

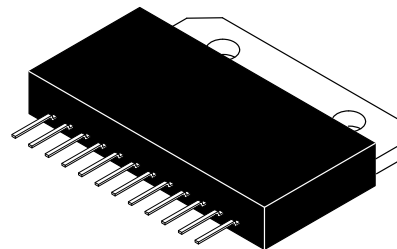
The RF Line Triple Video Output Hybrid Amplifier

A high performance triple video output amplifier designed specially for use as the video channel final stage in high resolution color monitors.

- Typical 10–90% Transitions Times are 2.3 ns
- Supports Video Clock Rates up to 250 MHz
- Up to 80 V_{p-p} Output Swing with 90 V Supply Voltage
- Low Power Consumption
- Excellent Gray–Scale Linearity
- Unconditional Stability
- Gold Metallization System for the Ultimate in Reliability

MHW3928

**2.3 ns
TRIPLE VIDEO OUTPUT
HYBRID
AMPLIFIER**



CASE 455-01, STYLE 1

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Supply Voltage	V _{CC}	+95	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} = 90 V, C_{LOAD} = 10 pF, 40 V Peak-to-Peak Output Swing with 45 Vdc Offset; R₁ = 510 Ω, C₁ = 39 pF Typ)

Characteristic	Symbol	Min	Typ	Max	Unit
Supply Current (With Input Open Circuited) Per Channel	I _{CC}	28	32	36	mA
Input DC Voltage (With Input Open Circuited)	V _{inDC}	1.2	1.5	1.8	V
Input DC Voltage (With Input Open Circuited)	V _{outDC}	42	45	48	V
Voltage Gain (1) (2)	A _V	10.8	12	14.2	V/V
Transient Response (2)					
— Rise Time (10% to 90%)	t _r	—	2.3	2.7	ns
— Overshoot	V _{OS,r}	—	6.0	10	%
— Fall Time (90% to 10%)	t _f	—	2.3	2.7	ns
— Overshoot	V _{OS,f}	—	6.0	10	%
Operating Supply Current per Channel @ 50 MHz Square Wave (3)	I _{CC}				mA
(V _{out} = 40 V _{p-p} and 45 V offset)		—	68	—	
(V _{out} = 50 V _{p-p} and 45 V offset)		—	78	—	
Linearity Error (V _{out} = 5.0 V to +85 V)	—	—	—	5.0	%

(1) A_V = V_{out}/V_S

(2) Input Signal is normally a 62.5 kHz square wave of 3.3 V peak-to-peak with 1.5 Vdc offset. Input t_r, t_f < 1.0 ns.

(3) Output is not short circuit protected.

TYPICAL CHARACTERISTICS

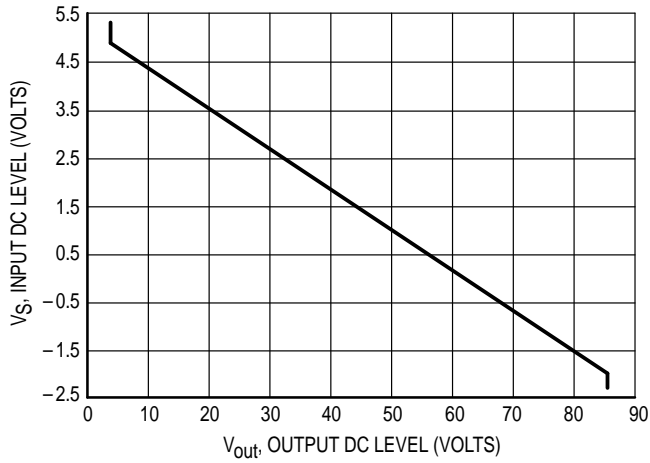


Figure 1. V_S versus V_{out}

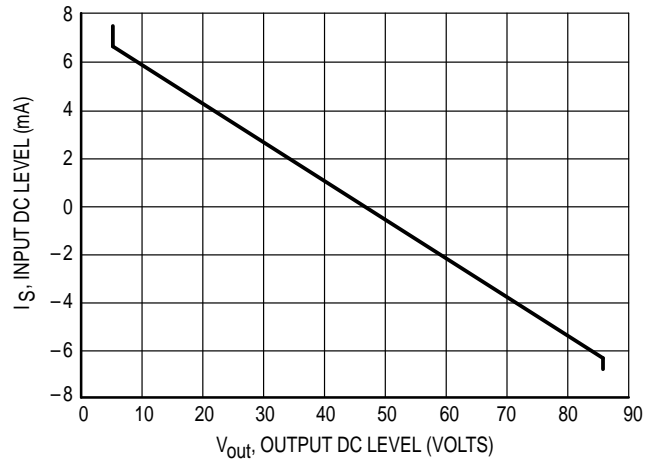


Figure 2. I_S versus V_{out}

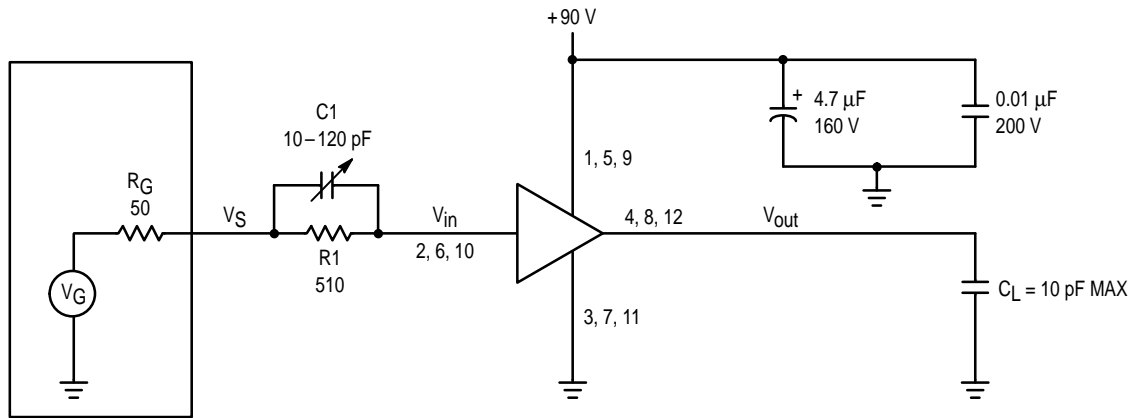
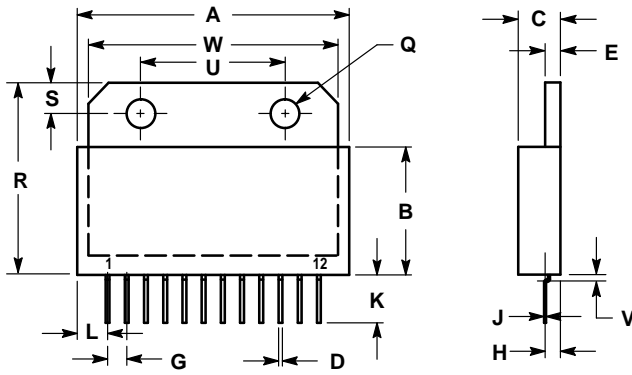


Figure 3. Hybrid Amplifier Test Circuit

PACKAGE DIMENSIONS




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

DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	—	1.415	—	35.94
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	0.065	0.085	1.65	2.16
J	0.010	—	0.25	—
K	0.250	—	6.33	—
L	0.150	0.160	3.81	4.06
Q	0.140	0.155	3.56	3.94
R	0.995	1.015	25.27	25.78
S	0.155	0.165	3.94	4.19
U	0.745	0.755	18.92	19.18
V	—	0.025	—	0.64
W	1.295	1.305	32.89	33.15

- STYLE 1:
 PIN 1. +VCC
 2. VIN
 3. GROUND
 4. VOUT
 5. +VCC
 6. VIN
 7. GROUND
 8. VOUT
 9. +VCC
 10. VIN
 11. GROUND
 12. VOUT

**CASE 455-01
 ISSUE A**

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MHW3928/D

