CRT Driver

Preliminary Data Sheet

CVA1556N

FEATURES

- **Little or No Heat Sink Required**
- **Ease of Use**
- **Emitter Peaking**
- **Rise Time . . . . . <8.0ns**
- **Fall Time . . . . . <8ns**

APPLICATIONS

- **14", 15" and 17" Monitors with 69KHz Scanning Frequency**

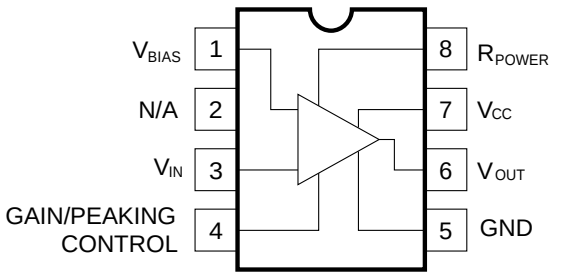
DESCRIPTION

The CVA1556N CRT driver amplifier is a very low cost solution designed for monitors up to 69KHz. This product is designed to replace the discrete solution for the 14", 15" and 17" monitors.

ORDERING INFORMATION

Part	Package	Temperature
CVA1556N	8-PDIP	0^oC to $+110^oC$

CONNECTION AND BLOCK DIAGRAMS



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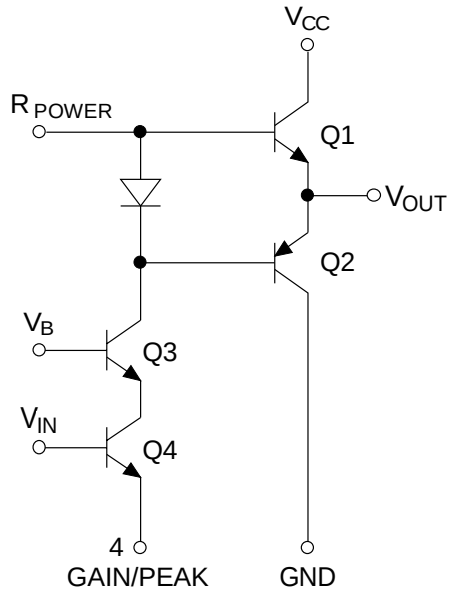

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ABSOLUTE MAXIMUM RATINGS

Supply Voltage 100V
Storage Temperature . . . . . -25°C to +125°C
Junction Temperature . . . . . 175°C
Operating Temperature (Case) . . . . . 0°C to +110°C
Lead Temperature . . . . . +300°C

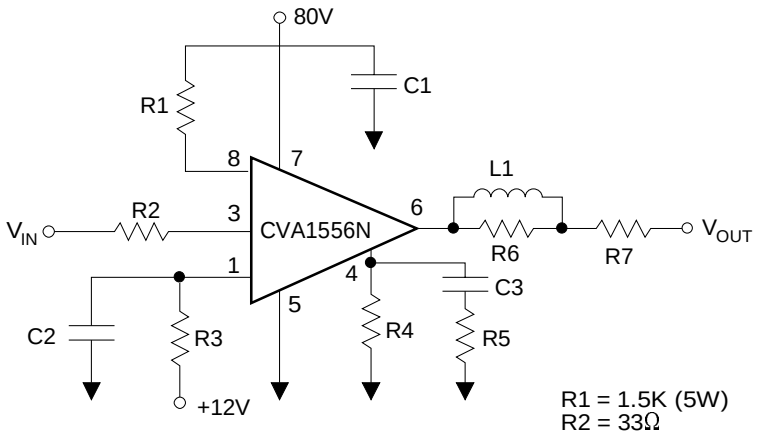
DC ELECTRICAL CHARACTERISTICS V_S = 80V, C_L = 12pF, V_{BIAS} = 12V, V_{IN} = 2.7V, R_L = 1500Ω, T_{CASE} = +25°C.

SYMBOL	CHARACTERISTICS	MIN	TYP	MAX	UNITS
I_{cc}	Supply Current		20	26	mA
$V_{OUT\ DC}$	Output DC Level	44	50	56	V
A_v	Voltage Gain		13	15	V

AC ELECTRICAL CHARACTERISTICS V_S = 80V, C_L = 12pF, V_{BIAS} = 12V, V_{IN} = 2.7V, R_L = 1500Ω, T_{CASE} = +25°C.

SYMBOL	CHARACTERISTICS	MIN	TYP	MAX	UNITS
T_r	Rise Time		7.5	9	ns
T_f	Fall Time		7.5	9	ns
L_e	Linearity		5		%
OS	Overshoot		3		%

FIGURE 1. TEST AND APPLICATION CIRCUIT



C1 = 10μF
C2 = .01μF
C3 = 47pF
L1 = .56μH

R1 = 1.5K (5W)
R2 = 33Ω
R3 = 50Ω
R4 = 100Ω
R5 = 33Ω
R6 = 820Ω
R7 = 47Ω

1U-14

APPLICATION INFORMATION

The CVA1556N is a high voltage triple CRT driver suitable for VGA, Super VGA, IBM® 8514, 1024 x 768 non-interlaced display applications. The CVA1556N features 80V operation and low power dissipation. The part is housed in the industry standard 8-pin PDIP.

Thermal Considerations

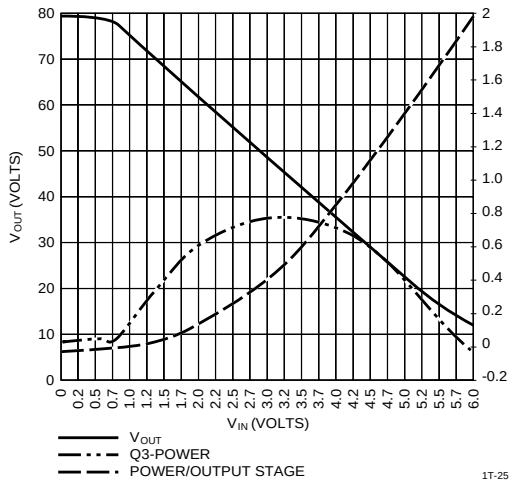
The transfer characteristics of the CVA1556N application (*Figure 2*.) are shown in *Figure 3.* Since this is a class A input stage, power supply current increases as the input signal increases and consequently power dissipation also increases.

The CVA1556N can be used without a heat sink. Under white screen condition, i.e. 25V output, dissipation is 0.6W/channel. Under gray level conditions C_L =12pf, V_{OUT} = 45_{P-P}, the dissipation is 1.1W/channel.

The CVA1556N maximum load is 600Ω to ground or V^+.

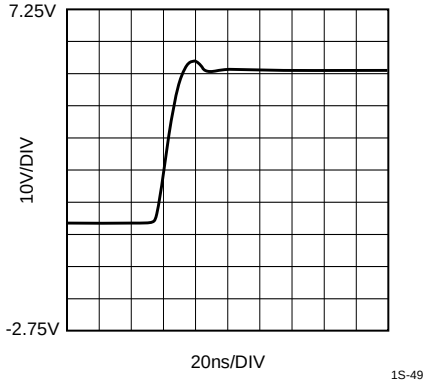
The output of CVA1556N is not short circuit proof. Any resistance to V^+ or Ground should be more than 600Ω.

FIGURE 2. CVA1556N DC CHARACTERISTICS

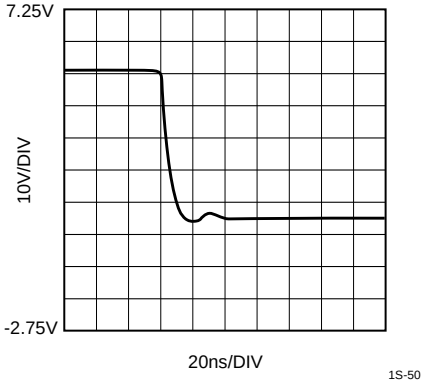


TYPICAL CHARACTERISTICS

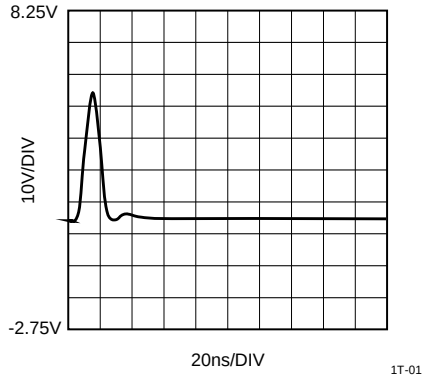
RISE TIME



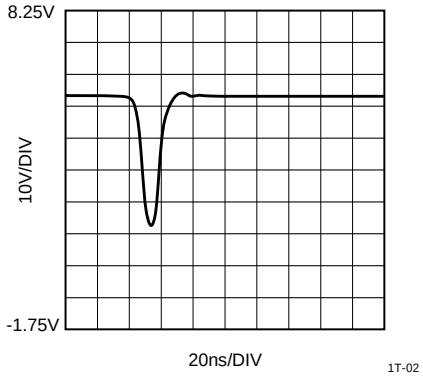
FALL TIME



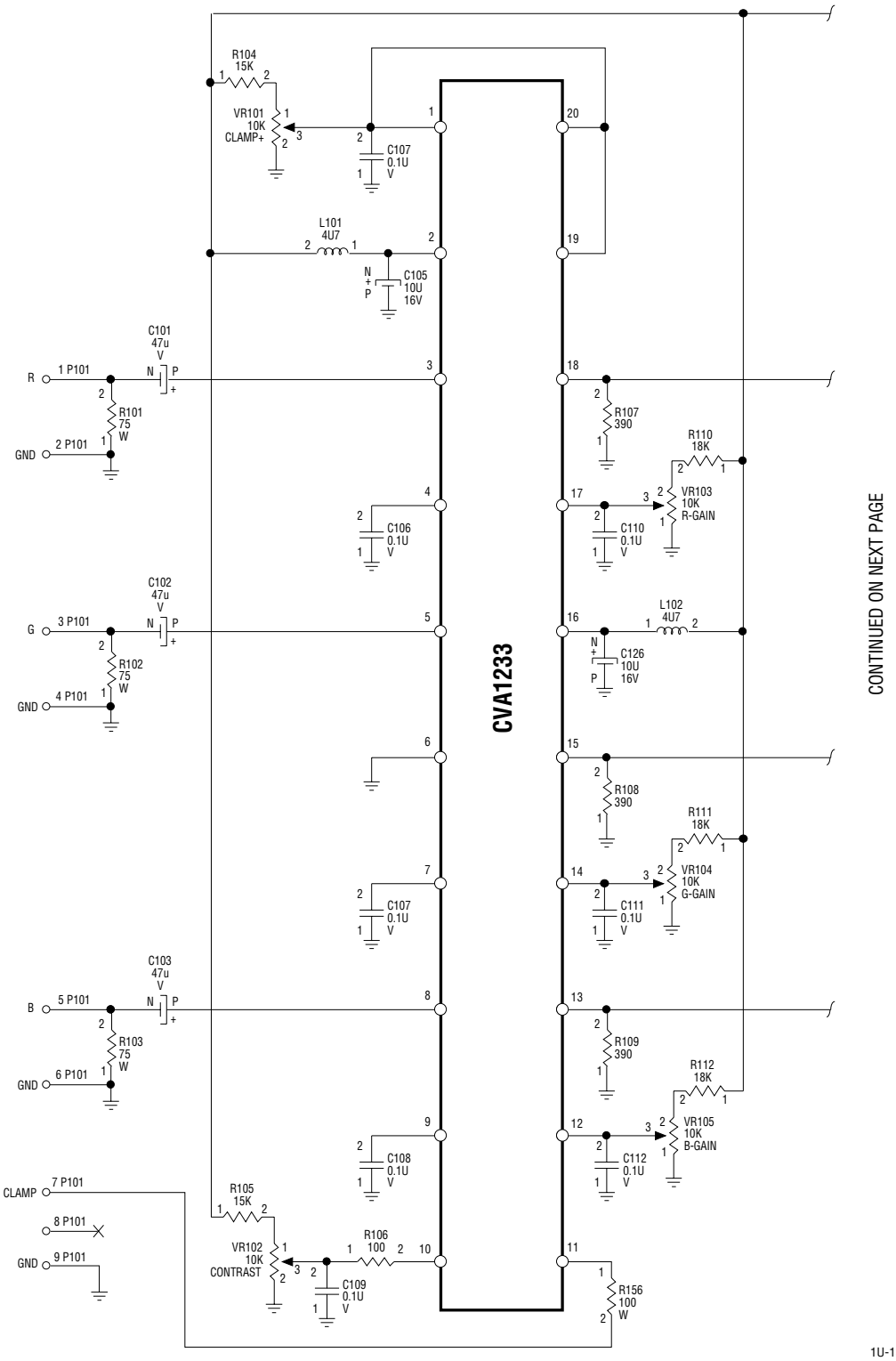
CROSS HATCH WHITE BACKGROUND



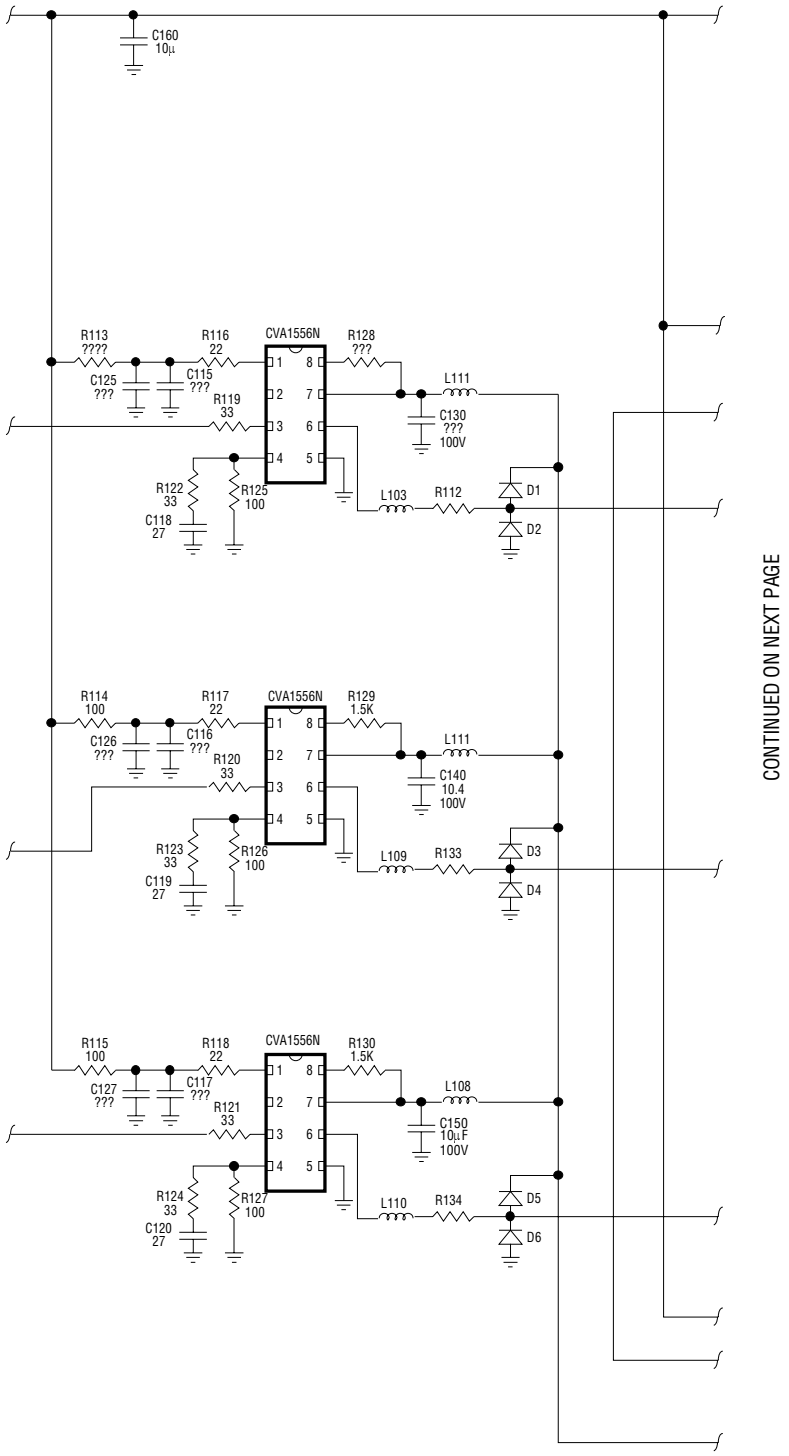
CROSS HATCH BLACK BACKGROUND



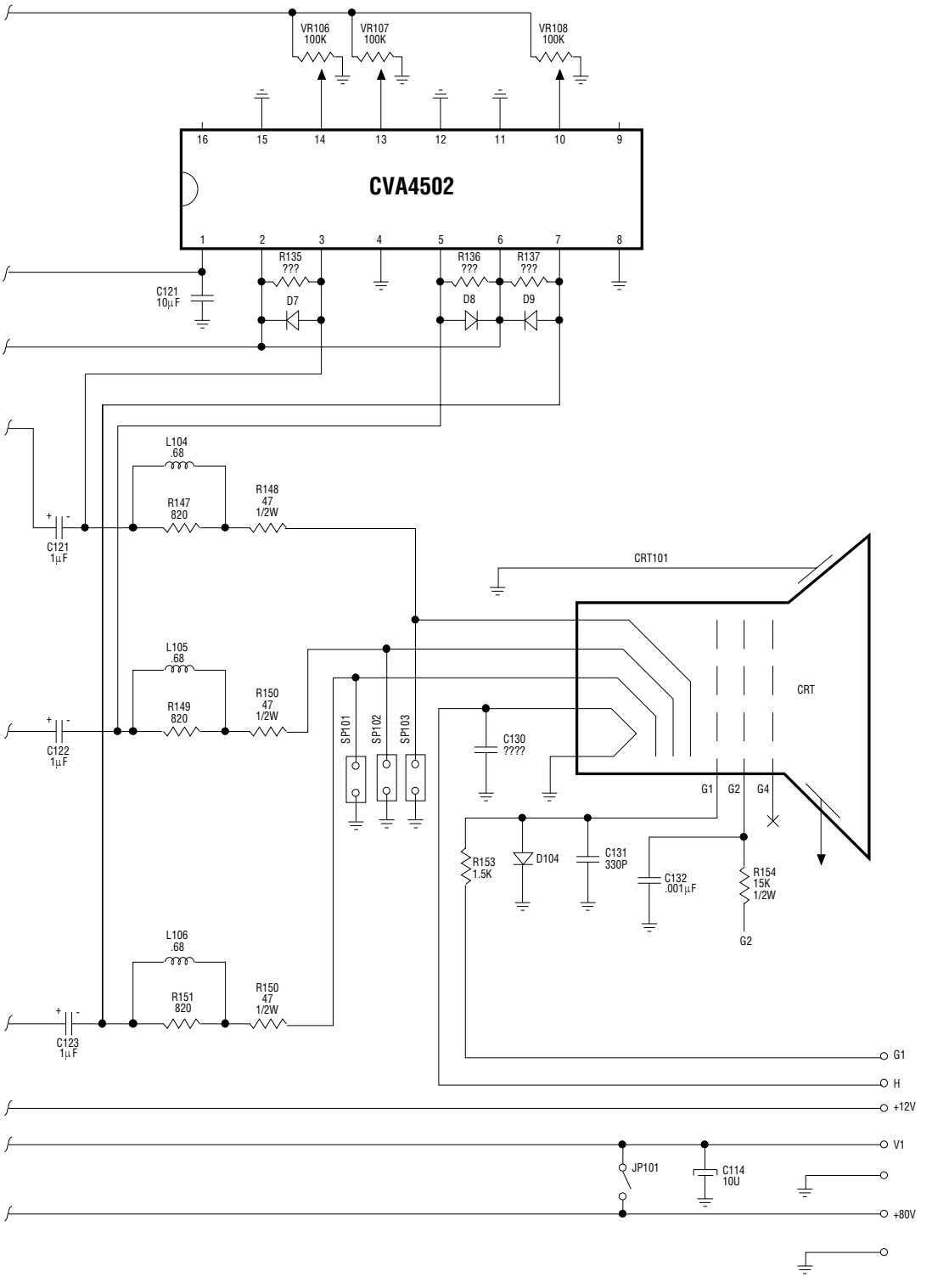
TYPICAL APPLICATION



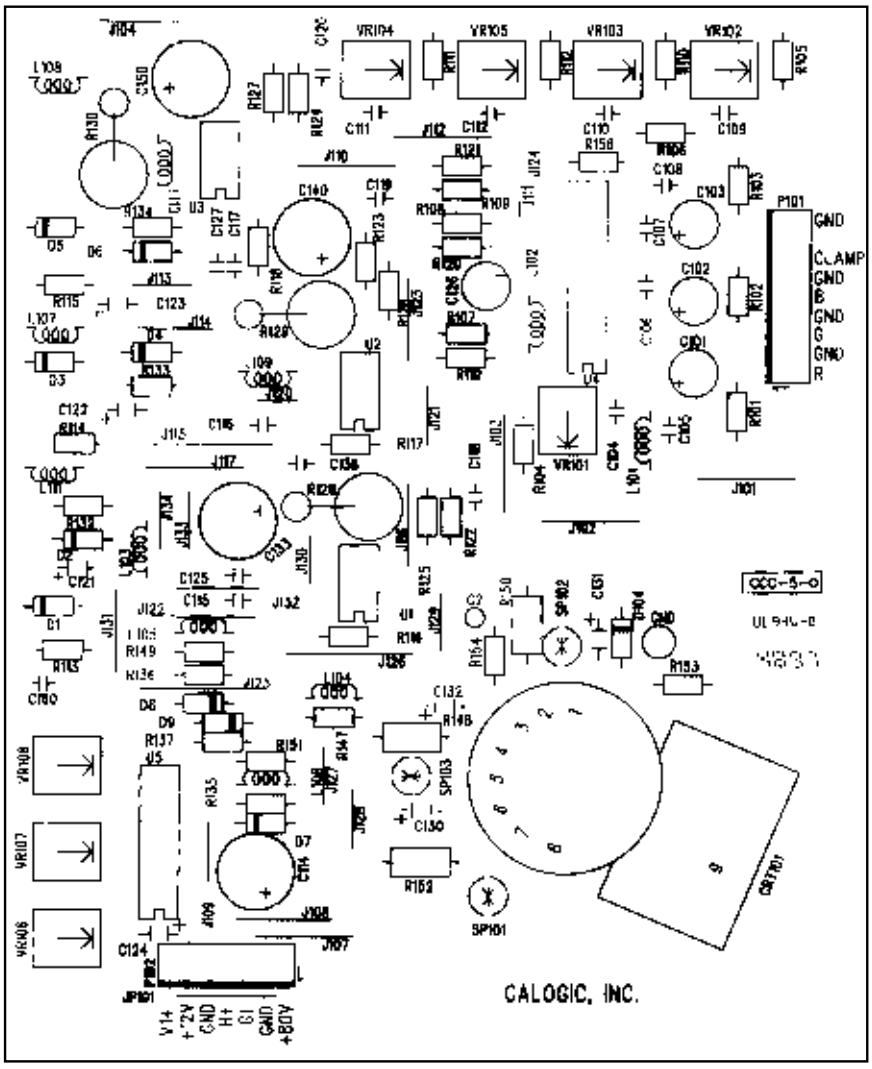
TYPICAL APPLICATION (continued)



TYPICAL APPLICATION (continued)



CUIRCUT BOARD



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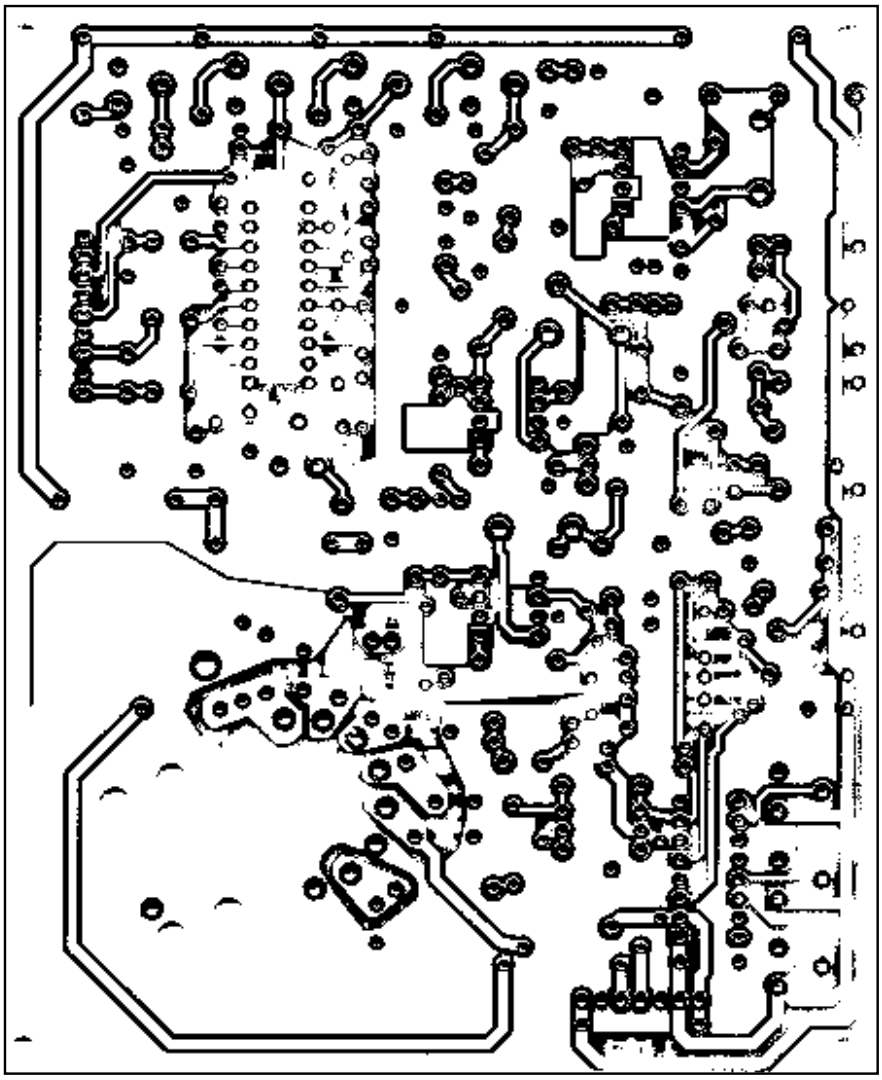
CUIRCUT BOARD



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