The RF Line

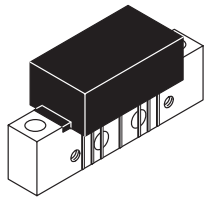
Low Distortion Wideband Reverse Amplifier Module

Designed specifically for broadband applications requiring low multi–channel distortion characteristics. Specified for use as return amplifiers for 2–way cable TV systems.

- Designed for Low Power Consumption
- Specified for 6 and 10 Channel Performance
- Guaranteed Broadband Power Gain
- Guaranteed Broadband Noise Figure
- All Gold Metallization
- Designed to Ensure Good Gain Stability versus Temperature

MHW1303LA

5–200 MHz, 30.8 dB
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°C, 75 Ω system, unless otherwise noted)

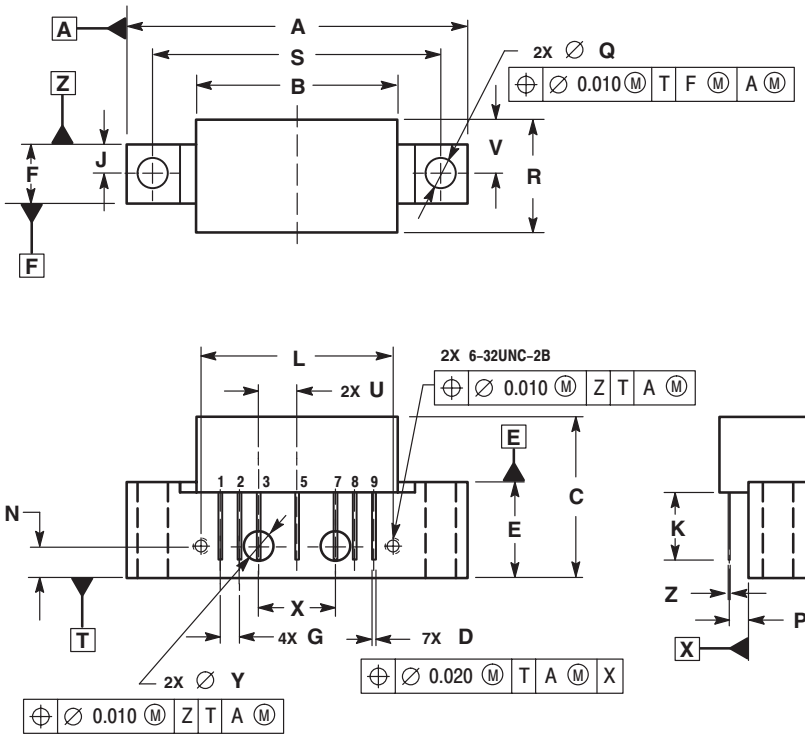
Characteristic		Symbol	Min	Typ	Max	Unit
Bandwidth	All	BW	5	—	200	MHz
Power Gain	(f = 5 MHz)	G_p	30	30.8	31.2	dB
Slope	(5–200 MHz)	S	0	—	1.0	dB
Gain Flatness (Peak To Valley)	(5–200 MHz)	—	—	—	0.7	dB
Return Loss — Input/Output		IRL/ORL				dB
	(@ f = 5–65 MHz)		20	—	—	
	(@ f = 65–200 MHz)		18	—	—	
Composite Second Order (V_{out} = +50 dBmV per Ch., Worst Case)						dB
	6–Channel FLAT	CSO_6	—	– 73	– 68	
	10–Channel FLAT	CSO_{10}	—	– 70	– 65	

ELECTRICAL CHARACTERISTICS – continued (V_{CC} = 24 Vdc, T_C = 30°C, 75 Ω system, unless otherwise noted)

Characteristic	Symbol	Min	Typ	Max	Unit
Cross Modulation Distortion (V_{out} = +50 dBmV per Ch., Worst Case)					dB
6–Channel FLAT	XMD_6	—	–67	–64	
10–Channel FLAT	XMD_{10}	—	–61	–58	
Composite Triple Beat (V_{out} = +50 dBmV per Ch., Worst Case)					dB
6–Channel FLAT	CTB_6	—	–76	–74	
10–Channel FLAT	CTB_{10}	—	–67	–64	
Noise Figure	NF				dB
(f = 5–200 MHz)		—	5	5.7	
DC Current	I_{DC}	85	95	110	mA

NOTES

PACKAGE DIMENSIONS



DIM	INCHES MIN	INCHES MAX	MILLIMETERS MIN	MILLIMETERS 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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