

# The RF Line CATV Amplifier Module

## Features

- Specified for 77-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

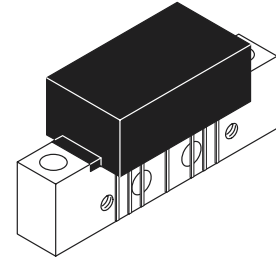
- CATV Systems Operating in the 40 to 550 MHz Frequency Range
- Single Module High Gain Line Amplifier in Cable TV Distribution System

## Description

- 24 Vdc Supply, 40 to 550 MHz, CATV Forward Amplifier

**MHW6342T**

**550 MHz  
35.2 dB GAIN  
77-CHANNEL  
CATV AMPLIFIER**



**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)

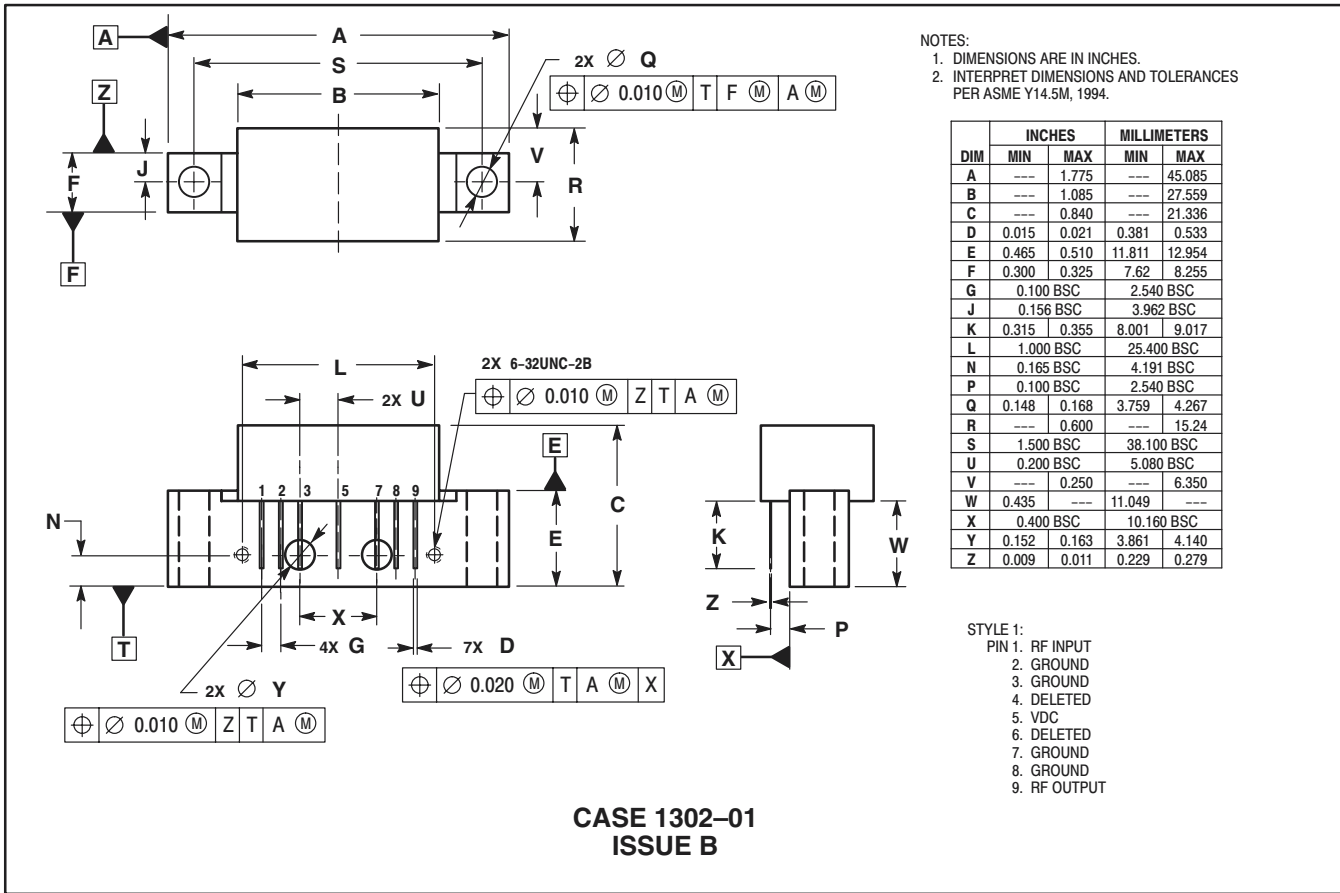
Characteristic	Symbol	Min	Typ	Max	Unit
Frequency Range	BW	40	—	550	MHz
Power Gain	$G_p$	33.5 34.5	34.5 35.2	35.5 —	dB
Slope	S	0	0.7	2	dB
Gain Flatness (Peak To Valley)	$G_F$	—	0.3	0.8	dB
Return Loss — Input/Output ( $Z_o = 75$ Ohms)	IRL/ORL	18 16	— —	— —	dB
Second Order Intermodulation Distortion ( $V_{out} = +46$ dBmV per ch., Ch 2, M13, M22) ( $V_{out} = +44$ dBmV per ch., Ch 2, M30, M39)	IMD	— —	-80 -74	— —	dBc
Cross Modulation Distortion ( $V_{out} = +46$ dBmV per ch.) ( $V_{out} = +44$ dBmV per ch.)	$XMD_{60}$ $XMD_{77}$	— —	-62 -63	— -57	dBc

**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 Triple Beat ( $V_{out} = +46$ dBmV per ch.) ( $V_{out} = +44$ dBmV per ch.)	60–Channel FLAT 77–Channel FLAT CTB <sub>60</sub> CTB <sub>77</sub>	— —	–64 –63	— –57	dBc
Composite Second Order ( $V_{out} = +46$ dBmV/ch, 60–Channel FLAT) ( $V_{out} = +44$ dBmV/ch, 77–Channel FLAT)	CSO <sub>60</sub> CSO <sub>77</sub>	— —	–70 –65	— –57	dBc
Noise Figure 550 MHz	NF	—	5.5	6.5	dB
DC Current	$I_{DC}$	—	310	340	mA

# NOTES

## PACKAGE DIMENSIONS



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