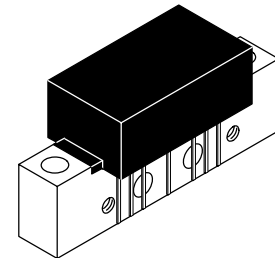


Replaced by MHW6342TN. There are no form, fit or function changes with this part replacement. N suffix indicates RoHS compliant part.

MHW6342T

550 MHz
35.2 dB GAIN
77-CHANNEL
CATV AMPLIFIER MODULE



CASE 1302-01, STYLE 1

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 Module

Table 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 |

Table 2. 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 | — | 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 |

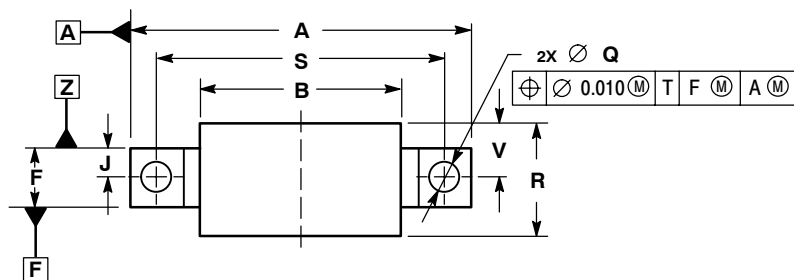
ARCHIVE INFORMATION

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Table 2. Electrical Characteristics ($V_{CC} = 24$ Vdc, $T_C = +30^\circ\text{C}$, $75\ \Omega$ system unless otherwise noted) (continued)

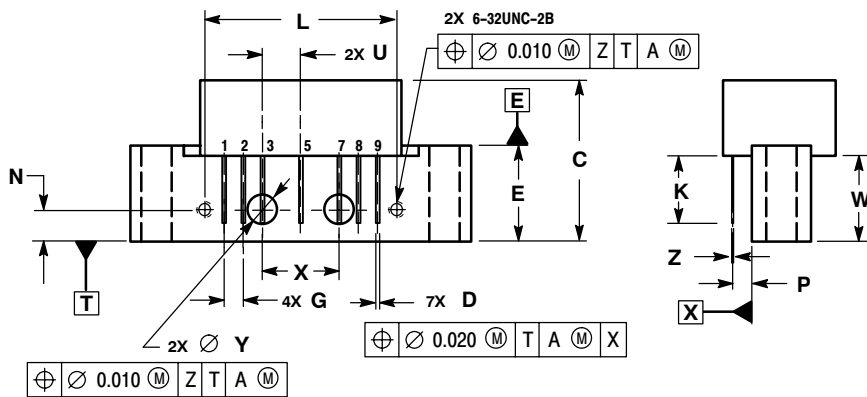
| Characteristic | Symbol | Min | Typ | Max | Unit |
|--|--|--------|--------------|-----------|------|
| Composite Triple Beat ($V_{out} = +46$ dBmV per ch.) ($V_{out} = +44$ dBmV per ch.) | 60-Channel FLAT 77-Channel FLAT CTB ₆₀ CTB ₇₇ | — — | - 64 - 63 | — - 57 | dBc |
| Composite Second Order ($V_{out} = +46$ dBmV/ch, 60-Channel FLAT) ($V_{out} = +44$ dBmV/ch, 77-Channel FLAT) | CSO ₆₀ CSO ₇₇ | — — | - 70 - 65 | — - 57 | dBc |
| Noise Figure 550 MHz | NF | — | 5.5 | 6.5 | dB |
| DC Current | I_{DC} | — | 310 | 340 | mA |

PACKAGE DIMENSIONS



NOTES:
 1. DIMENSIONS ARE IN INCHES.
 2. INTERPRET DIMENSIONS AND TOLERANCES PER ASME Y14.5M, 1994.

| 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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