

Replaced by MHW1346N. There are no form, fit or function changes with this part replacement. N suffix indicates RoHS compliant part.

**MHW1346**

## CATV Amplifier Module

### Features

- Specified for 22- and 26-Channel Loading
- Excellent Distortion Performance
- Superior Gain, Return Loss and DC Current Stability over Temperature
- Capable of Handling Multiple Channels in the Return Path with Good Distortion Performance
- Silicon Bipolar Transistor Technology
- Unconditionally Stable Under All Load Conditions

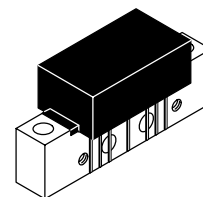
### Applications

- CATV Systems Operating in the 5 to 200 MHz Frequency Range
- Designed for Broadband Applications Requiring Low Distortion Characteristics
- Specified for Use as a Return Path Amplifier for Low-, Mid- and High-Split 2-Way Cable TV Systems

### Description

- 24 Vdc Supply, 5 to 200 MHz, CATV Reverse Amplifier Module

**5 - 200 MHz, 35 dB GAIN**  
**26-CHANNEL**  
**CATV HIGH-SPLIT**  
**REVERSE AMPLIFIER**  
**MODULE**



**CASE 1302-01, STYLE 1**

**Table 1. Maximum Ratings**

Rating	Symbol	Value	Unit
RF Voltage Input (Single Tone)	$V_{in}$	+65	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
Bandwidth All	BW	5	—	200	MHz
Power Gain (f = 5 MHz)	$G_p$	34.5	35	35.8	dB
Slope (5-200 MHz)	S	0	—	1.0	dB
Gain Flatness (Peak To Valley) (5-200 MHz)	$G_F$	—	0.6	1	dB
Return Loss — Input/Output (@ f = 5-65 MHz) (@ f = 65-200 MHz)	IRL/ORL	20 16	24 20	— —	dB
Composite Second Order ( $V_{out} = +50$ dBmV per Ch., Worst Case)					dBc
5-175 MHz 22-Channel FLAT	$CSO_{22}$	—	-76	-72	
5-200 MHz 26-Channel FLAT	$CSO_{26}$	—	-75	—	

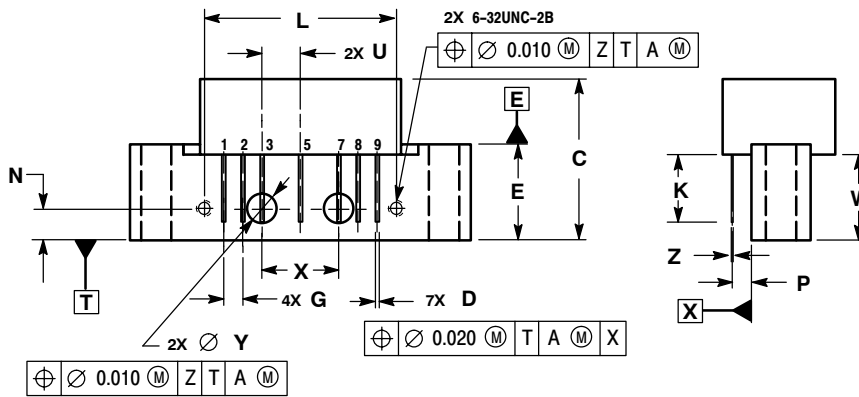
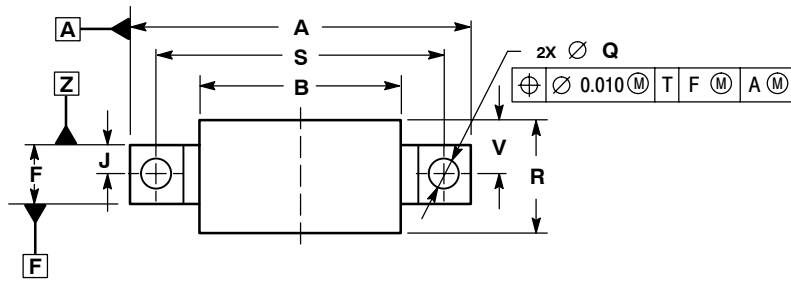
**Table 2. Electrical Characteristics** ( $V_{CC} = 24\text{ Vdc}$ ,  $T_C = 30^\circ\text{C}$ ,  $75\ \Omega$  system, unless otherwise noted) **(continued)**

Characteristic	Symbol	Min	Typ	Max	Unit
Cross Modulation Distortion ( $V_{out} = +50\text{ dBmV}$ per Ch., Worst Case)					dBc
22-Channel FLAT	$XMD_{22}$	—	- 64	- 60	
26-Channel FLAT	$XMD_{26}$	—	- 63	—	
Composite Triple Beat ( $V_{out} = +50\text{ dBmV}$ per Ch., Worst Case)					dBc
5-175 MHz 22-Channel FLAT	$CTB_{22}$	—	- 72	- 68	
5-200 MHz 26-Channel FLAT	$CTB_{26}$	—	- 70	—	
Noise Figure ( $f = 200\text{ MHz}$ )	NF	—	3.5	5	dB
DC Current	$I_{DC}$	310	325	350	mA

ARCHIVE INFORMATION

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# PACKAGE DIMENSIONS



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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Freescale Halbleiter Deutschland GmbH  
Technical Information Center  
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[support@freescale.com](mailto:support@freescale.com)

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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](mailto:support.japan@freescale.com)

**Asia/Pacific:**  
Freescale Semiconductor Hong Kong Ltd.  
Technical Information Center  
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