

MOTOROLA SEMICONDUCTOR TECHNICAL DATA

The RF Line Video Driver Hybrid Amplifiers

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

- Typical 10–90% Transition Times are 2.5 ns
- 130 MHz Minimum Bandwidth at 40 V_{p-p} Output
- Low Power Consumption
- Excellent Grey-Scale Linearity
- Unconditional Stability
- Gold Metallization System for the Ultimate in Reliability
- Reverse Polarity Version CR2424R (Negative Supply) for Grid Drive Application

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Supply Voltage	V _{CC}	70	Vdc
Case Operating Temperature Range	T _C	–20 to +100	°C
Storage Temperature Range	T _{stg}	–40 to +100	°C

ELECTRICAL CHARACTERISTICS (V_{CC} = 60 V, T_C = 25°C, C_{Load} = 8.5 pF, 40 V Peak-to-Peak output swing with 30 Vdc offset; R₁ = 215 ohms, C₁ = 90 pF typ.)

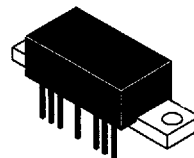
Characteristic	Symbol	Min	Typ	Max	Unit	
Supply Current (With Input Open Circuited)	I _{CC}	39.5	43.5	47.5	mA	
Input DC Voltage (With Input Open Circuited)	V _{inDC}	1.15	1.4	1.65	V	
Output DC Voltage (With Input Open Circuited)	V _{outDC}	26	30	34	V	
Voltage Gain (1) (2)	A _V	—	12.4	—	V/V	
Transient Response (2)	— Rise Time (10% to 90%)	t _r	—	2.5	2.9	ns
		— Overshoot	V _{os,r}	—	8.0	15
	— Fall Time (10% to 90%)	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, max}	—	—	100	mA	
Linearity Error (V _{out} = +5.0 V to +55 V)	—	—	—	5.0	%	

NOTES:

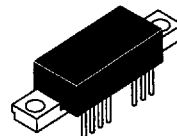
1. A_V = V_{out}/V_s
2. Input Signal is nominally a 62.5 KHz square wave of 3.25 V peak-to-peak with 1.4 Vdc offset. Input t_r, t_f < 1.0 ns.
3. Output is not short circuit protected.

**CR2424A
CR2424R
CR2425A**

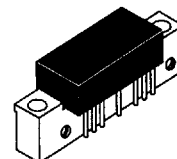
2.5 ns
130 MHz
VIDEO DRIVER
HYBRID
AMPLIFIERS



CASE 714G, STYLE 1
(CA LP)
CR2424A



CASE 714L, STYLE 1
(CA LP, NEG SUPPLY)
CR2424R



CASE 714F, STYLE 1
(CA)
CR2425A

TYPICAL CHARACTERISTICS

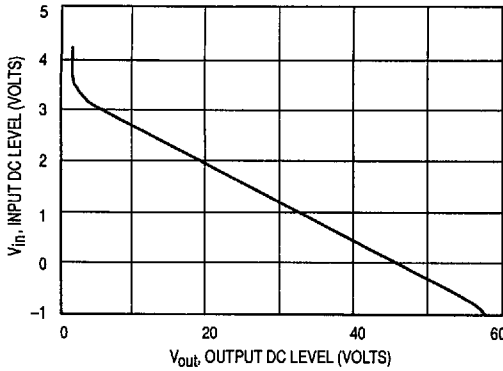


Figure 1. Voltage Ratio at RF Input Port

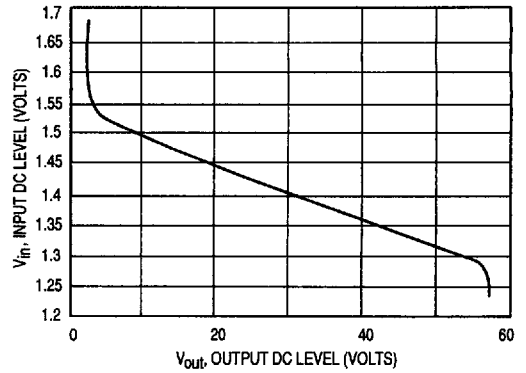


Figure 2. Voltage Ratio at Port 1

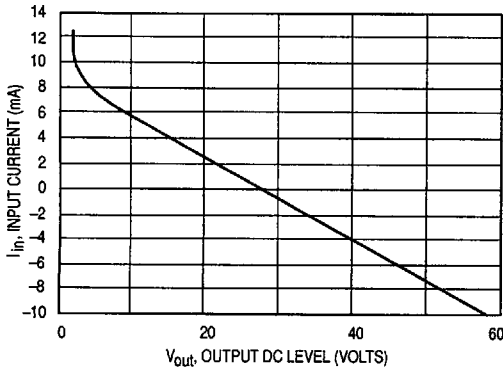


Figure 3. Output Voltage versus Input Current

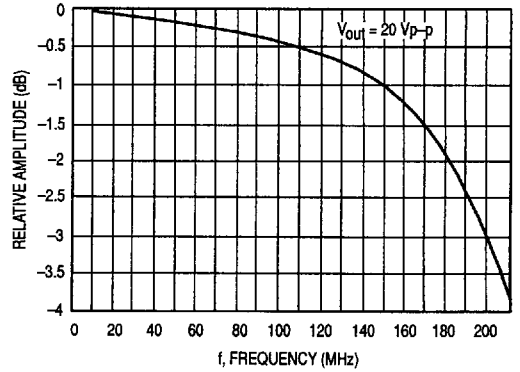


Figure 4. Frequency Response

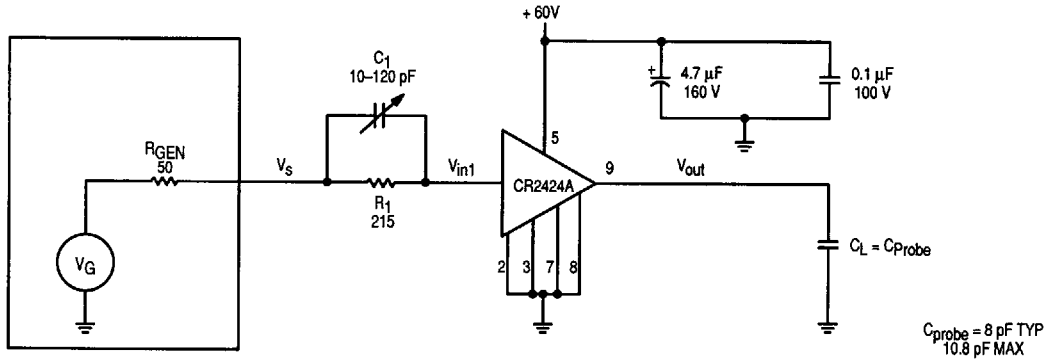


Figure 5. CRT Driver Test Circuit

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