

Replaced by MHW7222BN. There are no form, fit or function changes with this part replacement. N suffix indicates RoHS compliant part.

MHW7222B

**750 MHz
 22.7 dB GAIN
 110-CHANNEL
 CATV AMPLIFIER MODULE**

CATV Amplifier Module

Features

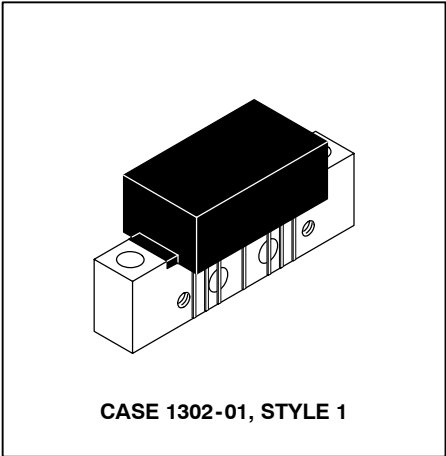
- Specified for 77- and 110-Channel Loading
- Excellent Distortion Performance
- Silicon Bipolar Transistor Technology
- Unconditionally Stable Under All Load Conditions

Applications

- CATV Systems Operating in the 40 to 750 MHz Frequency Range
- Input Stage Amplifier in Optical Nodes, Line Extenders and Trunk Distribution Amplifiers for CATV Systems
- Driver Amplifier in Linear General Purpose Applications
- Output Stage Amplifier on Applications Requiring Low Power Dissipation

Description

- 24 Vdc Supply, 40 to 750 MHz, CATV Forward Amplifier Module



ARCHIVE INFORMATION

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Table 1. Maximum Ratings

Rating	Symbol	Value	Unit
DC Supply Voltage	V _{CC}	+28	Vdc
RF Input Voltage (Single Tone)	V _{in}	+70	dBmV
Operating Case Temperature Range	T _C	-20 to +100	°C
Storage Temperature Range	T _{stg}	-40 to +100	°C

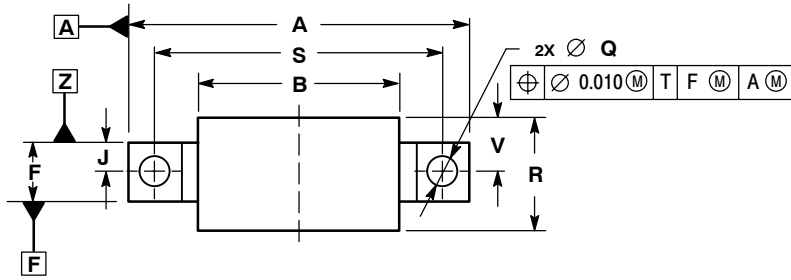
Table 2. Electrical Characteristics (V_{CC} = 24 Vdc, T_C = +30°C, 75 Ω system unless otherwise noted)

Characteristic	Symbol	Min	Typ	Max	Unit
Frequency Range	BW	40	—	750	MHz
Power Gain f = 50 MHz f = 750 MHz	G _p	21.4 22.2	21.9 22.7	22.4 23.2	dB
Slope (f = 40 - 750 MHz)	S	0.2	0.7	1.2	—
Gain Flatness (Peak To Valley) (f = 40 - 750 MHz)	G _F	—	0.4	0.6	—
Input/Output Return Loss @ f = 40 MHz	IRL/ORL	20	25	—	dB
Derate Return Loss @ f > 40 MHz	RLD	—	—	0.006	dB/MHz
Composite Second Order (V _{out} = +40 dBmV/ch; 110 Channels) (V _{out} = +44 dBmV/ch; 77 Channels)	CSO ₁₁₀ CSO ₇₇	— —	-67 -67	-60 -60	dBc

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

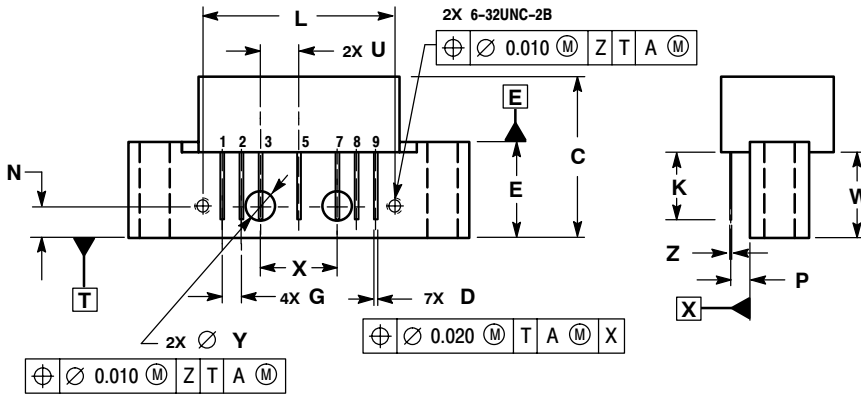
Characteristic	Symbol	Min	Typ	Max	Unit
Cross Modulation Distortion ($V_{out} = +40 \text{ dBmV/ch}$, 110-Channel @ $F_m = 55.25 \text{ MHz}$) ($V_{out} = +44 \text{ dBmV/ch}$, 77-Channel @ $F_m = 55.25 \text{ MHz}$)	XMD ₁₁₀ XMD ₇₇	— —	- 63 - 59	- 60 - 56	dBc
Composite Triple Beat ($V_{out} = +40 \text{ dBmV/ch}$, 110-Channels, Worst Case) ($V_{out} = +44 \text{ dBmV/ch}$, 77-Channels, Worst Case)	CTB ₁₁₀ CTB ₇₇	— —	- 64 - 65	- 61 - 62	dBc
Noise Figure f = 50 MHz f = 750 MHz	NF	— —	3.7 5	4.5 6.5	dB
DC Current	I _{DC}	180	220	240	mA

PACKAGE DIMENSIONS



NOTES:
 1. DIMENSIONS ARE IN INCHES.
 2. INTERPRET DIMENSIONS AND TOLERANCES PER ASME Y14.5M, 1994.

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 B

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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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Fax: 303-675-2150
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