

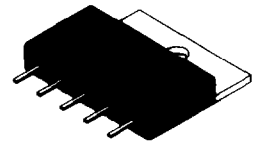
The RF Line
Video Driver
Hybrid Amplifier

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 V_{p-p} Output
- 290 MHz Minimum Video Clock Frequency
- Up to 50 V_{p-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 C, V_{CC} = 60 V, C_{LOAD} = 8.5 pF, 40 V peak–to–peak output swing with 30 Vdc offset; R₁ = 215 Ω, C₁ = 90 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 V Peak–to–Peak, 50 MHz Square Wave with 30 V offset) (3)	I _{CC}	—	100	—	mA
Linearity Error (V _{out} = +5.0 V to +55 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 ns.
3. Output is not short circuit protected.

REV 1

TYPICAL CHARACTERISTICS

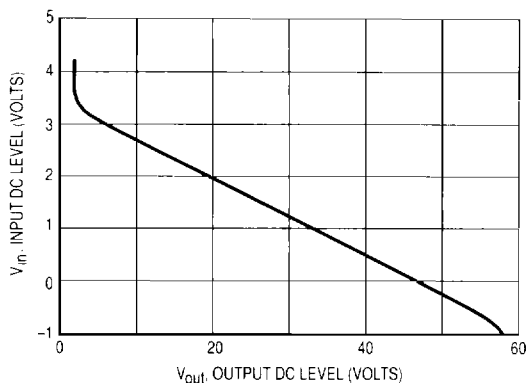


Figure 1. Voltage Ratio at RF Input Port

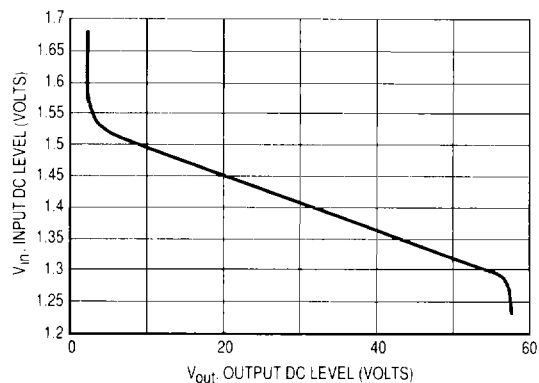


Figure 2. Voltage Ratio at Port 1

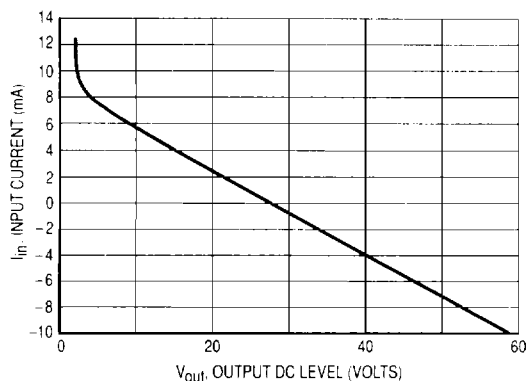


Figure 3. Output Voltage versus Input Current

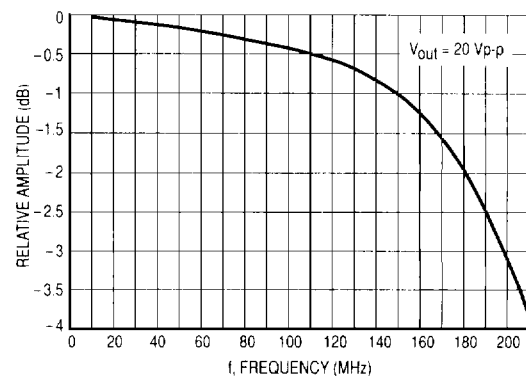


Figure 4. Frequency Response

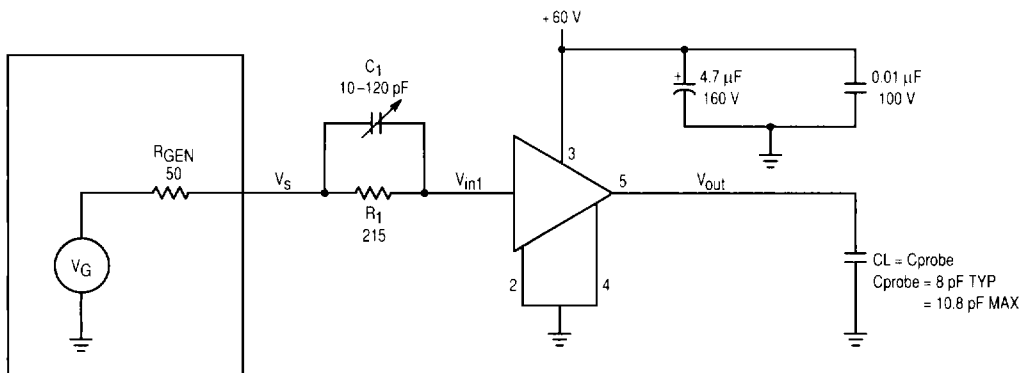


Figure 5. CRT Driver Test Circuit