

# The RF Line

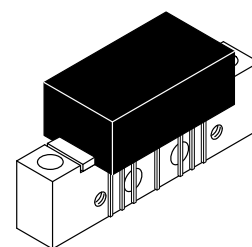
## High Output Power Doubler

### 870 MHz CATV Amplifier

- Specified for 77, 110 and 128-Channel Performance
- Broadband Power Gain — @ f = 40–870 MHz  
G<sub>p</sub> = 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**



**CASE 714Y-03, STYLE 1**

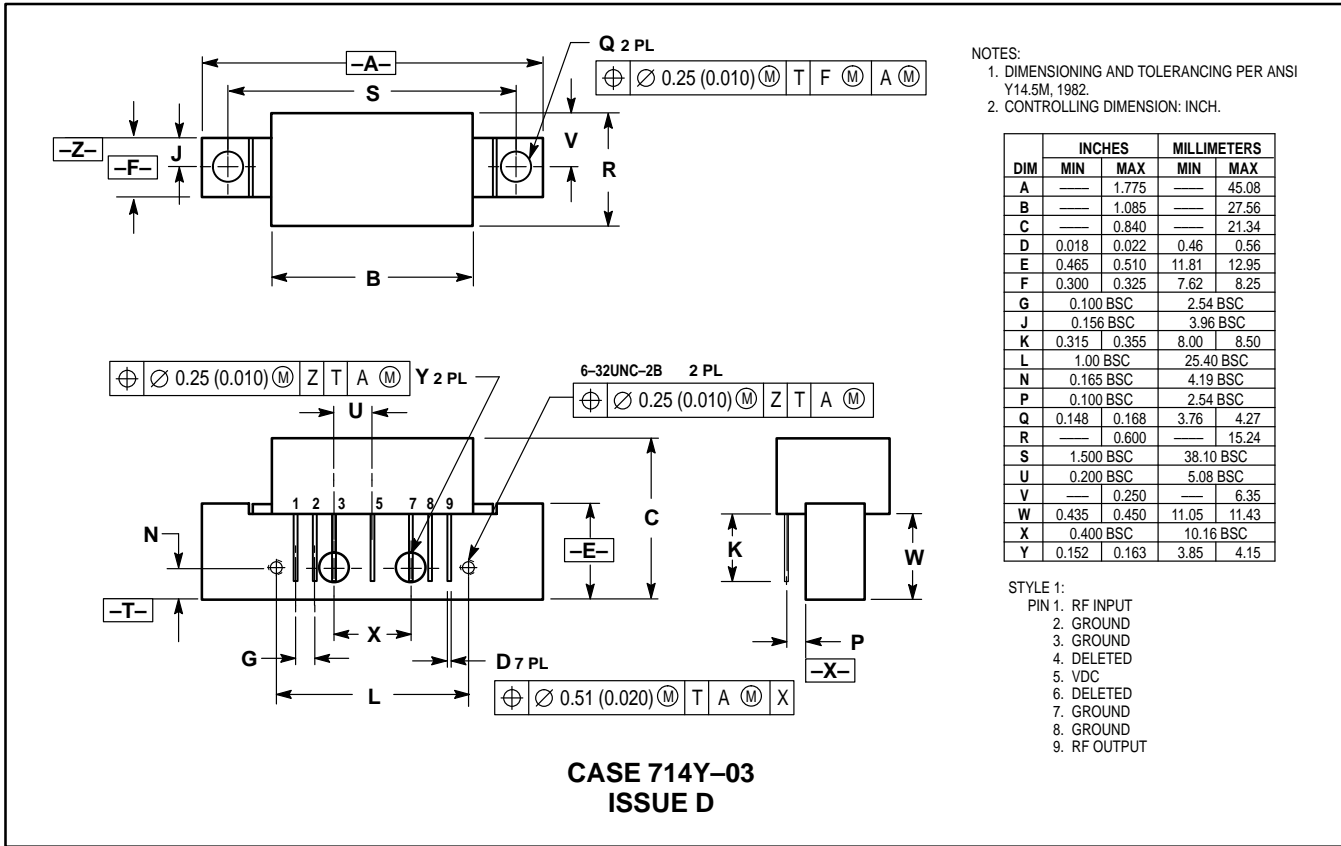
#### MAXIMUM RATINGS

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

#### ELECTRICAL CHARACTERISTICS (V<sub>CC</sub> = 24 Vdc, T<sub>C</sub> = +30°C, 75 Ω system unless otherwise noted)

Characteristic	Symbol	Min	Typ	Max	Unit
Frequency Range	BW	40	—	870	MHz
Power Gain	G <sub>p</sub>	18 19	18.5 19.4	19 20.5	dB
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 <sub>0</sub> = 75 Ohms)	IRL/ORL				
@ 40 MHz		20	—	—	dB
@ f > 40 MHz (Derate)		—	—	0.007	dB/MHz
Composite Second Order					dBc
(V <sub>out</sub> = +40 dBmV/ch., Worst Case) 128-Channel FLAT	CSO <sub>128</sub>	—	-69	-62	
(V <sub>out</sub> = +44 dBmV/ch., Worst Case) 110-Channel FLAT	CSO <sub>110</sub>	—	-70	-64	
(V <sub>out</sub> = +44 dBmV/ch., Worst Case) 77-Channel FLAT	CSO <sub>77</sub>	—	-85	-68	
Cross Modulation Distortion @ Ch 2					dBc
(V <sub>out</sub> = +40 dBmV/ch., FM = 55 MHz) 128-Channel FLAT	XMD <sub>128</sub>	—	-72	-64	
(V <sub>out</sub> = +44 dBmV/ch., FM = 55 MHz) 110-Channel FLAT	XMD <sub>110</sub>	—	-66	-63	
(V <sub>out</sub> = +44 dBmV/ch., FM = 55 MHz) 77-Channel FLAT	XMD <sub>77</sub>	—	-69	-67	
Composite Triple Beat					dBc
(V <sub>out</sub> = +40 dBmV/ch., Worst Case) 128-Channel FLAT	CTB <sub>128</sub>	—	-66	-63	
(V <sub>out</sub> = +44 dBmV/ch., Worst Case) 110-Channel FLAT	CTB <sub>110</sub>	—	-63	-61	
(V <sub>out</sub> = +44 dBmV/ch., Worst Case) 77-Channel FLAT	CTB <sub>77</sub>	—	-70	-68	
Noise Figure	NF	—	5.3 5.8 6.6 7.8	6.2 — — 8.5	dB
50 MHz					
550 MHz					
750 MHz					
870 MHz					
DC Current (V <sub>DC</sub> = 24 V, T <sub>C</sub> = -20 to +100°C)	I <sub>DC</sub>	345	365	385	mA

# PACKAGE DIMENSIONS



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