# The RF Line

# High Output Mirror Power Doubler 860 MHz CATV Amplifier

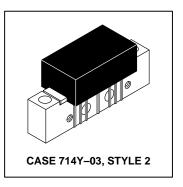
- Specified for 77, 110 and 128-Channel Performance
- Broadband Power Gain @ f = 860 MHz
  G<sub>D</sub> = 19.4 dB (Typ)
- Broadband Noise Figure
  NF = 7 dB (Typ) @ 860 MHz
- Pin Configuration Mirrors that of MHW8185
- Typical CTB @ 860 MHz under 128–Channel FLAT Loading = -67 dBc
- All Gold Metallization
- 7 GHz fT Ion-Implanted Transistors

### **MAXIMUM RATINGS**

Rating	Symbol	Value	Unit
RF Voltage Input (Single Tone)	V <sub>in</sub>	+70	dBmV
DC Supply Voltage	Vcc	+28	Vdc
Operating Case Temperature Range	TC	-20 to +100	°C
Storage Temperature Range	T <sub>stg</sub>	-40 to +100	°C

# MHW8185R

19.4 dB GAIN 860 MHz 128-CHANNEL CATV AMPLIFIER

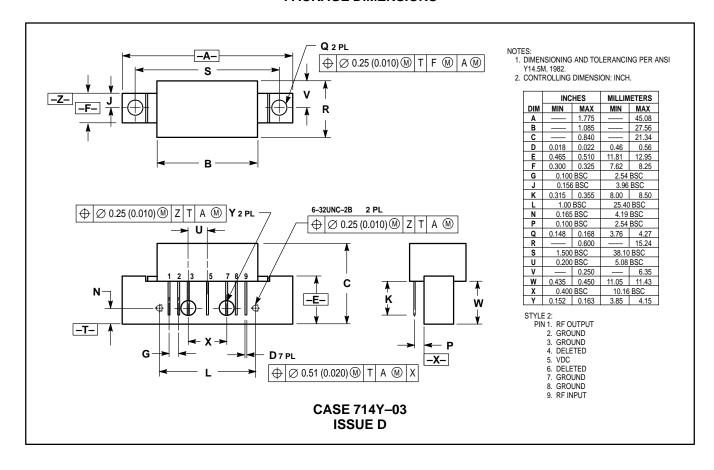


## **ELECTRICAL CHARACTERISTICS** ( $V_{CC}$ = 24 Vdc, $T_{C}$ = +30°C, 75 $\Omega$ system unless otherwise noted)

Characteristic		Symbol	Min	Тур	Max	Unit
Frequency Range		BW	40	_	860	MHz
Power Gain	50 MHz 860 MHz	Gp	18.3 19	18.8 19.4	19.3 20.5	dB
Slope	40-860 MHz	S	0	.5	1.5	dB
Gain Flatness (40-860 MHz, Peak to Valley)		_	_	0.3	1.0	dB
Return Loss — Input/Output (Z <sub>0</sub> = 75 Ohr	ns) @ 40 MHz @ f > 40 MHz (Derate)	IRL/ORL	19 —	_ _	 0.006	dB dB/MHz
Composite Second Order (V <sub>Out</sub> = +40 dBmV/ch., Worst Case) (V <sub>Out</sub> = +44 dBmV/ch., Worst Case)	128-Channel FLAT 110-Channel FLAT 77-Channel FLAT	CSO <sub>128</sub> CSO <sub>110</sub> CSO <sub>77</sub>	_ _ _	-70 -72 -80	-62  	dBc
Cross Modulation Distortion @ Ch 2 (Vout = +40 dBmV/ch., FM = 55 MHz) (Vout = +44 dBmV/ch., FM = 55 MHz)	128-Channel FLAT 110-Channel FLAT 77-Channel FLAT	XMD <sub>128</sub> XMD <sub>110</sub> XMD <sub>77</sub>	_ _ _ _	-72 -66 -69	-64  	dBc
Composite Triple Beat (Vout = +40 dBmV/ch., Worst Case) (Vout = +44 dBmV/ch., Worst Case)	128-Channel FLAT 110-Channel FLAT 77-Channel FLAT	CTB <sub>128</sub> CTB <sub>110</sub> CTB <sub>77</sub>	_ _ _	-67 -64 -70	-64  	dBc
Noise Figure	50 MHz 550 MHz 750 MHz 860 MHz	NF	_ _ _ _	5.0 5.8 6.2 7.0	6.0 — — 8.0	dB
DC Current (V <sub>DC</sub> = 24 V, T <sub>C</sub> = 30°C)		IDC	365	400	435	mA



### PACKAGE DIMENSIONS



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