

The RF Line CATV Amplifier Module

Features

- Specified for up to 132-Channel Loading
- Excellent Distortion Performance
- Superior Gain, Return Loss and DC Current Stability over Temperature
- Silicon Bipolar Transistor Technology
- Unconditionally Stable Under All Load Conditions

Applications

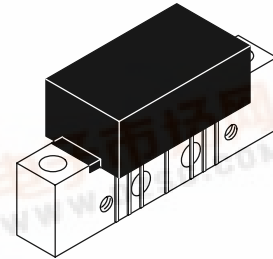
- CATV Systems Operating in the 40 to 870 MHz Frequency Range
- Single Module High Gain Line Amplifier in Cable TV Distribution System

Description

- 24 Vdc Supply, 40 to 870 MHz, CATV High Gain Forward Amplifier Module

MHW8342

**870 MHz
35.5 dB GAIN
132-CHANNEL
CATV AMPLIFIER MODULE**



CASE 1302-01, STYLE 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

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

Characteristic	Symbol	Min	Typ	Max	Unit	
Frequency Range	BW	40	—	870	MHz	
Power Gain	G_p	50 MHz	33.2	34	34.8	dB
		870 MHz	34	35.5	37	
Slope	S	0.5	1.5	2.75	dB	
Gain Flatness (Peak To Valley)	G_F	—	0.3	0.8	dB	
Return Loss — Input ($Z_0 = 75$ Ohms)	IRL	40-80 MHz	22	28	—	dB
		80-320 MHz	18	25	—	
		320-640 MHz	16	22	—	
		640-870 MHz	14	19	—	
Return Loss — Output ($Z_0 = 75$ Ohms)	ORL	40-80 MHz	22	28	—	dB
		80-240 MHz	19	25	—	
		240-640 MHz	17	22	—	
		640-870 MHz	15	22	—	

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

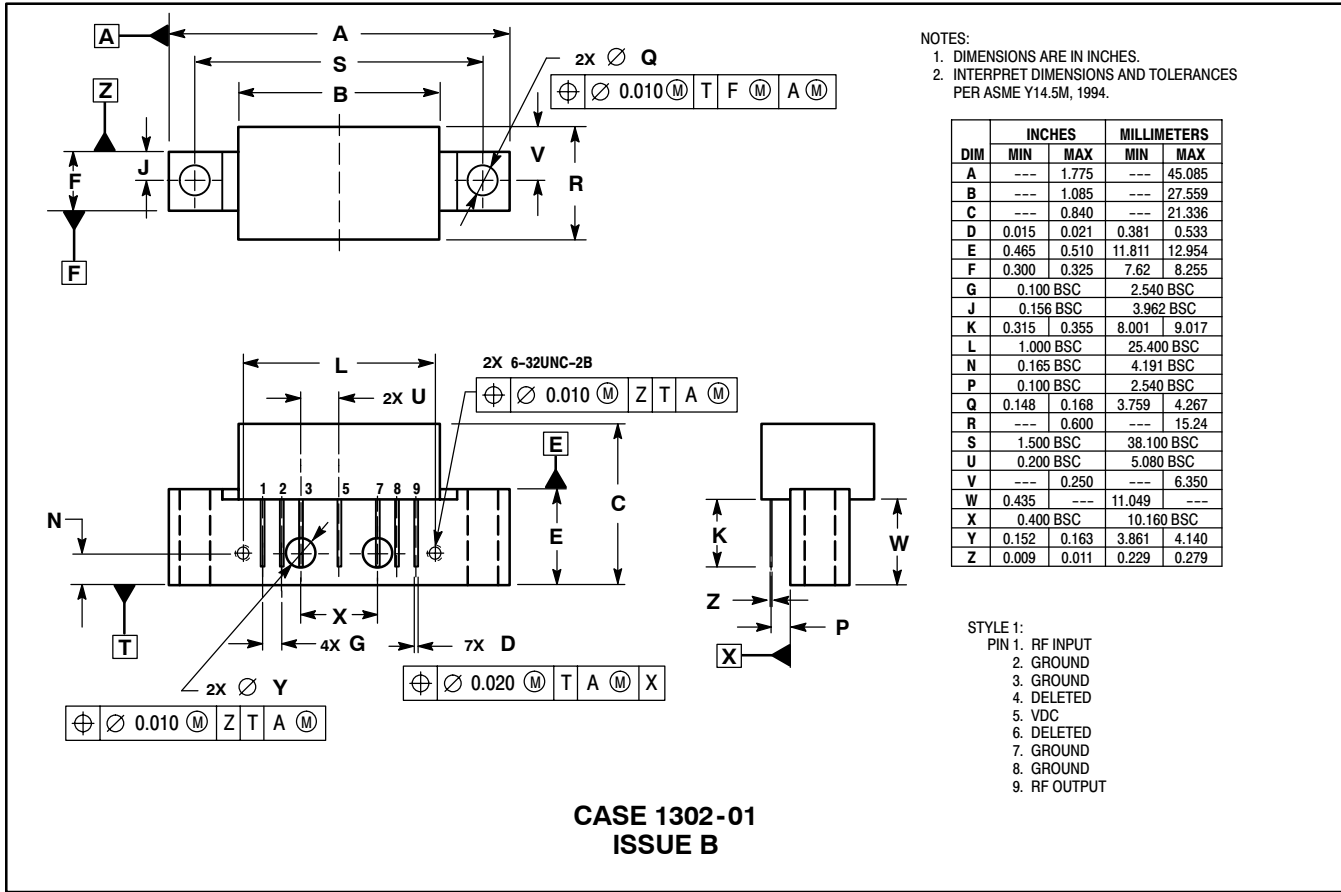
Characteristic		Symbol	Min	Typ	Max	Unit
Composite Second Order ($V_{out} = +44 \text{ dBmV/ch.}$, Worst Case)	79-Channel FLAT	CSO_{79}	—	-65	-60	dBc
($V_{out} = +44 \text{ dBmV/ch.}$, Worst Case)	112-Channel FLAT	CSO_{112}	—	-55	-50	
($V_{out} = +44 \text{ dBmV/ch.}$, Worst Case)	132-Channel FLAT	CSO_{132}	—	-48	-44	
Cross Modulation Distortion ($V_{out} = +44 \text{ dBmV}$, FM = 55.25 MHz)	79-Channel FLAT	XMD_{79}	—	-63	-60	dBc
($V_{out} = +44 \text{ dBmV}$, FM = 55.25 MHz)	112-Channel FLAT	XMD_{112}	—	-56	-52	
($V_{out} = +44 \text{ dBmV}$, FM = 55.25 MHz)	132-Channel FLAT	XMD_{132}	—	-56	-50	
Composite Triple Beat ($V_{out} = +44 \text{ dBmV/ch.}$, Worst Case)	79-Channel FLAT	CTB_{79}	—	-64	-62	dBc
($V_{out} = +44 \text{ dBmV/ch.}$, Worst Case)	112-Channel FLAT	CTB_{112}	—	-54	-51	
($V_{out} = +44 \text{ dBmV/ch.}$, Worst Case)	132-Channel FLAT	CTB_{132}	—	-50	-46	
Noise Figure	50 MHz	NF	—	3.5	4.5	dB
	550 MHz		—	4.5	—	
	870 MHz		—	5.5	6.5	
DC Current		I_{DC}	310	325	350	mA

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NOTES

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PACKAGE DIMENSIONS



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