

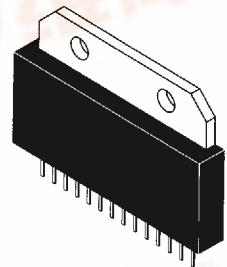
The RF Line Triple Video Driver Hybrid Amplifier

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

- 80 V Supply Operation Provide Large DC Offset Range for Color Applications
- Typical 10–90% Transitions Times are 2.7 ns
- 120 MHz Minimum Bandwidth at 40 V_{p-p} Output
- Up to 70 V_{p-p} Output Swing with 80 V Supply Voltage
- Low Power Consumption
- Excellent Grey–Scale Linearity
- Unconditional Stability
- Gold Metallization System for the Ultimate in Reliability

MHW3528

2.7 ns
120 MHz
**TRIPLE VIDEO DRIVER
HYBRID
AMPLIFIER**



CASE 445-02
Style 1

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Supply Voltage	V _{CC}	90	V _{dc}
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} = 80 V, C_{LOAD} = 10 pF, 40 V peak-to-peak output swing with 40 V_{dc} offset; R₁ = 287 ohms, C₁ = 60 pF Typ)

Characteristic	Symbol	Min	Typ	Max	Unit
Supply Current (With Input Open Circuited) Per Channel	I _{CC}	41	45	49	mA
Input DC Voltage (With Input Open Circuited)	V _{inDC}	1.3	1.55	1.8	V
Output DC Voltage (With Input Open Circuited)	V _{outDC}	36	40	44	V
Voltage Gain (1) (2)	A _v	—	12.7	—	V/V
Transient Response (2)					
— Rise Time (10% to 90%)	t _r	—	2.7	3.1	ns
— Overshoot	V _{OS,r}	—	8.0	10	%
— Fall Time (90% to 10%)	t _f	—	2.7	3.1	ns
— Overshoot	V _{OS,f}	—	6.0	10	%
Operating Supply Current per Channel (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 normally a 62.5 KHz square wave of 3.2 V peak-to-peak with 1.5 V_{dc} offset. Input t_r, t_f < 1.0 ns.
3. Output is not short circuit protected.



TYPICAL CHARACTERISTICS

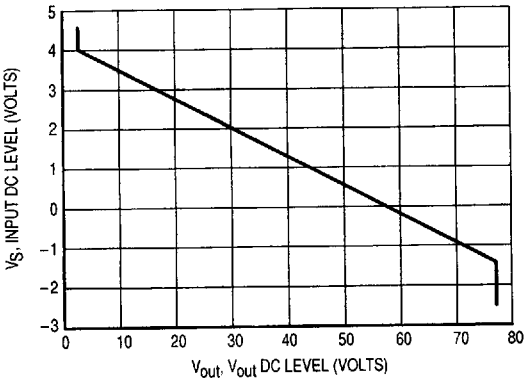


Figure 1. V_S versus V_{out}

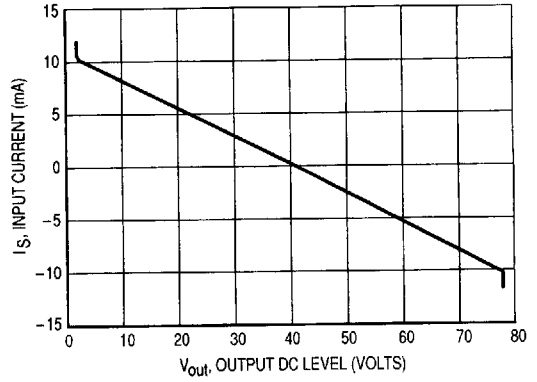


Figure 2. I_S versus V_{out}

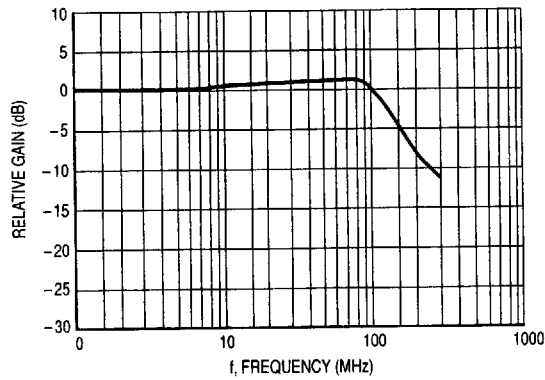


Figure 3. Frequency Response

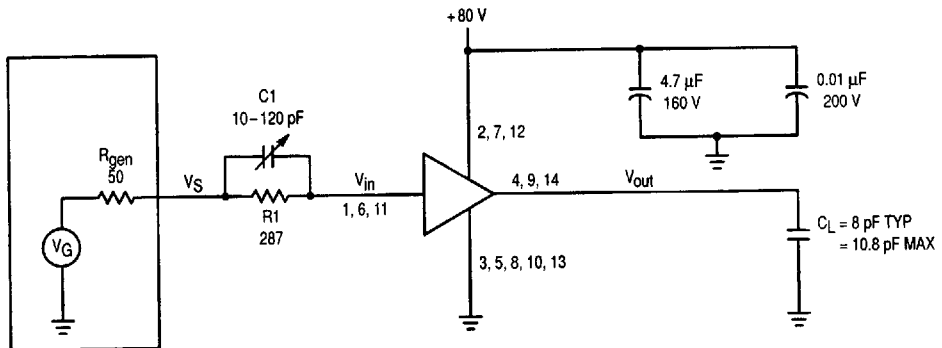


Figure 4. Hybrid Amplifier Test Circuit