

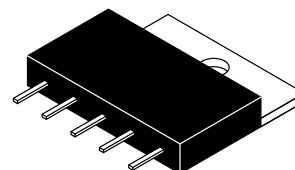
The RF Line Low Distortion Wideband Reverse Amplifier Modules

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

MHW1254LC
MHW1304LC

12 Vdc
200 MHz
25/30 dB
CATV LOW CURRENT AMPLIFIER



CASE 431A-02, STYLE 1

MAXIMUM RATINGS

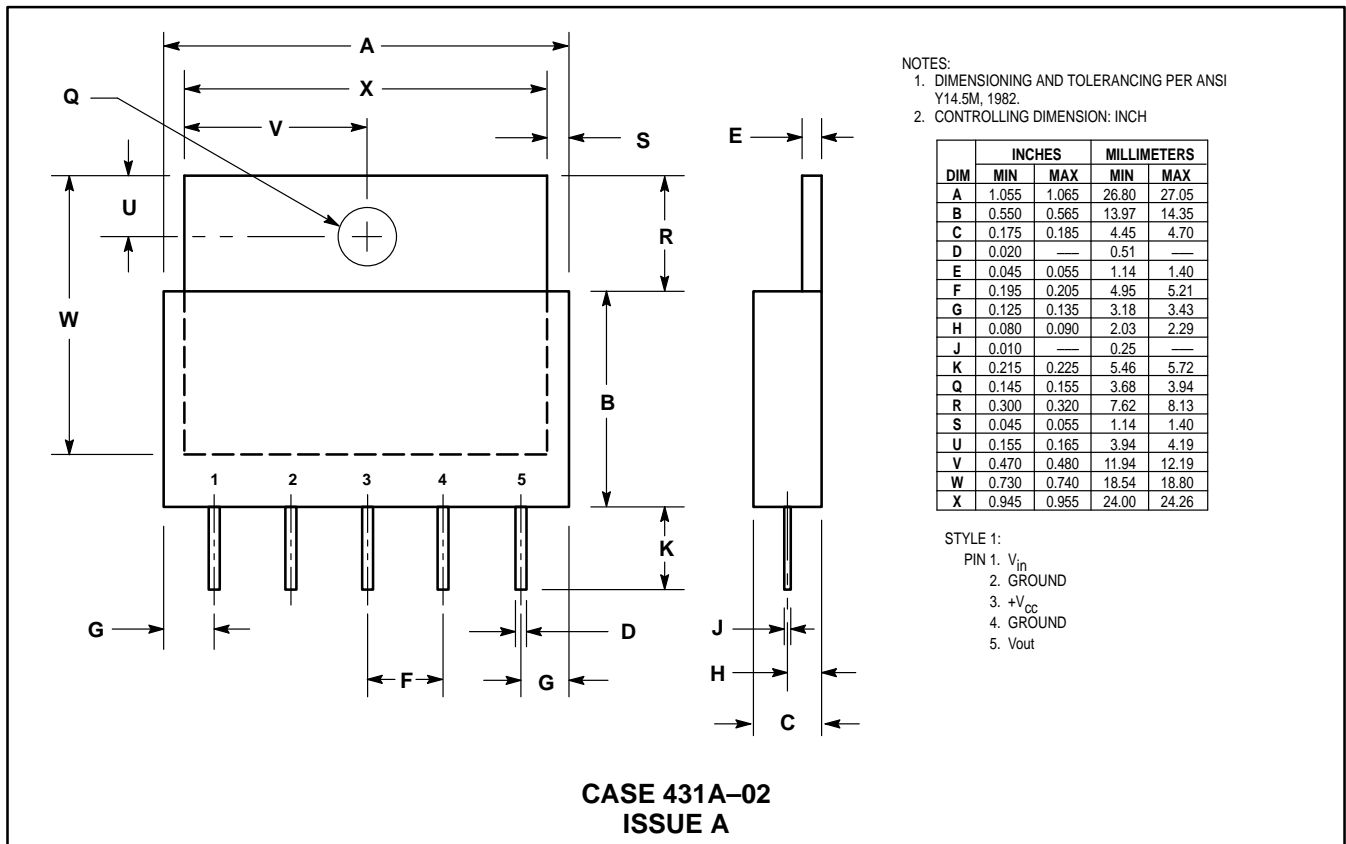
Parameter	Symbol	Value	Unit
DC Supply Voltage	V_{CC}	+16	Vdc
RF Input Voltage (Single Tone)	V_{in}	+50	dBmV
Operating Case Temperature Range	T_C	-20 to +100	°C
Storage Temperature Range	T_{stg}	-40 to +100	°C


ELECTRICAL CHARACTERISTICS ($V_{CC} = 12$ Vdc, $T_C = 30^\circ\text{C}$, 75 Ω system, unless otherwise noted)

Characteristic	Symbol	Min	Typ	Max	Unit
Frequency Range	BW	5.0	—	200	MHz
Power Gain (f = 5.0 MHz) MHW1254LC (f = 50 MHz) (f = 175 MHz) (f = 200 MHz) (f = 5.0 MHz) MHW1304LC (f = 50 MHz) (f = 175 MHz) (f = 200 MHz)	Gp	24.2 24.2 24 23.8 29 29 29 28.8	24.8 24.8 24.7 24.6 29.8 30 29.8 29.8	25.6 25.6 25.6 25.6 31 31 31 31	dB
Gain Slope (f = 5.0 – 200 MHz)	S	—	-0.2	—	dB
Gain Flatness (f = 5.0 – 200 MHz, Peak-to-Valley)	—	—	0.25	—	dB
Return Loss (f = 5.0–200 MHz) MHW1254LC MHW1304LC	RL	20 18	25 25	— —	dB
Second Order Intermodulation Distortion (12 MHz + 43.25 MHz @ 55.25 MHz, $V_{out} = 50$ dBmV/ch) (54 MHz + 121.25 MHz @ 175.25 MHz, $V_{out} = 50$ dBmV/ch) (54 MHz + 145.25 MHz @ 199.25 MHz, $V_{out} = 50$ dBmV/ch)	IMD	— — —	-68 -59 -57	— — -54	dBc
Composite Triple Beat ($V_{out} = 44$ dBmV/ch, 22-Channel, @175.25 MHz) MHW1254LC ($V_{out} = 44$ dBmV/ch, 26-Channel, @199.25 MHz) ($V_{out} = 44$ dBmV/ch, 22-Channel, @175.25 MHz) MHW1304LC ($V_{out} = 44$ dBmV/ch, 26-Channel, @199.25 MHz)	CTB ₂₂ CTB ₂₆ CTB ₂₂ CTB ₂₆	— — — —	-71 -67 -69 -66	— — — —	dBc

ELECTRICAL CHARACTERISTICS ($V_{CC} = 12\text{ Vdc}$, $T_C = 30^\circ\text{C}$, $75\ \Omega$ system, unless otherwise noted)

Characteristic	Symbol	Min	Typ	Max	Unit
Triple Beat Distortion (187.25–181.25 MHz + 193.25 MHz @ 199.25 MHz, $V_{out} = +50\text{ dBmV/ch}$)	TB ₃	—	–71	–68	dBc
Noise Figure ($f = 200\text{ MHz}$)	NF	—	4.5	5.0	dB
DC Current ($V_{dc} = 12.0\text{ V}$, $T_C = 30^\circ\text{C}$)	I_{DC}	90	100	110	mA

PACKAGE DIMENSIONS

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MHW1254LC/D

