

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

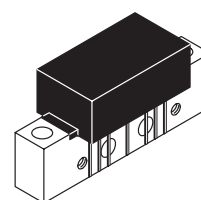
- CATV Systems Operating in the 5 to 200 MHz Frequency Range
- Specified for Use as a Return Path Amplifier for Low-, Mid- and High-Split 2-Way Cable TV Systems

Description

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

MHW1253LA

**5-200 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

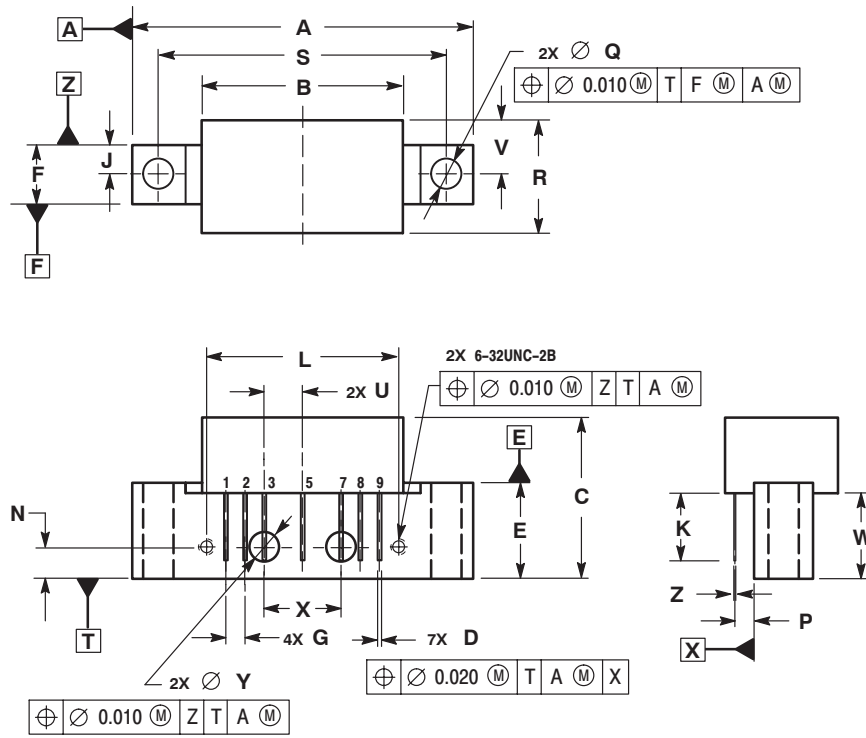
Table 2. Electrical Characteristics ($V_{CC} = 24$ Vdc, $T_C = 30^\circ\text{C}$, 75 Ω system, unless otherwise noted)

Characteristic	Symbol	Min	Typ	Max	Unit
Bandwidth All	BW	5	—	200	MHz
Power Gain (f = 5 MHz)	G_p	25	25.5	26	dB
Slope (5-200 MHz)	S	- 0.2	—	0.7	dB
Gain Flatness (Peak To Valley) (5-200 MHz)	G_F	—	—	0.4	dB
Return Loss — Input/Output (@ f = 5-150 MHz) (@ f = 150-200 MHz)	IRL/ORL	20 18	— —	— —	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 ($V_{CC} = 24 \text{ Vdc}$, $T_C = 30^\circ\text{C}$, 75Ω 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 ($f = 5\text{--}200 \text{ MHz}$)	NF	—	5.8	6.5	dB
DC Current	I_{DC}	85	95	110	mA

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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