

CATV Amplifier Module

Features

- Specified for 6- and 10-Channel Loading
- Excellent Distortion Performance
- Low Power Consumption
- Capable of Handling Multiple Channels in the Return Path with Good Distortion Performance
- Silicon Bipolar Transistor Technology
- Unconditionally Stable Under All Load Conditions

Applications

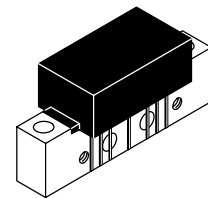
- CATV Systems Operating in the 5 to 65 MHz Frequency Range
- Specified for Use as a Return Path Amplifier for Low-Split 2-Way Cable TV Systems

Description

- 24 Vdc Supply, 5 to 65 MHz, CATV Reverse Amplifier Module
- Replaced MHW1254LA. There are no form, fit or function changes with this part replacement.
- RoHS Compliant

MHW1254LAN

**5-65 MHz, 25.5 dB, 10-CHANNEL
CATV LOW CURRENT
AMPLIFIER MODULE**



CASE 1302-01, STYLE 1

Table 1. Maximum Ratings

Parameter	Symbol	Value	Unit
DC Supply Voltage	V_{CC}	+28	Vdc
RF Input Voltage (Single Tone)	V_{in}	+60	dBmV
Operating Case Temperature Range	T_C	-20 to +100	°C
Storage Temperature Range	T_{stg}	-40 to +100	°C

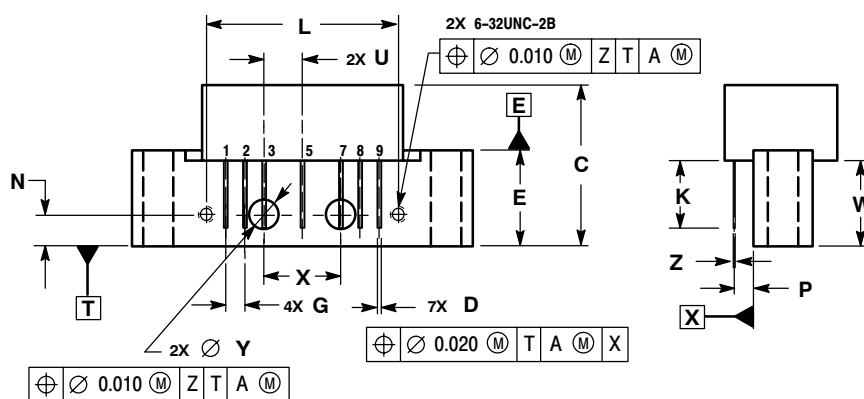
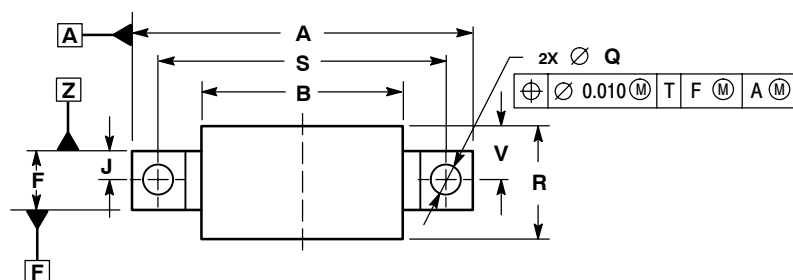
Table 2. Electrical Characteristics ($V_{CC} = 24$ Vdc, $T_C = 30^\circ\text{C}$, 75 Ω system, unless otherwise noted)

Characteristic	Symbol	Min	Typ	Max	Unit
Bandwidth All	BW	5	—	65	MHz
Power Gain (f = 5 MHz)	G_p	25	25.5	26	dB
Slope (5-65 MHz)	S	-0.2	—	0.5	dB
Gain Flatness (Peak To Valley) (5-65 MHz)	G_F	—	—	0.4	dB
Return Loss — Input/Output (@ f = 5-65 MHz)	IRL/ORL	20	—	—	dB
Composite Second Order ($V_{out} = +50$ dBmV per Ch., Worst Case)					dBc
6-Channel FLAT	CSO_6	—	-73	-68	
10-Channel FLAT	CSO_{10}	—	-71	-66	

Table 2. Electrical Characteristics ($V_{CC} = 24\text{ Vdc}$, $T_C = 30^\circ\text{C}$, $75\ \Omega$ system, unless otherwise noted) **(continued)**

Characteristic	Symbol	Min	Typ	Max	Unit
Cross Modulation Distortion ($V_{out} = +50\text{ dBmV}$ per Ch., Worst Case)					dBc
6-Channel FLAT	XMD_6	—	- 69	- 65	
10-Channel FLAT	XMD_{10}	—	- 64	- 61	
Composite Triple Beat ($V_{out} = +50\text{ dBmV}$ per Ch., Worst Case)					dBc
6-Channel FLAT	CTB_6	—	- 78	- 75	
10-Channel FLAT	CTB_{10}	—	- 69	- 66	
Noise Figure ($f = 5\text{ - }65\text{ MHz}$)	NF	—	5.8	6.5	dB
DC Current	I_{DC}	85	95	110	mA

PACKAGE DIMENSIONS



DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	---	1.775	---	45.085
B	---	1.085	---	27.559
C	---	0.840	---	21.336
D	0.015	0.021	0.381	0.533
E	0.465	0.510	11.811	12.954
F	0.300	0.325	7.62	8.255
G	0.100 BSC		2.540 BSC	
J	0.156 BSC		3.962 BSC	
K	0.315	0.355	8.001	9.017
L	1.000 BSC		25.400 BSC	
N	0.165 BSC		4.191 BSC	
P	0.100 BSC		2.540 BSC	
Q	0.148	0.168	3.759	4.267
R	---	0.600	---	15.24
S	1.500 BSC		38.100 BSC	
U	0.200 BSC		5.080 BSC	
V	---	0.250	---	6.350
W	0.435	---	11.049	---
X	0.400 BSC		10.160 BSC	
Y	0.152	0.163	3.861	4.140
Z	0.009	0.011	0.229	0.279

STYLE 1:
PIN 1: RF INPUT
2: GROUND
3: GROUND
4: DELETED
5: VDC
6: DELETED
7: GROUND
8: GROUND
9: RF OUTPUT

CASE 1302-01
ISSUE E

How to Reach Us:

Home Page:
www.freescale.com

E-mail:
support@freescale.com

USA/Europe or Locations Not Listed:
Freescale Semiconductor
Technical Information Center, CH370
1300 N. Alma School Road
Chandler, Arizona 85224
+1-800-521-6274 or +1-480-768-2130
support@freescale.com

Europe, Middle East, and Africa:
Freescale Halbleiter Deutschland GmbH
Technical Information Center
Schatzbogen 7
81829 Muenchen, Germany
+44 1296 380 456 (English)
+46 8 52200080 (English)
+49 89 92103 559 (German)
+33 1 69 35 48 48 (French)
support@freescale.com

Japan:
Freescale Semiconductor Japan Ltd.
Headquarters
ARCO Tower 15F
1-8-1, Shimo-Meguro, Meguro-ku,
Tokyo 153-0064
Japan
0120 191014 or +81 3 5437 9125
support.japan@freescale.com

Asia/Pacific:
Freescale Semiconductor Hong Kong Ltd.
Technical Information Center
2 Dai King Street
Tai Po Industrial Estate
Tai Po, N.T., Hong Kong
+800 2666 8080
support.asia@freescale.com

For Literature Requests Only:

Freescale Semiconductor Literature Distribution Center
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