

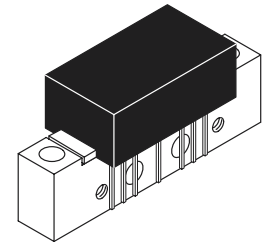
The RF Line

High Output Mirror Power Doubler

860 MHz CATV Amplifier

MHW8185R

- Specified for 77, 110 and 128-Channel Performance
- Broadband Power Gain — @ f = 860 MHz
 $G_p = 19.4$ dB (Typ)
- Broadband Noise Figure
 $NF = 7$ dB (Typ) @ 860 MHz
- Pin Configuration Mirrors that of MHW8185
- Typical CTB @ 860 MHz under 128-Channel FLAT Loading = -67 dBc
- All Gold Metallization
- 7 GHz f_T Ion-Implanted Transistors

19.4 dB GAIN
860 MHz
128-CHANNEL
CATV AMPLIFIER

CASE 714Y-03, STYLE 2
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

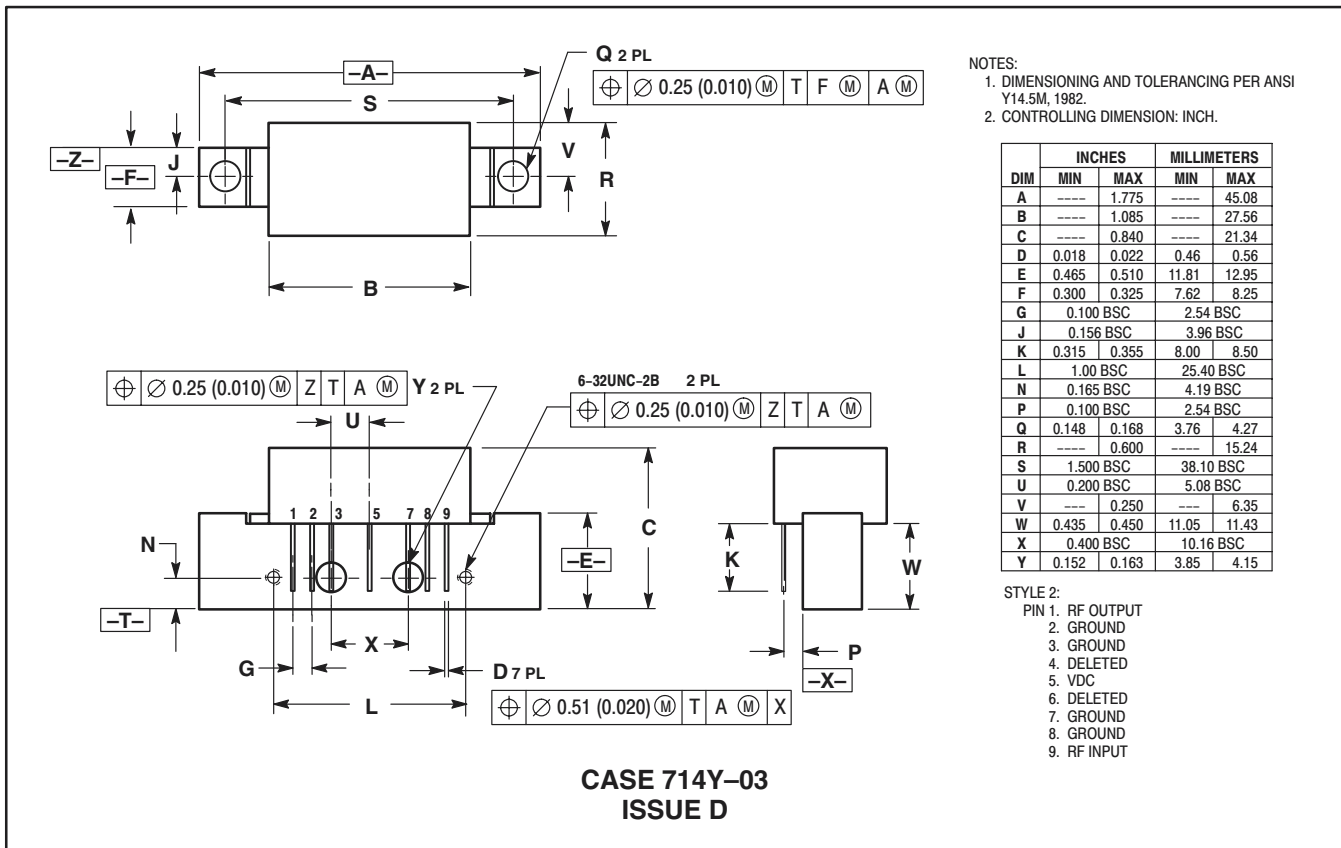
ELECTRICAL CHARACTERISTICS ($V_{CC} = 24$ Vdc, $T_C = +30^\circ\text{C}$, 75 Ω system unless otherwise noted)

Characteristic	Symbol	Min	Typ	Max	Unit	
Frequency Range	BW	40	—	860	MHz	
Power Gain	G_p	50 MHz 860 MHz	18.3 19	18.8 19.4	19.3 20.5	dB
Slope		40-860 MHz	0	.5	1.5	dB
Gain Flatness (40-860 MHz, Peak to Valley)	—	—	0.3	1.0	dB	
Return Loss — Input/Output ($Z_0 = 75$ Ohms)	IRL/ORL	@ 40 MHz	19	—	—	dB
@ f > 40 MHz (Derate)		—	—	0.006	—	dB/MHz
Composite Second Order	CSO_{128} CSO_{110} CSO_{77}	($V_{out} = +40$ dBmV/ch., Worst Case) 128-Channel FLAT	—	-70	-62	dBc
($V_{out} = +44$ dBmV/ch., Worst Case) 110-Channel FLAT		—	-72	-64		
($V_{out} = +44$ dBmV/ch., Worst Case) 77-Channel FLAT		—	-80	-68		
Cross Modulation Distortion @ Ch 2	XMD_{128} XMD_{110} XMD_{77}	($V_{out} = +40$ dBmV/ch., FM = 55 MHz) 128-Channel FLAT	—	-72	-64	dBc
($V_{out} = +44$ dBmV/ch., FM = 55 MHz) 110-Channel FLAT		—	-67	-63		
($V_{out} = +44$ dBmV/ch., FM = 55 MHz) 77-Channel FLAT		—	-70	-68		
Composite Triple Beat	CTB_{128} CTB_{110} CTB_{77}	($V_{out} = +40$ dBmV/ch., Worst Case) 128-Channel FLAT	—	-67	-64	dBc
($V_{out} = +44$ dBmV/ch., Worst Case) 110-Channel FLAT		—	-64	-62		
($V_{out} = +44$ dBmV/ch., Worst Case) 77-Channel FLAT		—	-71	-69		
Noise Figure	NF	50 MHz	—	5.0	6.0	dB
		550 MHz	—	5.8	—	
		750 MHz	—	6.2	—	
		860 MHz	—	7.0	8.0	
DC Current ($V_{DC} = 24$ V, $T_C = 30^\circ\text{C}$)	I_{DC}	365	400	435	mA	

ARCHIVE INFORMATION

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PACKAGE DIMENSIONS



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