

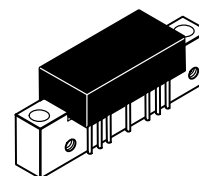
## The RF Line Low Distortion Wideband Reverse Amplifier Modules

Designed specifically for broadband applications requiring low distortion characteristics. Specified for use as return amplifiers for low-split 2-way cable TV systems. Features all gold metallization system.

- Guaranteed Broadband Power Gain
- Guaranteed Broadband Noise Figure
- Superior Gain, Return Loss and DC Current Stability with Temperature
- All Gold Metallization
- Circuit Design Optimized for Good RF Stability Under High VSWR Load Conditions
- Transformers Designed to Insure Good Low Frequency Gain Stability versus Temperature

**MHW1184L**  
**MHW1224L**  
**MHW1254L**  
**MHW1304L**

**24 Vdc**  
**50 MHz**  
**18/22/25/30 dB**  
**CATV LOW CURRENT AMPLIFIER**



CASE 714-06, STYLE 1

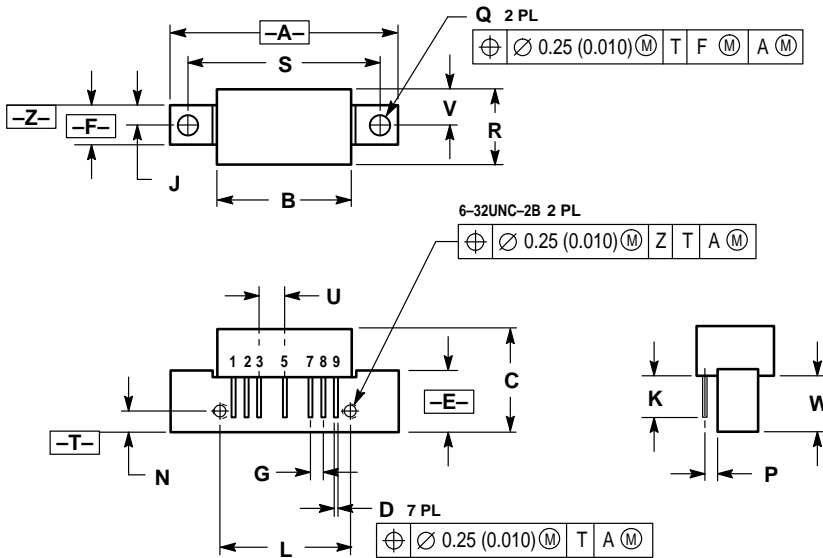
### MAXIMUM RATINGS

Parameter	Symbol	Value	Unit
DC Supply Voltage	$V_{CC}$	+28	Vdc
RF Input Voltage (Single Tone)	$V_{IN}$	+70	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, $T_C = 30^\circ\text{C}$ , 75 ohm system, unless otherwise noted)

Characteristic	Symbol	Min	Max	Unit
Bandwidth All	BW	5.0	50	MHz
Power Gain ( $f = 5.0$ MHz)	Gp	18.0 21.4 24.3 29.2	19.0 22.7 25.8 30.8	dB
Return Loss (@ $f = 5.0$ –50 MHz) MHW1184L, MHW1224L, MHW1254L, MHW1304L	RL	20 18	—	dB
Second Order Distortion ( $V_{out} = +50$ dBmV/ch) All	IMD	—	-70	dBc
Cross Modulation ( $V_{out} = +50$ dBmV/ch) MHW1184L, MHW1224L, MHW1254L, MHW1304L	XMD <sub>4</sub>	—	-64 -63 -62 -57	dBc
Triple Beat Distortion ( $V_{out} = +50$ dBmV/ch) MHW1184L, MHW1224L, MHW1254L, MHW1304L	TB <sub>3</sub>	—	-73 -72 -70 -66	dBc
Noise Figure ( $f = 50$ MHz) MHW1184L, MHW1224L, MHW1254L, MHW1304L	NF	—	5.0 4.5	dB
DC Current All	IDC	100	135	mA

## PACKAGE DIMENSIONS




- NOTES:
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
  2. CONTROLLING DIMENSION: INCH.

DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	—	1.775	—	45.08
B	—	1.085	—	27.56
C	—	0.840	—	21.34
D	0.018	0.022	0.46	0.56
E	0.465	0.510	11.81	12.95
F	0.300	0.325	7.62	8.25
G	0.100 BSC	—	2.54 BSC	—
J	0.156 BSC	—	3.96 BSC	—
K	0.315	0.355	8.00	8.50
L	1.00 BSC	—	25.40 BSC	—
N	0.165 BSC	—	4.10 BSC	—
P	0.100 BSC	—	2.54 BSC	—
Q	0.148	0.168	3.76	4.27
R	—	0.595	—	15.11
S	1.500 BSC	—	38.10 BSC	—
U	0.200 BSC	—	5.08 BSC	—
V	0.280 BSC	—	7.11 BSC	—
W	0.435	0.450	11.05	11.43

- STYLE 1:
1. RF INPUT
  2. GROUND
  3. GROUND
  4. DELETED
  5. VDC
  6. DELETED
  7. GROUND
  8. GROUND
  9. RF OUTPUT

**CASE 714-06  
ISSUE K**

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MHW1184L/D

