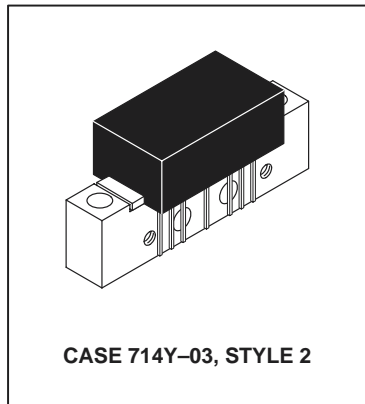


The RF Line High Output Power Doubler 870 MHz CATV Amplifier

MHW8185LR

**19.4 dB GAIN
870 MHz
128-CHANNEL
CATV AMPLIFIER**

- Specified for 77, 110 and 128-Channel Performance
- Broadband Power Gain — @ f = 40–870 MHz
G_p = 19.4 dB (Typ)
- Lower DC Current Consumption
- Superior DC Current Stability with Temperature



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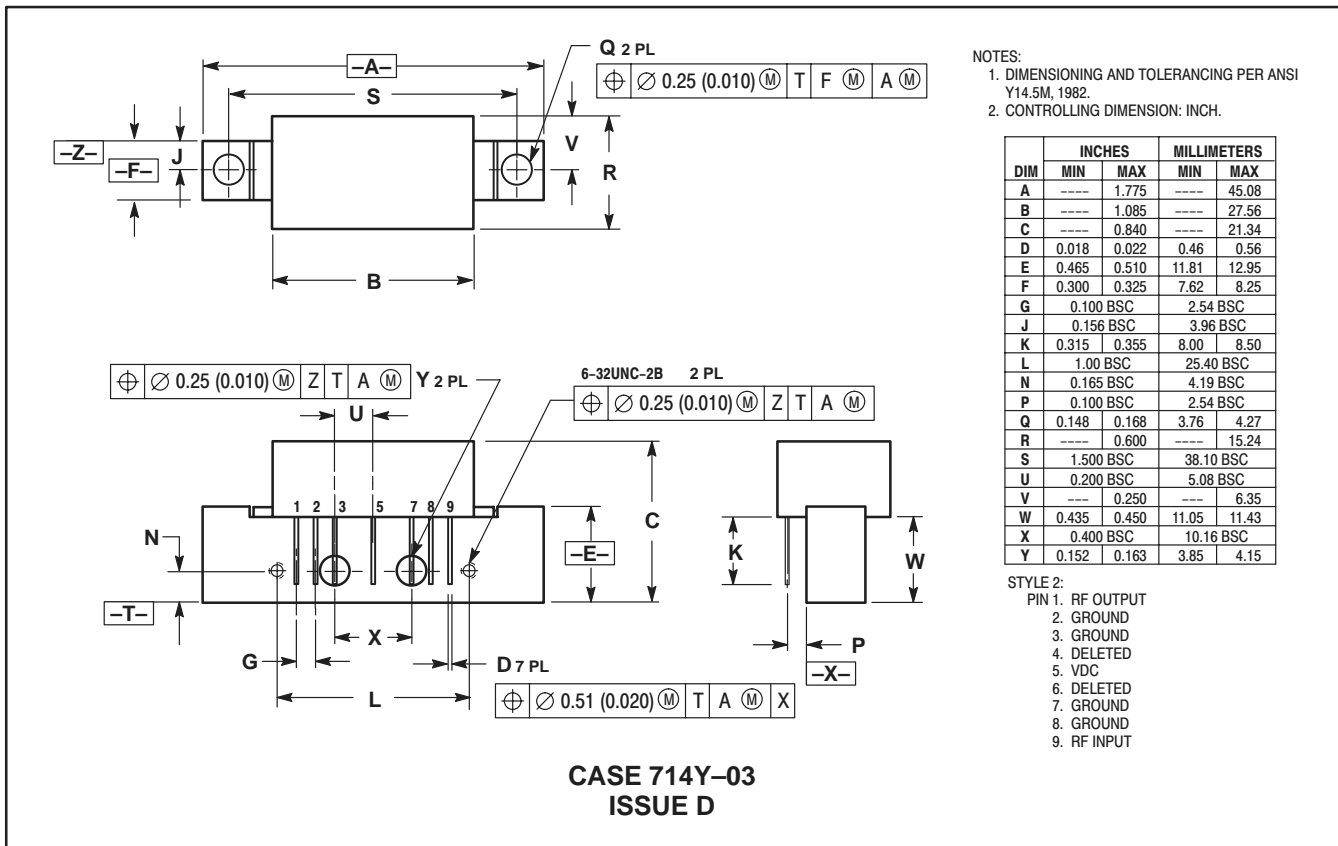
MAXIMUM RATINGS

Rating	Symbol	Value	Unit
RF Voltage Input (Single Tone)	V _{in}	+70	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°C, 75 Ω system unless otherwise noted)

Characteristic	Symbol	Min	Typ	Max	Unit
Frequency Range	BW	40	—	870	MHz
Power Gain 50 MHz 870 MHz	G _p	18 19	18.5 19.4	19 20.5	dB
Slope 40–870 MHz	S	0.4	0.9	1.4	dB
Gain Flatness (40–870 MHz, Peak-to-Valley)	—	—	0.3	0.8	dB
Return Loss — Input/Output (Z ₀ = 75 Ohms) @ f > 40 MHz (Derate) @ 40 MHz	IRL/ORL	20 —	— —	— 0.007	dB dB/MHz
Composite Second Order (V _{out} = +40 dBmV/ch., Worst Case) (V _{out} = +44 dBmV/ch., Worst Case) (V _{out} = +44 dBmV/ch., Worst Case)	CSO ₁₂₈ CSO ₁₁₀ CSO ₇₇	— — —	-69 -70 -85	-62 -64 -68	dBc
Cross Modulation Distortion @ Ch 2 (V _{out} = +40 dBmV/ch., FM = 55 MHz) (V _{out} = +44 dBmV/ch., FM = 55 MHz) (V _{out} = +44 dBmV/ch., FM = 55 MHz)	XMD ₁₂₈ XMD ₁₁₀ XMD ₇₇	— — —	-72 -66 -69	-64 -63 -67	dBc
Composite Triple Beat (V _{out} = +40 dBmV/ch., Worst Case) (V _{out} = +44 dBmV/ch., Worst Case) (V _{out} = +44 dBmV/ch., Worst Case)	CTB ₁₂₈ CTB ₁₁₀ CTB ₇₇	— — —	-66 -63 -70	-63 -61 -68	dBc
Noise Figure 50 MHz 550 MHz 750 MHz 870 MHz	NF	— — — —	5.3 5.8 6.6 7.8	6.2 — — 8.5	dB
DC Current (V _{DC} = 24 V, T _C = -20 to +100°C)	I _{DC}	345	365	385	mA

PACKAGE DIMENSIONS



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