

# The RF Line CATV Amplifier Module

## Features

- Specified for up to 112-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

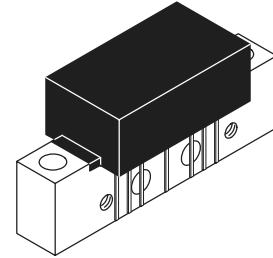
- CATV Systems Operating in the 40 to 750 MHz Frequency Range
- Single Module High Gain Line Amplifier in Cable TV Distribution System

## Description

- 24 Vdc Supply, 40 to 750 MHz, CATV High Gain Forward Amplifier Module

**MHW7342**

**750 MHz  
 35.2 dB GAIN  
 112-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 $\Omega$ system unless otherwise noted)

Characteristic	Symbol	Min	Typ	Max	Unit
Frequency Range	BW	40	—	750	MHz
Power Gain	$G_p$	33.2 33.8	34 35.2	34.8 36	dB
Slope	S	0.3	1.2	2.25	dB
Gain Flatness (Peak To Valley)	$G_F$	—	0.3	0.8	dB
Return Loss — Input ( $Z_o = 75$ Ohms)	IRL	22 18 16 14	28 25 22 19	— — — —	dB
Return Loss — Output ( $Z_o = 75$ Ohms)	ORL	22 19 17 15	28 25 22 22	— — — —	dB

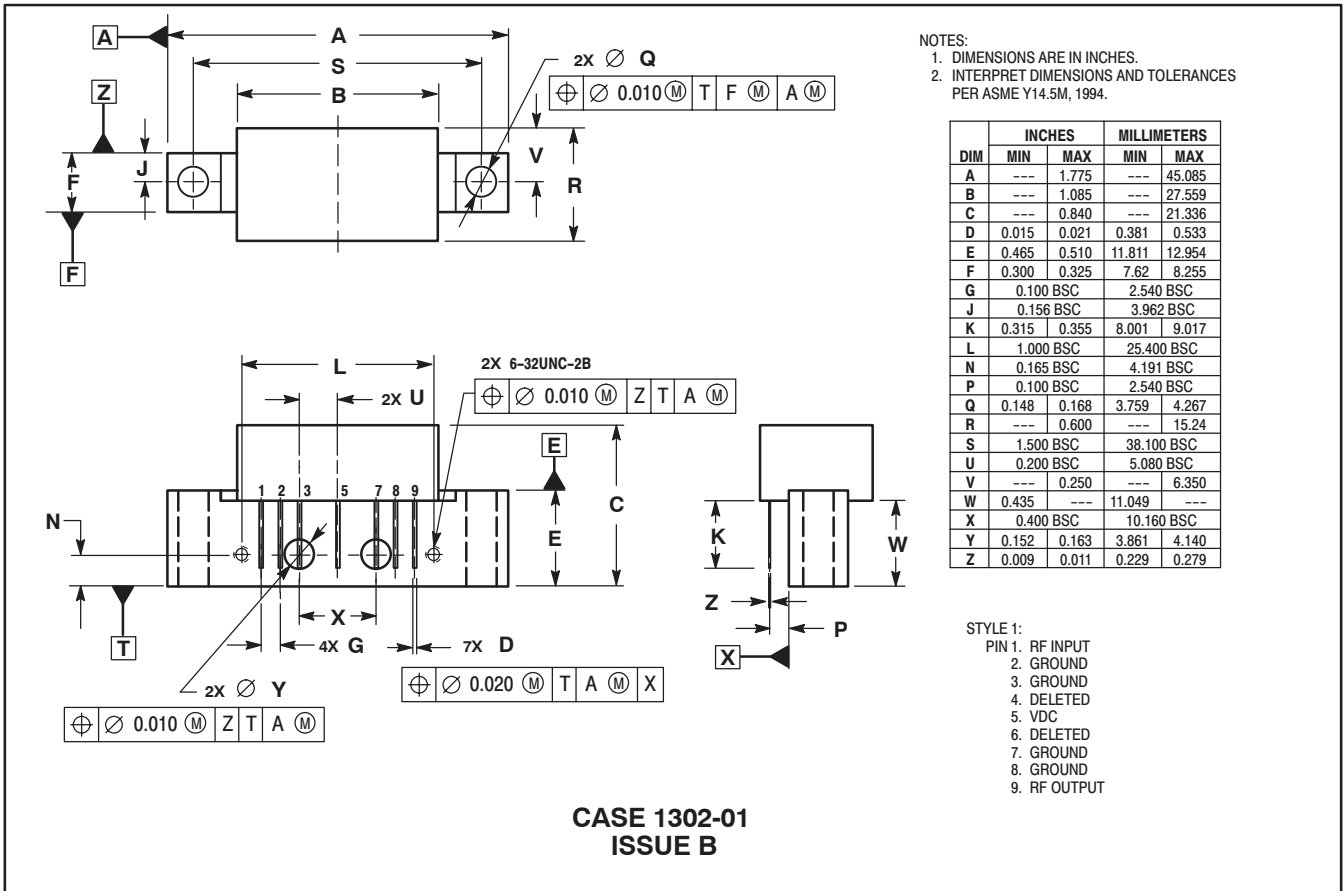
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**ELECTRICAL CHARACTERISTICS — continued** ( $V_{CC} = 24$  Vdc,  $T_C = +30^\circ\text{C}$ ,  $75 \Omega$  system unless otherwise noted)

Characteristic		Symbol	Min	Typ	Max	Unit
Composite Second Order ( $V_{out} = +44$ dBmV/ch., Worst Case)	79-Channel FLAT	$CSO_{79}$	—	-65	-57	dBc
	112-Channel FLAT	$CSO_{112}$	—	-55	-50	
Cross Modulation Distortion ( $V_{out} = +44$ dBmV, FM = 55.25 MHz)	79-Channel FLAT	$XMD_{79}$	—	-63	-60	dBc
	112-Channel FLAT	$XMD_{112}$	—	-56	-53	
Composite Triple Beat ( $V_{out} = +44$ dBmV/ch., Worst Case)	79-Channel FLAT	$CTB_{79}$	—	-64	-62	dBc
	112-Channel FLAT	$CTB_{112}$	—	-54	-52	
Noise Figure	50 MHz	NF	—	3.5	4.5	dB
	550 MHz		—	4.5	—	
	750 MHz		—	5	6	
DC Current		$I_{DC}$	310	325	350	mA

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