

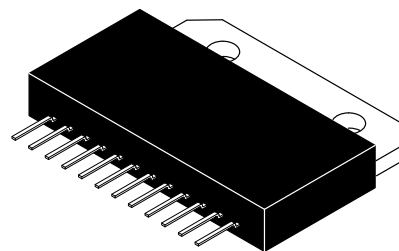
The RF Line Triple Video Output Hybrid Amplifier

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 Vp–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 ($T_C = 25^\circ\text{C}$, $V_{CC} = 90\text{ V}$, $C_{LOAD} = 10\text{ pF}$, 40 V Peak–to–Peak Output Swing with 45 Vdc Offset; $R_1 = 510\ \Omega$, $C_1 = 39\text{ pF}$ 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
($V_{out} = 40\text{ Vp–p}$ and 45 V offset)		—	68	—	
($V_{out} = 50\text{ Vp–p}$ and 45 V offset)		—	78	—	
Linearity Error ($V_{out} = 5.0\text{ V}$ 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 , $t_f < 1.0\text{ ns}$.

(3) Output is not short circuit protected.



TYPICAL CHARACTERISTICS

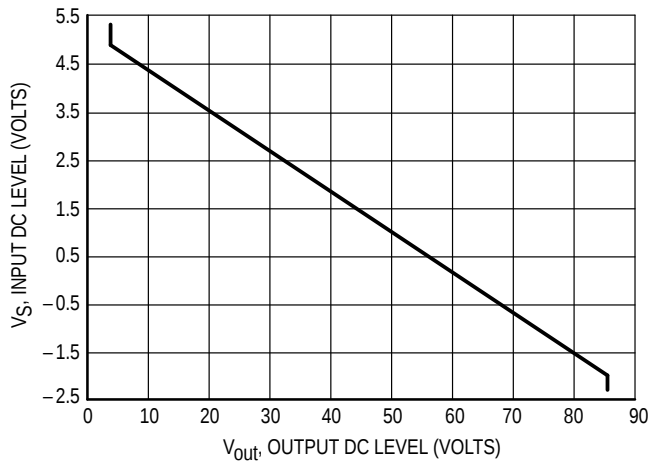


Figure 1. V_S versus V_{out}

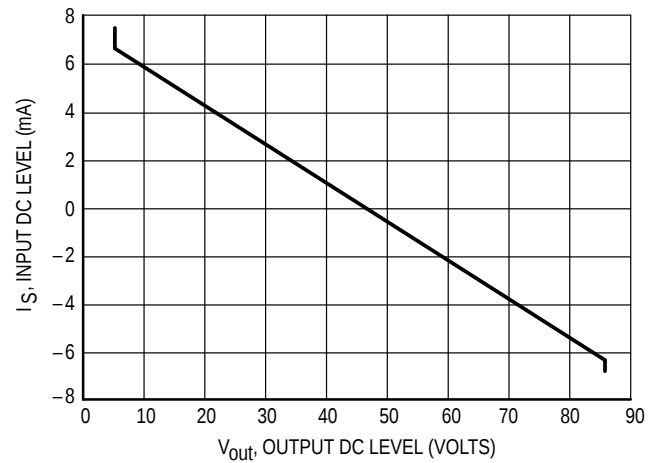


Figure 2. I_S versus V_{out}

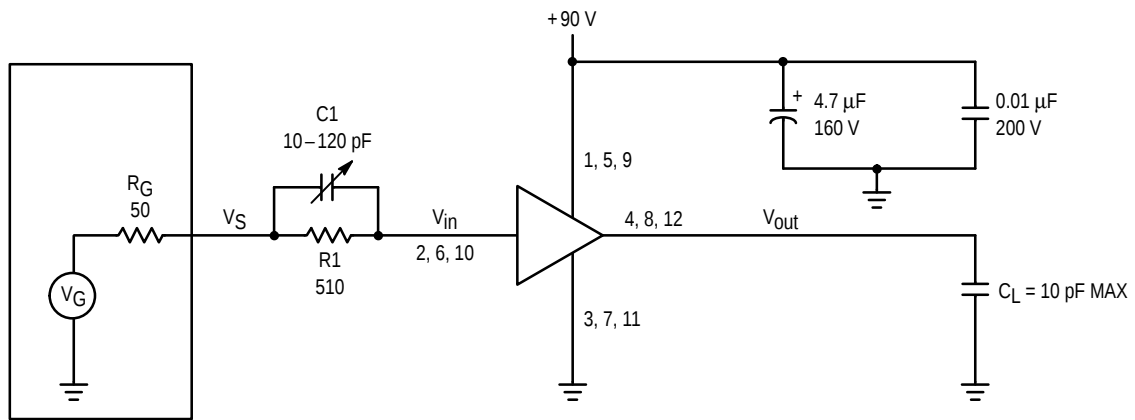
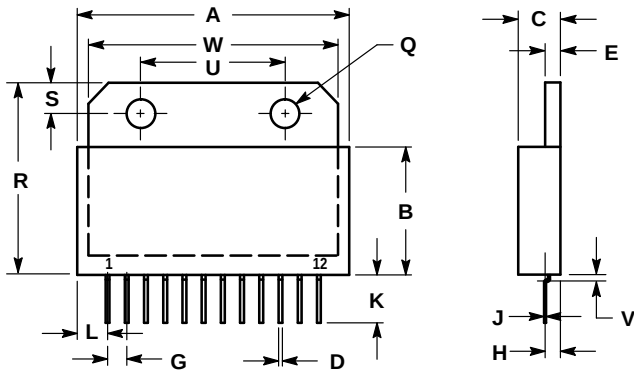


Figure 3. Hybrid Amplifier Test Circuit

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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How to reach us:

USA/EUROPE/Locations Not Listed: Motorola Literature Distribution;
P.O. Box 20912; Phoenix, Arizona 85036. 1-800-441-2447 or 602-303-5454

MFAX: RMFAX0@email.sps.mot.com – TOUCHTONE 602-244-6609
INTERNET: <http://Design-NET.com>

JAPAN: Nippon Motorola Ltd.; Tatsumi-SPD-JLDC, 6F Seibu-Butsuryu-Center,
3-14-2 Tatsumi Koto-Ku, Tokyo 135, Japan. 03-81-3521-8315

ASIA/PACIFIC: Motorola Semiconductors H.K. Ltd.; 8B Tai Ping Industrial Park,
51 Ting Kok Road, Tai Po, N.T., Hong Kong. 852-26629298



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MHW3928/D

