES.,FXD,CMPSN:2K OHM,5%,0.25W	01121	CB2025
R155	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
R156	315-0100-00			RES.,FXD,CMPSN:10 OHM,5%,0.25W	01121	CB1005
R162	315-0101-00			RES.,FXD,CMPSN:100 OHM,5%,0.25W	01121	CB1015
R163	315-0221-00			RES.,FXD,CMPSN:220 OHM,5%,0.25W	01121	CB2215
R164	315-0101-00			RES.,FXD,CMPSN:100 OHM,5%,0.25W	01121	CB1015
R173	315-0220-00			RES.,FXD,CMPSN:22 OHM,5%,0.25W	01121	CB2205
R174	315-0130-00			RES.,FXD,CMPSN:13 OHM,5%,0.25W	01121	CB1305
R175	307-0116-00			RES.,FXD,CMPSN:9.1 OHM,5%,0.25W	01121	CB91G5
R202	315-0122-00			RES.,FXD,CMPSN:1.2K OHM,5%,0.25W	01121	CB1225
R203	315-0121-00			RES.,FXD,CMPSN:120 OHM,5%,0.25W	01121	CB1215
R204	315-0471-00			RES.,FXD,CMPSN:470 OHM,5%,0.25W	01121	CB4715
R205	315-0181-00			RES.,FXD,CMPSN:180 OHM,5%,0.25W	01121	CB1815
R206	303-0680-00			RES.,FXD,CMPSN:68 OHM,5%,1W	01121	GB6805
R207	315-0151-00			RES.,FXD,CMPSN:150 OHM,5%,0.25W	01121	CB1515
R208	315-0101-00			RES.,FXD,CMPSN:100 OHM,5%,0.25W	01121	CB1015

(SN B020000 & up) Replaceable Electrical Parts—ADC 820T

Ckt No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
R209	315-0101-00			RES.,FXD,CMPSN:100 OHM,5%,0.25W	01121	CB1015
R211	315-0391-00			RES.,FXD,CMPSN:390 OHM,5%,0.25W	01121	CB3915
R212	307-0103-00			RES.,FXD,CMPSN:2.7 OHM,5%,0.25W	01121	CB27G5
R213	315-0391-00			RES.,FXD,CMPSN:390 OHM,5%,0.25W	01121	CB3915
R214	315-0151-00			RES.,FXD,CMPSN:150 OHM,5%,0.25W	01121	CB1515
R215	315-0151-00			RES.,FXD,CMPSN:150 OHM,5%,0.25W	01121	CB1515
R216	315-0391-00			RES.,FXD,CMPSN:390 OHM,5%,0.25W	01121	CB3915
R217	315-0271-00			RES.,FXD,CMPSN:270 OHM,5%,0.25W	01121	CB2715
R218	315-0680-00			RES.,FXD,CMPSN:68 OHM,5%,0.25W	01121	CB6805
R219	315-0151-00			RES.,FXD,CMPSN:150 OHM,5%,0.25W	01121	CB1515
R221	315-0911-00			RES.,FXD,CMPSN:910 OHM,5%,0.25W	01121	CB9115
R243	315-0151-00			RES.,FXD,CMPSN:150 OHM,5%,0.25W	01121	CB1515
R244	315-0391-00			RES.,FXD,CMPSN:390 OHM,5%,0.25W	01121	CB3915
R301	321-0232-00	XB020140		RES.,FXD,FILM:2.55K OHM,1%,0.125W	91637	MFF1816G25500F
R302	315-0132-00			RES.,FXD,CMPSN:1.3K OHM,5%,0.25W	01121	CB1325
R303	321-0193-07			RES.,FXD,FILM:1K OHM,0.1%,0.125W	91637	MFF1816C10000B
R304	321-0612-00			RES.,FXD,FILM:500 OHM,1%,0.125W	91637	MFF1816G500ROF
R305	321-0193-07			RES.,FXD,FILM:1K OHM,0.1%,0.125W	91637	MFF1816C10000B
R306	321-0256-00			RES.,FXD,FILM:4.53K OHM,1%,0.125W	91637	MFF1816G45300F
R307	311-1897-00			RES.,VAR,NONWIR:25K OHM,10%,0.50W	32997	3299W-1-253
R308	321-0323-00			RES.,FXD,FILM:22.6K OHM,1%,0.125W	91637	MFF1816G22601F
R309	303-0271-00			RES.,FXD,CMPSN:270 OHM,5%,1W	01121	GB2715
R314	315-0510-00			RES.,FXD,CMPSN:51 OHM,5%,0.25W	01121	CB5105
R315	315-0132-00			RES.,FXD,CMPSN:1.3K OHM,5%,0.25W	01121	CB1325
R316	311-1270-00			RES.,VAR,NONWW:TRMR,12K OHM,0.5W	73138	82-57
R317	311-1270-00			RES.,VAR,NONWW:TRMR,12K OHM,0.5W	73138	82-57
R318	315-0510-00			RES.,FXD,CMPSN:51 OHM,5%,0.25W	01121	CB5105
R319	315-0132-00			RES.,FXD,CMPSN:1.3K OHM,5%,0.25W	01121	CB1325
R320	315-0511-00			RES.,FXD,CMPSN:510 OHM,5%,0.25W	01121	CB5115
R321	315-0102-00			RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
R322	315-0683-00			RES.,FXD,CMPSN:68K OHM,5%,0.25W	01121	CB6835
R323	315-0103-00			RES.,FXD,CMPSN:10K OHM,5%,0.25W	01121	CB1035
R324	311-1270-00			RES.,VAR,NONWW:TRMR,12K OHM,0.5W	73138	82-57
R325	315-0271-00			RES.,FXD,CMPSN:270 OHM,5%,0.25W	01121	CB2715
R326	315-0474-00			RES.,FXD,CMPSN:470K OHM,5%,0.25W	01121	CB4745
R327	315-0203-00			RES.,FXD,CMPSN:20K OHM,5%,0.25W	01121	CB2035
R328	315-0153-00			RES.,FXD,CMPSN:15K OHM,5%,0.25W	01121	CB1535
R330	315-0221-00			RES.,FXD,CMPSN:220 OHM,5%,0.25W	01121	CB2215
R331	315-0912-00			RES.,FXD,CMPSN:9.1K OHM,5%,0.25W	01121	CB9125
R332	315-0183-00			RES.,FXD,CMPSN:18K OHM,5%,0.25W	01121	CB1835
R333	315-0153-00			RES.,FXD,CMPSN:15K OHM,5%,0.25W	01121	CB1535
R334	315-0103-00			RES.,FXD,CMPSN:10K OHM,5%,0.25W	01121	CB1035
R335	321-0196-00			RES.,FXD,FILM:1.07K OHM,1%,0.125W	91637	MFF1816G10700F
R336	315-0510-00			RES.,FXD,CMPSN:51 OHM,5%,0.25W	01121	CB5105
R337	321-0085-00			RES.,FXD,FILM:75 OHM,1%,0.125W	91637	MFF1816G75R00F
R338	321-0214-00			RES.,FXD,FILM:1.65K OHM,1%,0.125W	91637	MFF1816G16500F
R339	321-0214-00			RES.,FXD,FILM:1.65K OHM,1%,0.125W	91637	MFF1816G16500F
R342	321-0101-00			RES.,FXD,FILM:110 OHM,1%,0.125W	91637	MFF1816G110ROF
R343	315-0153-00			RES.,FXD,CMPSN:15K OHM,5%,0.25W	01121	CB1535
R344	311-0622-00			RES.,VAR,NONWIR:100 OHM,10%,0.50W	32997	3326H-G48-101
R345	311-1270-00			RES.,VAR,NONWW:TRMR,12K OHM,0.5W	73138	82-57

Replaceable Electrical Parts—ADC 820T (SN B020000 & up)

Ckt No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Name & Description	Mfr Code	Mfr Part Number
R346	321-0155-00			RES.,FXD,FILM:402 OHM,1%,0.125W	91637	MFF1816G402ROF
R347	321-0159-00			RES.,FXD,FILM:442 OHM,1%,0.125W	91637	MFF1816G442ROF
R348	321-0230-00			RES.,FXD,FILM:2.43K OHM,1%,0.125W	91637	MFF1816G24300F
R349	321-0225-00			RES.,FXD,FILM:2.15K OHM,1%,0.125W	91637	MFF1816G21500F
R351	321-0236-00			RES.,FXD,FILM:2.8K OHM,1%,0.125W	91637	MFF1816G28000F
R352	305-0221-00			RES.,FXD,CMPNS:220 OHM,5%,2W	01121	HB2215
R353	321-0250-00			RES.,FXD,FILM:3.92K OHM,1%,0.125W	91637	MFF1816G39200F
R355	315-0151-00			RES.,FXD,CMPNS:150 OHM,5%,0.25W	01121	CB1515
R357	321-0085-00			RES.,FXD,FILM:75 OHM,1%,0.125W	91637	MFF1816G75R00F
U101	156-0316-03			MICROCIRCUIT,DI:ECL TO TTL CONVERTER	80009	156-0316-03
U108	156-0316-03			MICROCIRCUIT,DI:ECL TO TTL CONVERTER	80009	156-0316-03
U146	155-0165-01			MICROCIRCUIT,LI:4 BIT PRL A/D CONVERTER	80009	155-0165-01
U156	155-0167-00			MICROCIRCUIT,LI:4 BIT D/A CONVERTER	80009	155-0167-00
U166	155-0165-00			MICROCIRCUIT,LI:4 BIT PRL A/D CONVERTER,MSB	80009	155-0165-00
U201	156-0316-03			MICROCIRCUIT,DI:ECL TO TTL CONVERTER	80009	156-0316-03
U207	156-0369-02			MICROCIRCUIT,DI:TRIPLE LINE RECEIVER	80009	156-0369-02
U221	156-0631-02			MICROCIRCUIT,DI:QUAD 2 INPUT OR/NOR GATE	80009	156-0631-02
U228	156-0369-02			MICROCIRCUIT,DI:TRIPLE LINE RECEIVER	80009	156-0369-02
U305	156-0783-01			MICROCIRCUIT,LI:PRECISION VOLTAGE REFERENCE	80009	156-0783-01
U311	156-0067-13			MICROCIRCUIT,LI:OPNL AMPL,SELECTED	80009	156-0067-13
U314	156-0067-13			MICROCIRCUIT,LI:OPNL AMPL,SELECTED	80009	156-0067-13
U318	156-0067-13			MICROCIRCUIT,LI:OPNL AMPL,SELECTED	80009	156-0067-13
U322	156-0067-13			MICROCIRCUIT,LI:OPNL AMPL,SELECTED	80009	156-0067-13
U328	156-0067-13			MICROCIRCUIT,LI:OPNL AMPL,SELECTED	80009	156-0067-13

REPLACEABLE MECHANICAL PARTS

PARTS ORDERING INFORMATION

Replacement parts are available from or through your local Tektronix, Inc. Field Office or representative.

Changes to Tektronix instruments are sometimes made to accommodate improved components as they become available, and to give you the benefit of the latest circuit improvements developed in our engineering department. It is therefore important, when ordering parts, to include the following information in your order: Part number, instrument type or number, serial number, and modification number if applicable.

If a part you have ordered has been replaced with a new or improved part, your local Tektronix, Inc. Field Office or representative will contact you concerning any change in part number.

Change information, if any, is located at the rear of this manual.

SPECIAL NOTES AND SYMBOLS

- X000 Part first added at this serial number
- 00X Part removed after this serial number

FIGURE AND INDEX NUMBERS

Items in this section are referenced by figure and index numbers to the illustrations.

INDENTATION SYSTEM

This mechanical parts list is indented to indicate item relationships. Following is an example of the indentation system used in the description column.

- ```

1 2 3 4 5 Name & Description
Assembly and/or Component
Attaching parts for Assembly and/or Component
 - - - * - - -
Detail Part of Assembly and/or Component
Attaching parts for Detail Part
 - - - * - - -
Parts of Detail Part
Attaching parts for Parts of Detail Part
 - - - * - - -

```

Attaching Parts always appear in the same indentation as the item it mounts, while the detail parts are indented to the right. Indented items are part of, and included with, the next higher indentation. The separation symbol - - - \* - - - indicates the end of attaching parts.

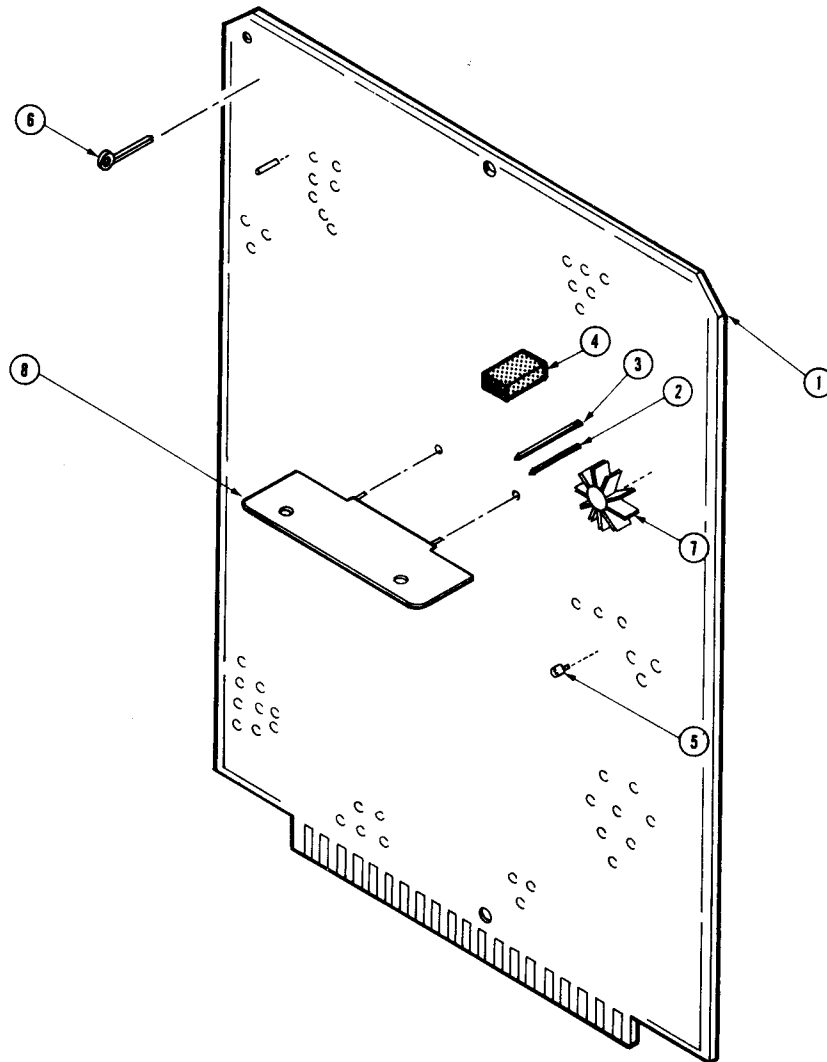
**Attaching parts must be purchased separately, unless otherwise specified.**

## ITEM NAME

In the Parts List, an Item Name is separated from the description by a colon (:). Because of space limitations, an Item Name may sometimes appear as incomplete. For further Item Name identification, the U.S. Federal Cataloging Handbook H6-1 can be utilized where possible.

## ABBREVIATIONS

|       |                    |         |                       |          |                      |          |                 |
|-------|--------------------|---------|-----------------------|----------|----------------------|----------|-----------------|
| #     | INCH               | ELCTRN  | ELECTRON              | IN       | INCH                 | SE       | SINGLE END      |
| ACTR  | NUMBER SIZE        | ELEC    | ELECTRICAL            | INCAND   | INCANDESCENT         | SECT     | SECTION         |
| ADPTR | ACTUATOR           | ELCLT   | ELECTROLYTIC          | INSUL    | INSULATOR            | SEMICOND | SEMICONDUCTOR   |
| ALIGN | ADAPTER            | ELEM    | ELEMENT               | INTL     | INTERNAL             | SHLD     | SHIELD          |
| AL    | ALIGNMENT          | EPL     | ELECTRICAL PARTS LIST | LPHLDR   | LAMPHOLDER           | SHLDR    | SHOULDERED      |
| ASSEM | ALUMINUM           | EQPT    | EQUIPMENT             | MACH     | MACHINE              | SKT      | SOCKET          |
| ASSY  | ASSEMBLED          | EXT     | EXTERNAL              | MECH     | MECHANICAL           | SL       | SLIDE           |
| ATTEN | ASSEMBLY           | FIL     | FILLISTER HEAD        | MTG      | MOUNTING             | SLFLKGG  | SELF-LOCKING    |
| AWG   | ATTENUATOR         | FLEX    | FLEXIBLE              | NIP      | NIPPLE               | SLVGG    | SLEEVING        |
| BD    | AMERICAN WIRE GAGE | FLH     | FLAT HEAD             | NON WIRE | NOT WIRE WOUND       | SPR      | SPRING          |
| BRKT  | BOARD              | FLTR    | FILTER                | OBDD     | ORDER BY DESCRIPTION | SQ       | SQUARE          |
| BRS   | BRACKET            | FR      | FRAME or FRONT        | OD       | OUTSIDE DIAMETER     | SST      | STAINLESS STEEL |
| BRZ   | BRASS              | FSTNR   | FASTENER              | OVH      | OVAL HEAD            | STL      | STEEL           |
| BSHG  | BRONZE             | FT      | FOOT                  | PH BRZ   | PHOSPHOR BRONZE      | SW       | SWITCH          |
| CAB   | BUSHING            | FXD     | FIXED                 | PL       | PLAIN or PLATE       | T        | TUBE            |
| CAP   | CABINET            | GSKT    | GASKET                | PLSTC    | PLASTIC              | TERM     | TERMINAL        |
| CER   | CAPACITOR          | HDL     | HANDLE                | PN       | PART NUMBER          | THD      | THREAD          |
| CHAS  | CERAMIC            | HEX     | HEXAGON               | PNH      | PAN HEAD             | THK      | THICK           |
| CKT   | CHASSIS            | HEX HD  | HEXAGONAL HEAD        | PWR      | POWER                | TNSN     | TENSION         |
| COMP  | CIRCUIT            | HEX SOC | HEXAGONAL SOCKET      | RCPT     | RECEPTACLE           | TPG      | TAPPING         |
| CONN  | COMPOSITION        | HLCPS   | HELICAL COMPRESSION   | RES      | RESISTOR             | TRH      | TRUSS HEAD      |
| COV   | CONNECTOR          | HLEXT   | HELICAL EXTENSION     | RGD      | RIGID                | V        | VOLTAGE         |
| CPLG  | COVER              | HV      | HIGH VOLTAGE          | RLF      | RELIEF               | VAR      | VARIABLE        |
| CRT   | COUPLING           | IC      | INTEGRATED CIRCUIT    | RTNR     | RETAINER             | W/       | WITH            |
| DEG   | CATHODE RAY TUBE   | ID      | INSIDE DIAMETER       | SCH      | SOCKET HEAD          | WSHR     | WASHER          |
| DWR   | DEGREE             | IDNT    | IDENTIFICATION        | SCOPE    | OSCILLOSCOPE         | XFMR     | TRANSFORMER     |
|       | DRAWER             | IMPLR   | IMPELLER              | SCR      | SCREW                | XSTR     | TRANSISTOR      |



| Fig. & Index No. | Tektronix Part No. | Serial/Model No. Eff | Dscont | Qty | 1 | 2 | 3 | 4 | 5 | Name & Description                    | Mfr Code | Mfr Part Number |
|------------------|--------------------|----------------------|--------|-----|---|---|---|---|---|---------------------------------------|----------|-----------------|
| -1               | -----              | -----                |        | 1   |   |   |   |   |   | CKT BOARD ASSY: (SEE A3 EPL)          |          |                 |
| -2               | 131-0608-00        |                      |        | 3   |   |   |   |   |   | . CONTACT, ELEC: 0.365 INCH LONG      | 22526    | 47357           |
| -3               | 131-0787-00        |                      |        | 9   |   |   |   |   |   | . CONTACT, ELEC: 0.64 INCH LONG       | 22526    | 47359           |
| -4               | 131-0993-00        |                      |        | 1   |   |   |   |   |   | . LINK, TERM. CONNE: 2 WIRE BLACK     | 00779    | 530153-2        |
| -5               | 136-0252-04        |                      |        | 64  |   |   |   |   |   | . SOCKET, PIN TERM: 0.188 INCH LONG   | 22526    | 75060           |
| -6               | 214-0579-00        |                      |        | 4   |   |   |   |   |   | . TERM., TEST PT: 0.40 INCH LONG      | 80009    | 214-0579-00     |
| -7               | 214-1292-00        |                      |        | 1   |   |   |   |   |   | . HEAT SINK, ELEC: TRANSISTOR         | 05820    | 205-AB          |
| -8               | 337-0763-00        |                      |        | 1   |   |   |   |   |   | . SHIELD, ELEC:                       | 80009    | 337-0763-00     |
|                  | 072-2421-00        |                      |        | 1   |   |   |   |   |   | MANUAL, TECH: INSTRUCTION (NOT SHOWN) | 80009    | 072-2421-00     |

### CROSS INDEX MFR. CODE NUMBER TO MANUFACTURER

| MFR.CODE | MANUFACTURER                | ADDRESS         | CITY, STATE, ZIP         |
|----------|-----------------------------|-----------------|--------------------------|
| 00779    | AMP, INC.                   | PO BOX 3608     | HARRISBURG, PA 17105     |
| 05820    | WAKEFIELD ENGINEERING, INC. | AUDUBON ROAD    | WAKEFIELD, MA 01880      |
| 22526    | BERG ELECTRONICS, INC.      | YOKU EXPRESSWAY | NEW CUMBERLAND, PA 17070 |
| 80009    | TEKTRONIX, INC.             | PO BOX 500      | BEAVERTON, OR 97077      |

