

The RF Line
High Output Power Doubler
870 MHz CATV Amplifier

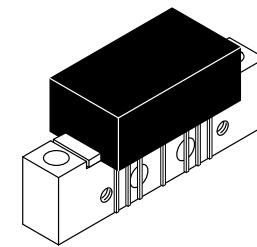
- Specified for 77, 110 and 128-Channel Performance
- Broadband Power Gain — @ $f = 40$ –870 MHz
 $G_p = 19.4$ dB (Typ)
- Lower DC Current Consumption
- Superior DC Current Stability with Temperature

MHW8185L

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

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

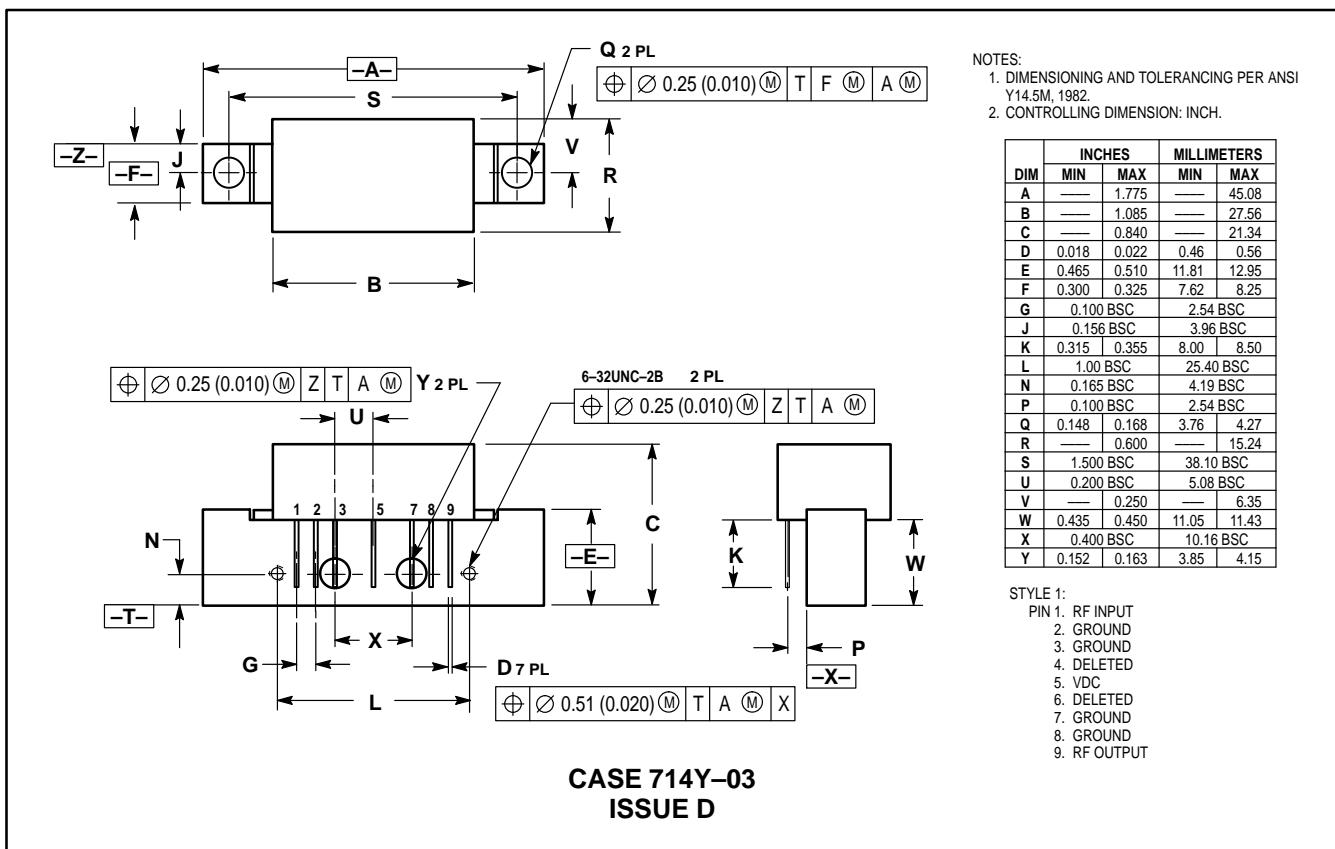


CASE 714Y-03, STYLE 1

ELECTRICAL CHARACTERISTICS ($V_{CC} = 24$ Vdc, $T_C = +30$ °C, $75\ \Omega$ system unless otherwise noted)

Characteristic	Symbol	Min	Typ	Max	Unit
Frequency Range	BW	40	—	870	MHz
Power Gain	G_p	18	18.5	19	dB
50 MHz		19	19.4	20.5	
870 MHz					
Slope	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)	IRL/ORL	20	—	—	dB
@ 40 MHz		—	—	0.007	dB/MHz
@ $f > 40$ MHz (Derate)					
Composite Second Order					
($V_{out} = +40$ dBmV/ch., Worst Case)	128-Channel FLAT	CSO128	—	-69	dBc
($V_{out} = +44$ dBmV/ch., Worst Case)	110-Channel FLAT	CSO110	—	-70	
($V_{out} = +44$ dBmV/ch., Worst Case)	77-Channel FLAT	CSO77	—	-85	
Cross Modulation Distortion @ Ch 2					
($V_{out} = +40$ dBmV/ch., FM = 55 MHz)	128-Channel FLAT	XMD128	—	-72	dBc
($V_{out} = +44$ dBmV/ch., FM = 55 MHz)	110-Channel FLAT	XMD110	—	-66	
($V_{out} = +44$ dBmV/ch., FM = 55 MHz)	77-Channel FLAT	XMD77	—	-69	
Composite Triple Beat					
($V_{out} = +40$ dBmV/ch., Worst Case)	128-Channel FLAT	CTB128	—	-66	dBc
($V_{out} = +44$ dBmV/ch., Worst Case)	110-Channel FLAT	CTB110	—	-63	
($V_{out} = +44$ dBmV/ch., Worst Case)	77-Channel FLAT	CTB77	—	-70	
Noise Figure	NF	—	5.3	6.2	dB
50 MHz		—	5.8	—	
550 MHz		—	6.6	—	
750 MHz		—	7.8	8.5	
870 MHz		—			
DC Current ($V_{DC} = 24$ V, $T_C = -20$ to +100°C)	I_{DC}	345	365	385	mA

PACKAGE DIMENSIONS



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