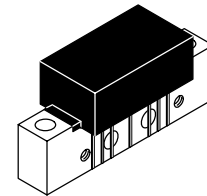


Replaced by MHW8242AN. There are no form, fit or function changes with this part replacement. N suffix indicates RoHS compliant part.

**MHW8242A**

**860 MHz**  
**25 dB GAIN**  
**128-CHANNEL**  
**CATV AMPLIFIER MODULE**



**CASE 1302-01, STYLE 1**

## CATV Amplifier Module

### Features

- Specified for 77- and 128-Channel Loading
- Excellent Distortion Performance
- Silicon Bipolar Transistor Technology
- Unconditionally Stable Under All Load Conditions

### Applications

- CATV Systems Operating in the 40 to 860 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 860 MHz, CATV Forward Amplifier Module

**Table 1. Maximum Ratings**

Rating	Symbol	Value	Unit
RF Voltage Input (Single Tone)	$V_{in}$	+55	dBmV
DC Supply Voltage	$V_{CC}$	+28	Vdc
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  $\Omega$  system unless otherwise noted)

Characteristic	Symbol	Min	Typ	Max	Unit
Frequency Range	BW	40	—	860	MHz
Power Gain	$G_p$	23.2 24	24 25	24.8 26	dB
Slope	S	0	0.8	1.8	dB
Gain Flatness (40 - 860 MHz, Peak To Valley)	$G_F$	—	0.4	0.8	dB
Return Loss — Input/Output ( $Z_0 = 75$ Ohms)	IRL/ORL	20 —	— —	— 0.007	dB dB/MHz
Composite Second Order					dBc
( $V_{out} = +38$ dBmV/ch., Worst Case)	$CSO_{128}$	—	- 69	- 62	
( $V_{out} = +44$ dBmV/ch., Worst Case)	$CSO_{77}$	—	- 78	—	
Cross Modulation Distortion @ Ch 2					dBc
( $V_{out} = +38$ dBmV/ch., FM = 55 MHz)	$XMD_{128}$	—	- 65	- 62	
( $V_{out} = +44$ dBmV/ch., FM = 55 MHz)	$XMD_{77}$	—	- 58	—	
Composite Triple Beat					dBc
( $V_{out} = +38$ dBmV/ch., Worst Case)	$CTB_{128}$	—	- 68	- 64	
( $V_{out} = +44$ dBmV/ch., Worst Case)	$CTB_{77}$	—	- 64	—	
Noise Figure	NF	— —	4.8 5.8	5.5 7.5	dB
DC Current	$I_{DC}$	280	318	350	mA

ARCHIVE INFORMATION

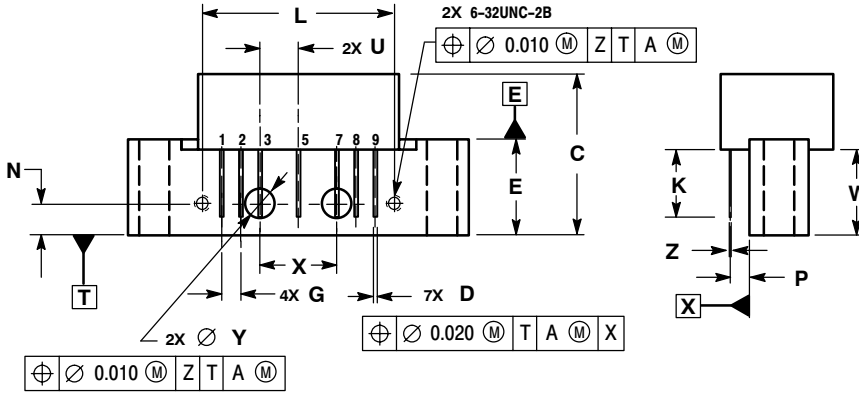
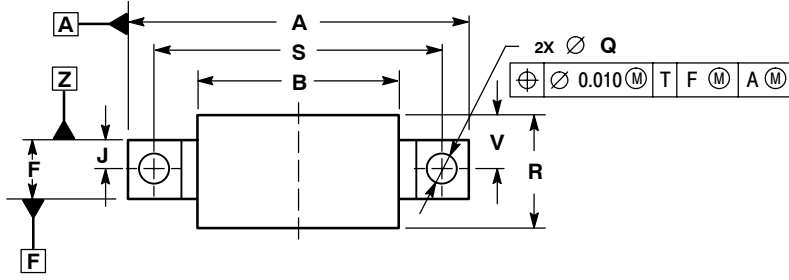
ARCHIVE INFORMATION

# NOTES

ARCHIVE INFORMATION

ARCHIVE INFORMATION

**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 B**

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