

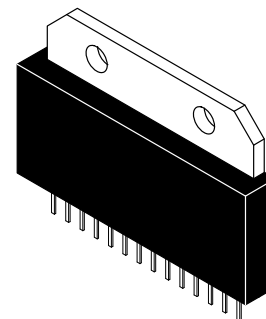
## The RF Line Triple Video Driver Hybrid Amplifier

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 Vp–p Output
- Up to 70 Vp–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	Vdc
Operating Case Temperature Range	$T_C$	-20 to +100	°C
Storage Temperature Range	$T_{stg}$	-40 to +100	°C

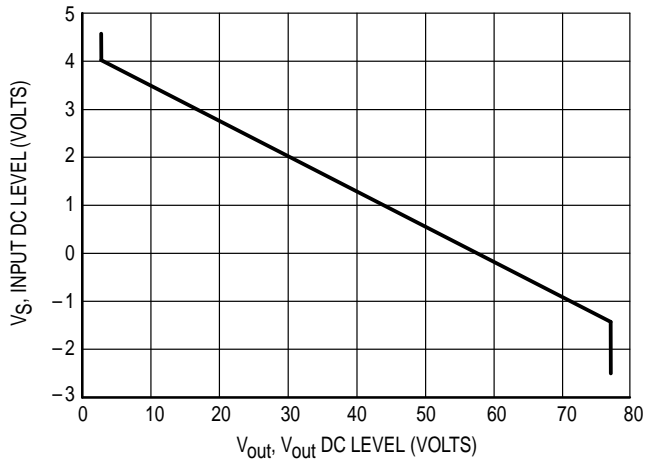
**ELECTRICAL CHARACTERISTICS** ( $T_C = 25^\circ\text{C}$ ,  $V_{CC} = 80\text{ V}$ ,  $C_{LOAD} = 10\text{ pF}$ , 40 V peak-to-peak output swing with 40 Vdc offset;  $R_1 = 287\text{ ohms}$ ,  $C_1 = 60\text{ pF Typ}$ )

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 ( $V_{out} = 40\text{ V Peak-to-Peak}$ , 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	%

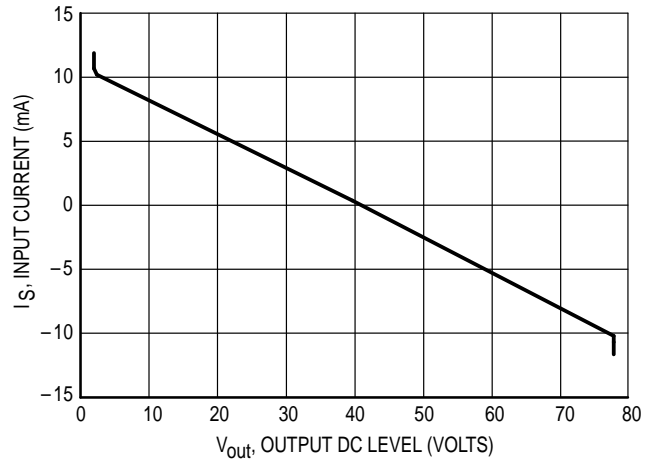
#### NOTES:

1.  $A_V = V_{out}/V_S$
2. Input Signal is normally a 62.5 KHz square wave of 3.2 V peak-to-peak with 1.5 Vdc offset. Input  $t_r$ ,  $t_f < 1.0\text{ ns}$ .
3. Output is not short circuit protected.

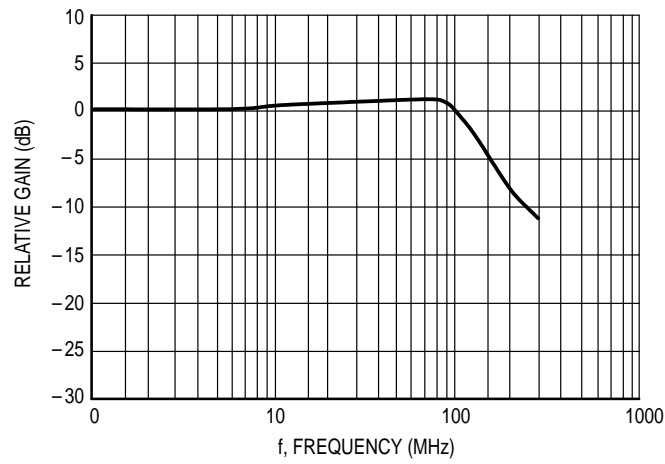
## TYPICAL CHARACTERISTICS



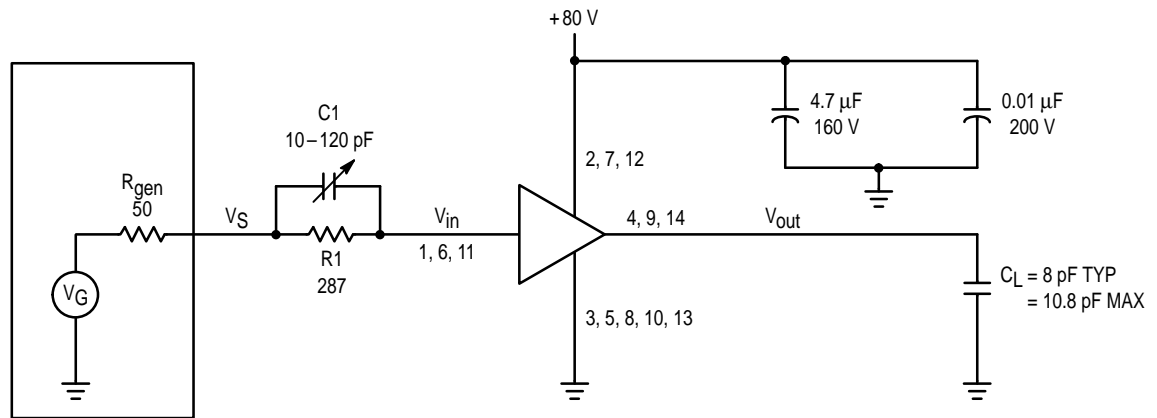
**Figure 1.  $V_S$  versus  $V_{out}$**



**Figure 2.  $I_S$  versus  $V_{out}$**



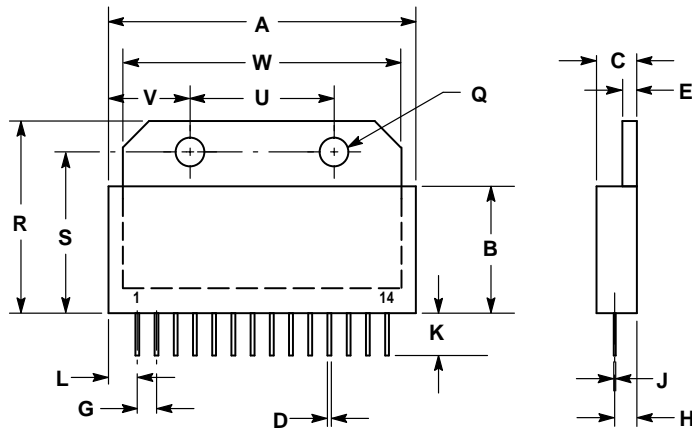
**Figure 3. Frequency Response**



**Figure 4. Hybrid Amplifier Test Circuit**

# PACKAGE DIMENSIONS


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



DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	—	1.570	—	39.88
B	—	0.665	—	16.89
C	0.210	0.225	5.33	5.72
D	0.020	—	0.51	—
E	0.070	0.085	1.78	2.16
G	0.095	0.105	2.41	2.67
H	0.105	0.130	2.67	3.30
J	0.010	—	0.25	—
K	0.210	0.230	5.33	5.84
L	0.120	0.145	3.05	3.68
Q	0.140	0.155	3.56	3.94
R	0.995	1.015	25.27	25.78
S	0.835	0.855	21.21	21.72
U	0.745	0.755	18.92	19.18
V	0.385	0.415	9.78	10.54
W	1.440	1.455	36.58	36.96

- STYLE 1:  
 PIN 1:  $V_{IN}$   
 2:  $+V_{CC}$   
 3: GROUND  
 4:  $V_{OUT}$   
 5: GROUND  
 6:  $V_{IN}$   
 7:  $+V_{CC}$   
 8: GROUND  
 9:  $V_{OUT}$   
 10: GROUND  
 11:  $V_{IN}$   
 12:  $+V_{CC}$   
 13: GROUND  
 14:  $V_{OUT}$

CASE 445-02  
 ISSUE A

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MHW3528/D

