

The RF Line 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

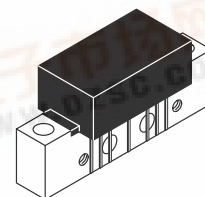
- CATV Systems Operating in the 5 to 150 MHz Frequency Range
- Specified for Use as a Return Path Amplifier for Low-, Mid- and High-Split 2-Way Cable TV Systems

Description

- 24 Vdc Supply, 5 to 150 MHz, CATV Reverse Amplifier

MHW1353LA

**5-150 MHz, 35.2 dB
10-CHANNEL
CATV LOW CURRENT AMPLIFIER**



CASE 1302-01, STYLE 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

ELECTRICAL CHARACTERISTICS ($V_{CC} = 24$ Vdc, $T_C = 30^\circ\text{C}$, 75 Ω system, unless otherwise noted)

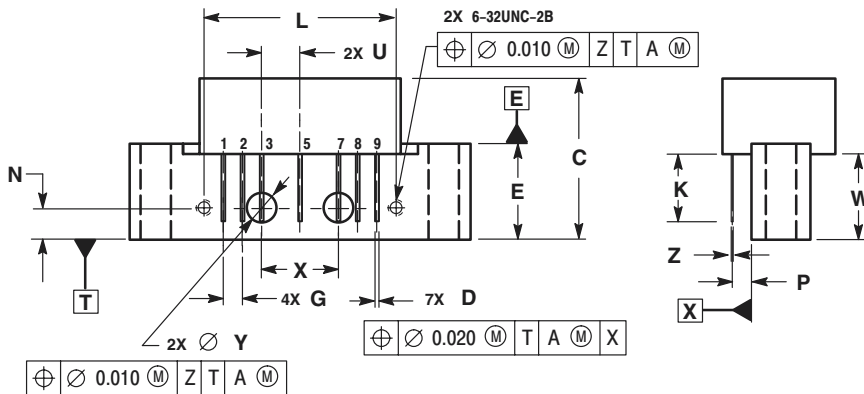
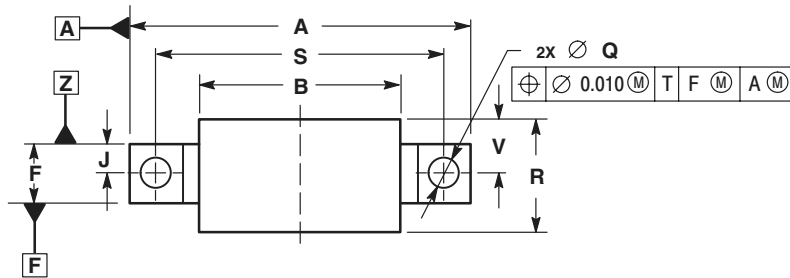
Characteristic	Symbol	Min	Typ	Max	Unit
Bandwidth All	BW	5	—	150	MHz
Power Gain ($f = 5$ MHz)	G_p	34.5	35.2	35.7	dB
Slope (5-150 MHz)	S	0	—	1	dB
Gain Flatness (Peak To Valley) (5-150 MHz)	G_F	—	—	0.7	dB
Return Loss — Input/Output (@ $f = 5-65$ MHz) (@ $f = 65-150$ MHz)	IRL/ORL	20 18	— —	— —	dB
Composite Second Order ($V_{out} = +50$ dBmV per Ch., Worst Case)					dBc
6-Channel FLAT	CSO_6	—	-73	-68	
10-Channel FLAT	CSO_{10}	—	-69	-65	

ELECTRICAL CHARACTERISTICS – continued ($V_{CC} = 24\text{ Vdc}$, $T_C = 30^\circ\text{C}$, $75\ \Omega$ system, unless otherwise noted)

Characteristic	Symbol	Min	Typ	Max	Unit
Cross Modulation Distortion ($V_{out} = +50\text{ dBmV}$ per Ch., Worst Case)					dBc
6-Channel FLAT	XMD_6	—	–66	–63	
10-Channel FLAT	XMD_{10}	—	–60	–57	
Composite Triple Beat ($V_{out} = +50\text{ dBmV}$ per Ch., Worst Case)					dBc
6-Channel FLAT	CTB_6	—	–75	–73	
10-Channel FLAT	CTB_{10}	—	–65	–62	
Noise Figure ($f = 5\text{--}150\text{ MHz}$)	NF	—	4.4	5.4	dB
DC Current	I_{DC}	85	95	110	mA

NOTES

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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