

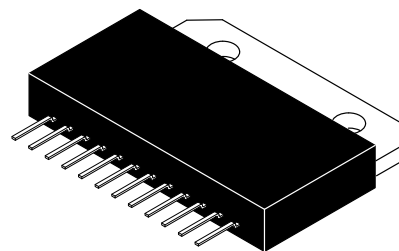
The RF Line Triple Video Driver Hybrid Amplifier

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

- Typical 10–90% Transitions Times are 3.0 ns
- 110 MHz – 3.0 dB Bandwidth at 40 Vp–p Output
- 220 MHz Pixel Frequency
- Up to 60 Vp–p Output Swing with 70 V Supply Voltage
- Low Power Consumption
- Excellent Gray–scale Linearity
- Unconditional Stability
- Gold Metallization System for the Ultimate in Reliability

MHW3628

**3.0 ns
TRIPLE VIDEO DRIVER
HYBRID
AMPLIFIER**



CASE 455–01, STYLE 1

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Supply Voltage	V_{CC}	80	Vdc
Operating Case Temperature Range	T_C	–20 to +100	°C
Storage Temperature Range	T_{stg}	–40 to +100	°C

ELECTRICAL CHARACTERISTICS ($T_C = 25^\circ\text{C}$, $V_{CC} = 70\text{ V}$, $C_{LOAD} = 10\text{ pF}$, 40 V Peak–to–Peak Output Swing with 35 Vdc Offset; $R_1 = 287\ \Omega$, $C_1 = 60\text{ pF}$ Typ)

Characteristic	Symbol	Min	Typ	Max	Unit
Supply Current (With Input Open Circuited) Per Channel	I_{CC}	33	37	41	mA
Input DC Voltage (With Input Open Circuited)	V_{inDC}	1.15	1.4	1.65	V
Input DC Voltage (With Input Open Circuited)	V_{outDC}	32	33	37	V
Voltage Gain (1) (2)	A_V	—	12.7	—	V/V
Transient Response (2)					
— Rise Time (10% to 90%)	t_r	—	3.0	3.4	ns
— Overshoot	$V_{OS,r}$	—	2.0	7.0	%
— Fall Time (90% to 10%)	t_f	—	2.8	3.2	ns
— Overshoot	$V_{OS,f}$	—	2.0	7.0	%
Operating Supply Current per Channel ($V_{out} = 40\text{ V}$ Peak–to–Peak, 50 MHz Square Wave with 40 V Offset) (3)	I_{CC}	—	70	—	mA
Linearity Error ($V_{out} = 5.0\text{ V}$ to +75 V)	—	—	—	5.0	%

(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 1.4 Vdc offset. Input t_r , $t_f < 1.0\text{ ns}$

(3) Output is not short circuit protected

TYPICAL CHARACTERISTICS

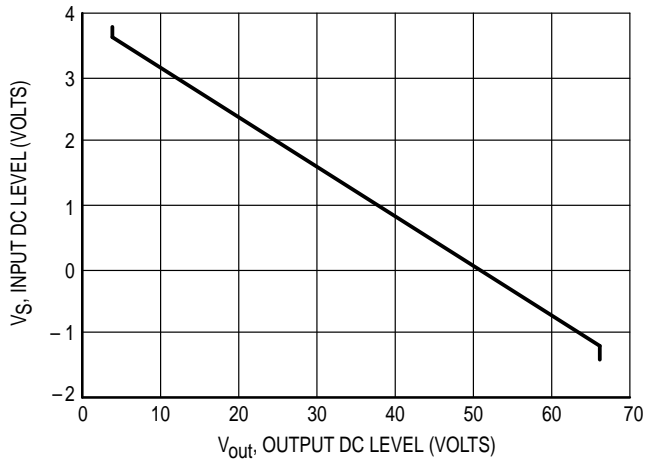


Figure 1. V_S versus V_{out}

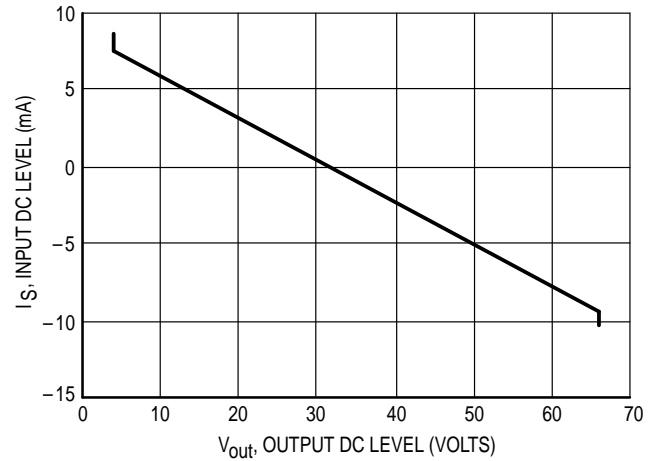


Figure 2. I_S versus V_{out}

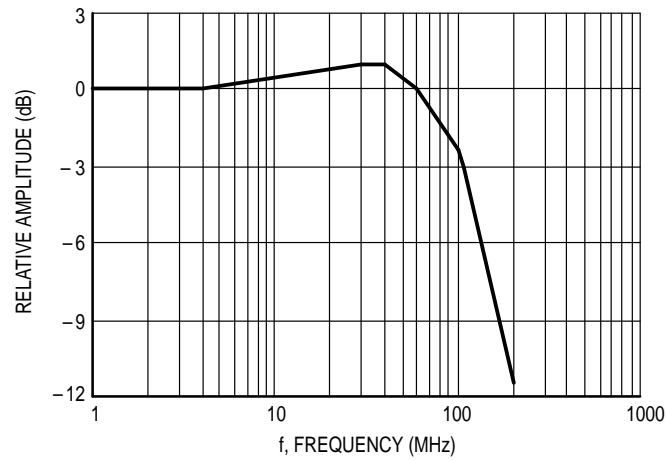


Figure 3. Frequency Response

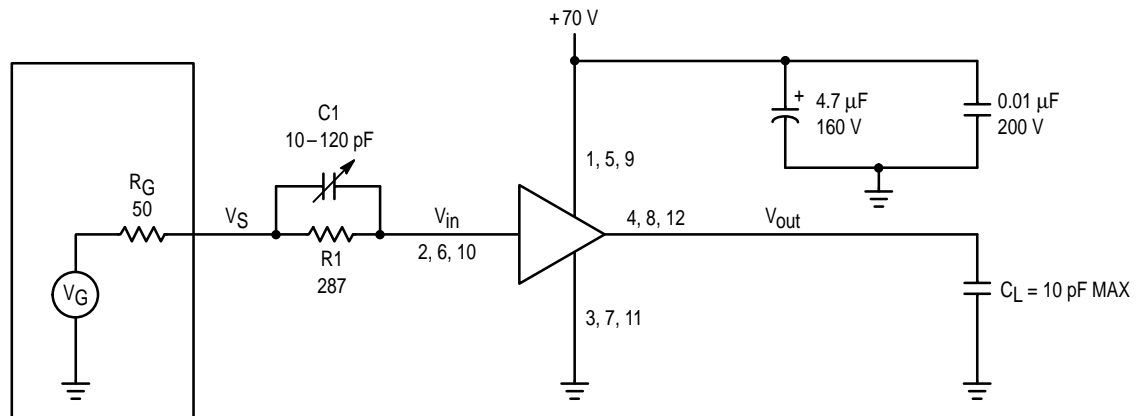
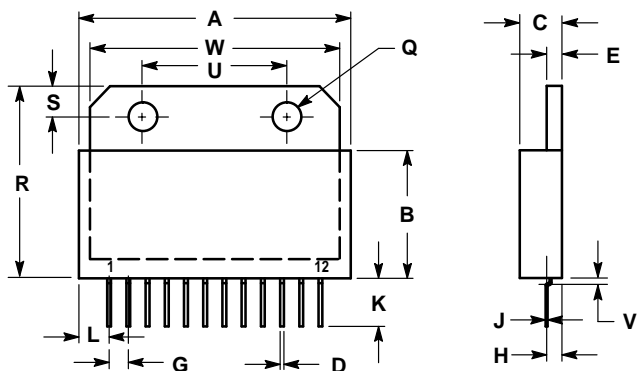


Figure 4. Hybrid Amplifier Test Circuit

PACKAGE DIMENSIONS




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

DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	—	1.415	—	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	—	5.33	—
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 O

Motorola reserves the right to make changes without further notice to any products herein. Motorola makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does Motorola assume any liability arising out of the application or use of any product or circuit, and specifically disclaims any and all liability, including without limitation consequential or incidental damages. "Typical" parameters which may be provided in Motorola data sheets and/or specifications can and do vary in different applications and actual performance may vary over time. All operating parameters, including "Typicals" must be validated for each customer application by customer's technical experts. Motorola does not convey any license under its patent rights nor the rights of others. Motorola products are not designed, intended, or authorized for use as components in systems intended for surgical implant into the body, or other applications intended to support or sustain life, or for any other application in which the failure of the Motorola product could create a situation where personal injury or death may occur. Should Buyer purchase or use Motorola products for any such unintended or unauthorized application, Buyer shall indemnify and hold Motorola and its officers, employees, subsidiaries, affiliates, and distributors harmless against all claims, costs, damages, and expenses, and reasonable attorney fees arising out of, directly or indirectly, any claim of personal injury or death associated with such unintended or unauthorized use, even if such claim alleges that Motorola was negligent regarding the design or manufacture of the part. Motorola and  are registered trademarks of Motorola, Inc. Motorola, Inc. is an Equal Opportunity/Affirmative Action Employer.

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



MOTOROLA



MHW3628/D

