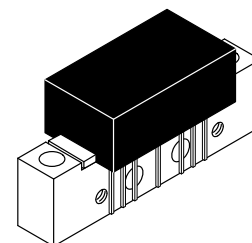


The RF Line 110-Channel (750 MHz) CATV Line Extender Amplifier

MHW7242A

- Specified for 110-Channel Performance
- Broadband Power Gain — @ $f = 40\text{--}750\text{ MHz}$
 $G_p = 24\text{ dB (Typ)}$
- Broadband Noise Figure
 $NF = 7\text{ dB (Max) @ } 750\text{ MHz}$
- Superior Gain, Return Loss and DC Current Stability with Temperature
- All Gold Metallization
- 7 GHz f_T Ion-Implanted Transistors
- Improved CTB Performance

**24 dB GAIN
750 MHz
110-CHANNEL
CATV AMPLIFIER**



CASE 714Y-03, STYLE 1

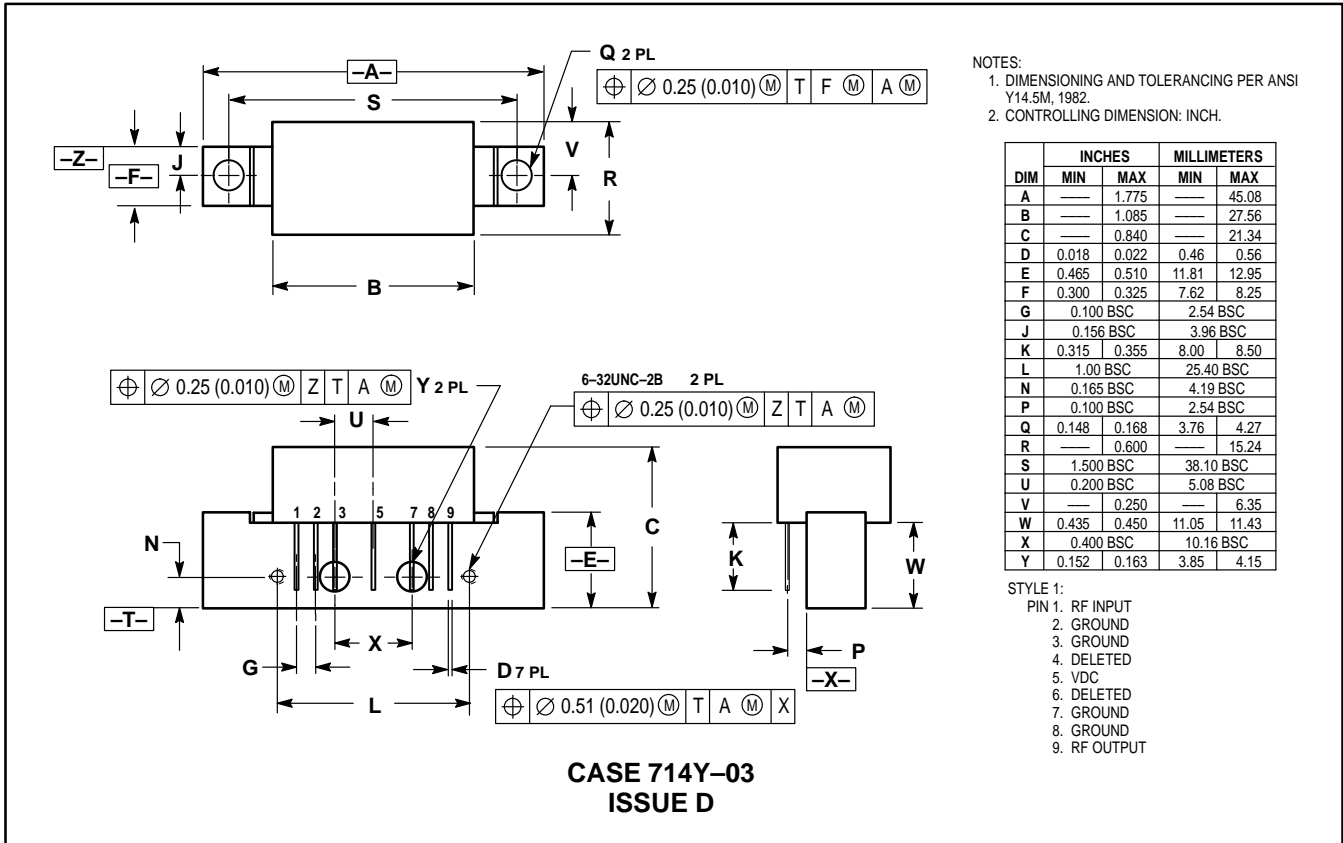
MAXIMUM RATINGS

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 ($V_{CC} = 24\text{ Vdc}$, $T_C = +30^\circ\text{C}$, 75 Ω system unless otherwise noted)

Characteristic	Symbol	Min	Typ	Max	Unit
Frequency Range	BW	40	—	750	MHz
Power Gain	G_p	23.2 24	24 24.7	24.8 26	dB
Slope	S	0	0.6	1.5	dB
Gain Flatness (40-750 MHz, Peak To Valley)	—	—	0.4	0.6	dB
Return Loss — Input/Output ($Z_0 = 75\text{ Ohms}$)	IRL/ORL	20 —	— —	— 0.007	dB dB/MHz
Composite Second Order ($V_{out} = +40\text{ dBmV/ch.}$, Worst Case) ($V_{out} = +44\text{ dBmV/ch.}$, Worst Case)	CSO ₁₁₀ CSO ₇₇	— —	-69 -78	-62 —	dBc
Cross Modulation Distortion @ Ch 2 ($V_{out} = +40\text{ dBmV/ch.}$, FM = 55 MHz) ($V_{out} = +44\text{ dBmV/ch.}$, FM = 55 MHz)	XMD ₁₁₀ XMD ₇₇	— —	-63 -58	-61 —	dBc
Composite Triple Beat ($V_{out} = +40\text{ dBmV/ch.}$, Worst Case) ($V_{out} = +44\text{ dBmV/ch.}$, Worst Case)	CTB ₁₁₀ CTB ₇₇	— —	-67 -64	-63 —	dBc
Noise Figure	NF	— —	4.8 5.5	5.5 7	dB
DC Current	I_{DC}	280	318	350	mA

PACKAGE DIMENSIONS



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