

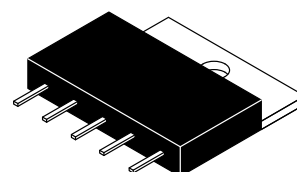
The RF Line Video Driver Hybrid Amplifier

The CR2428 is designed specifically for use as the video channel final stage in high resolution monitors.

- Typical 10–90% Transitions Times are 2.5 ns
- 130 MHz Minimum Bandwidth at 40 Vp–p Output
- 290 MHz Minimum Video Clock Frequency
- Up to 50 Vp–p Output Swing with 60 V Supply Voltage
- Low Power Consumption
- Excellent Grey–Scale Linearity
- Unconditional Stability
- Gold Metallization System for the Ultimate in Reliability

CR2428

**2.5 ns
130 MHz
VIDEO DRIVER
HYBRID
AMPLIFIER**



**CASE 431A–02, STYLE 1
(CR LP)**

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Supply Voltage	V_{CC}	70	Vdc
Operating Case Temperature Range	T_C	–20 to +100	°C
Storage Temperature Range	T_{stg}	–40 to +100	°C

ELECTRICAL CHARACTERISTICS ($T_C = 25^\circ\text{C}$, $V_{CC} = 60\text{ V}$, $C_{LOAD} = 8.5\text{ pF}$, 40 V peak–to–peak output swing with 30 Vdc offset; $R_1 = 215\ \Omega$, $C_1 = 90\text{ pF typ}$)

Characteristic	Symbol	Min	Typ	Max	Unit
Supply Current (With Input Open Circuited)	I_{CC}	39.5	43.5	47.5	mA
Input DC Voltage (With Input Open Circuited)	V_{inDC}	1.15	1.4	1.65	V
Output DC Voltage (With Input Open Circuited)	V_{outDC}	26	30	34	V
Voltage Gain (1) (2)	A_V	11.2	12.4	13.2	V/V
Transient Response (2)					
— Rise Time (10% to 90%)	t_r	—	2.5	2.9	ns
— Overshoot	$V_{os,r}$	—	8.0	15	%
— Fall Time (90% to 10%)	t_f	—	2.5	2.9	ns
— Overshoot	$V_{os,f}$	—	6.0	10	%
Operating Supply Current ($V_{out} = 40\text{ V Peak–to–Peak}$, 50 MHz Square Wave with 30 V offset) (3)	I_{CC}	—	100	—	mA
Linearity Error ($V_{out} = +5.0\text{ V to }+55\text{ V}$)	—	—	—	5.0	%

NOTES:

1. $A_V = V_{out}/V_s$
2. Input Signal is nominally a 62.5 kHz square wave of 3.25 V peak–to–peak with 1.4 Vdc offset. Input t_r , $t_f < 1.0\text{ ns}$.
3. Output is not short circuit protected.

TYPICAL CHARACTERISTICS

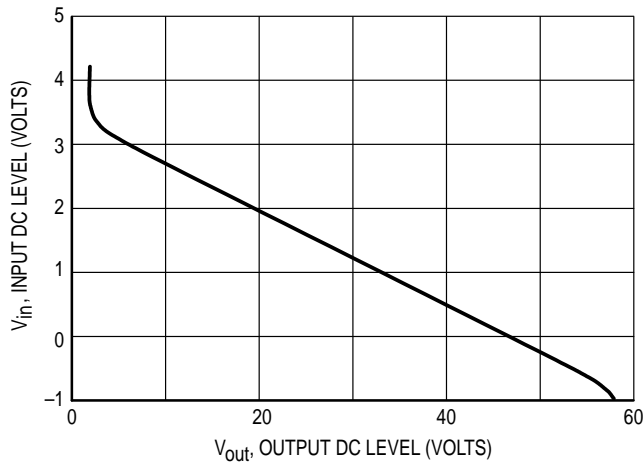


Figure 1. Voltage Ratio at RF Input Port

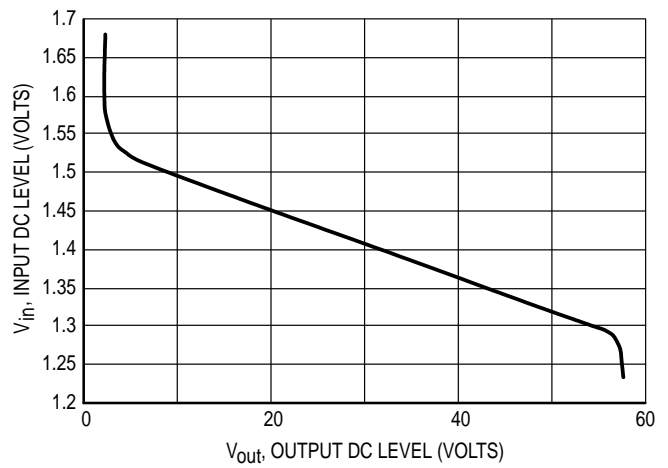


Figure 2. Voltage Ratio at Port 1

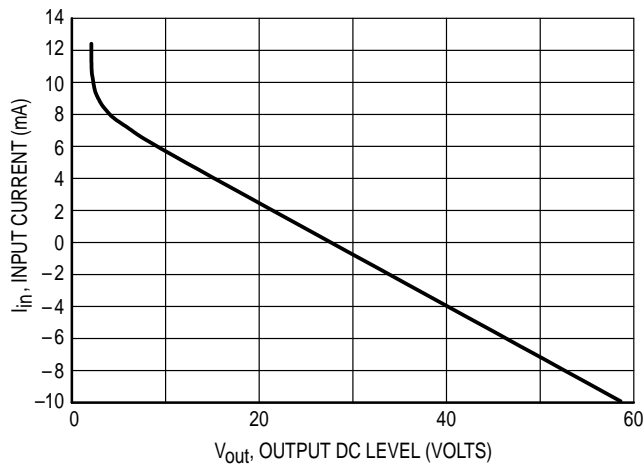


Figure 3. Output Voltage versus Input Current

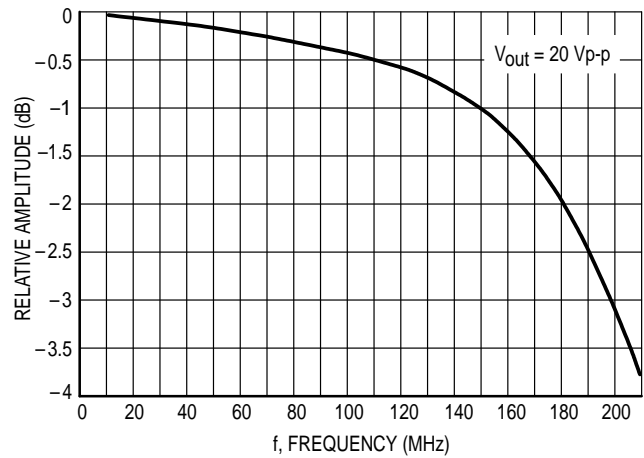


Figure 4. Frequency Response

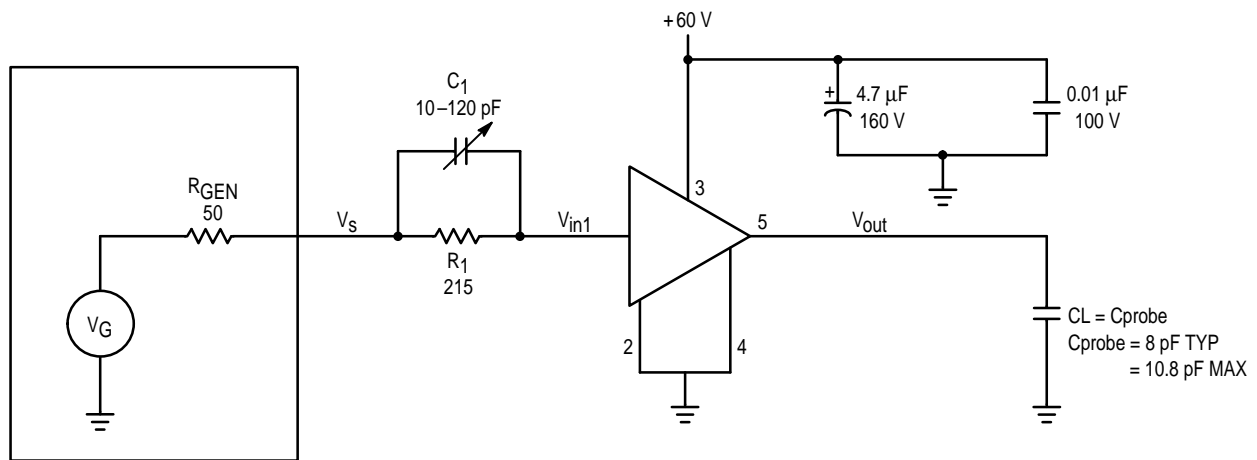
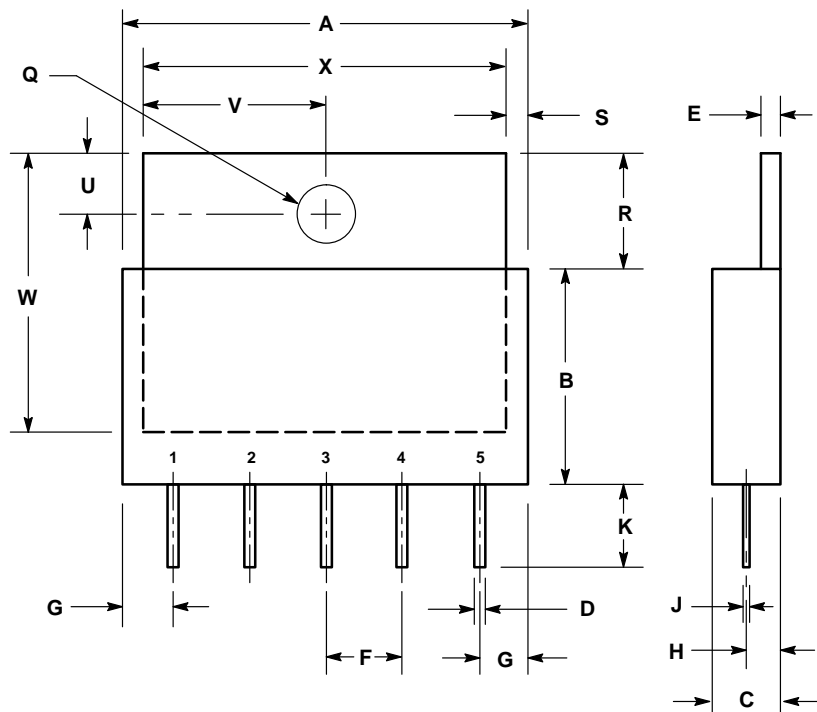


Figure 5. CRT Driver Test Circuit

PACKAGE DIMENSIONS




- NOTES:
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH

DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	1.055	1.065	26.80	27.05
B	0.550	0.565	13.97	14.35
C	0.175	0.185	4.45	4.70
D	0.020	—	0.51	—
E	0.045	0.055	1.14	1.40
F	0.195	0.205	4.95	5.21
G	0.125	0.135	3.18	3.43
H	0.080	0.090	2.03	2.29
J	0.010	—	0.25	—
K	0.215	0.225	5.46	5.72
Q	0.145	0.155	3.68	3.94
R	0.300	0.320	7.62	8.13
S	0.045	0.055	1.14	1.40
U	0.155	0.165	3.94	4.19
V	0.470	0.480	11.94	12.19
W	0.730	0.740	18.54	18.80
X	0.945	0.955	24.00	24.26

- STYLE 1:
PIN 1. V_{in}
2. GROUND
3. $+V_{cc}$
4. GROUND
5. V_{out}

CASE 431A-02
ISSUE A

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CR2428/D

