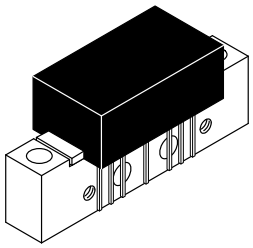
The RF Line

High Output Power Doubler 870 MHz CATV Amplifier

MHW8185L

- 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

19.4 dB GAIN
870 MHz
128–CHANNEL
CATV AMPLIFIER



CASE 714Y–03, STYLE 1

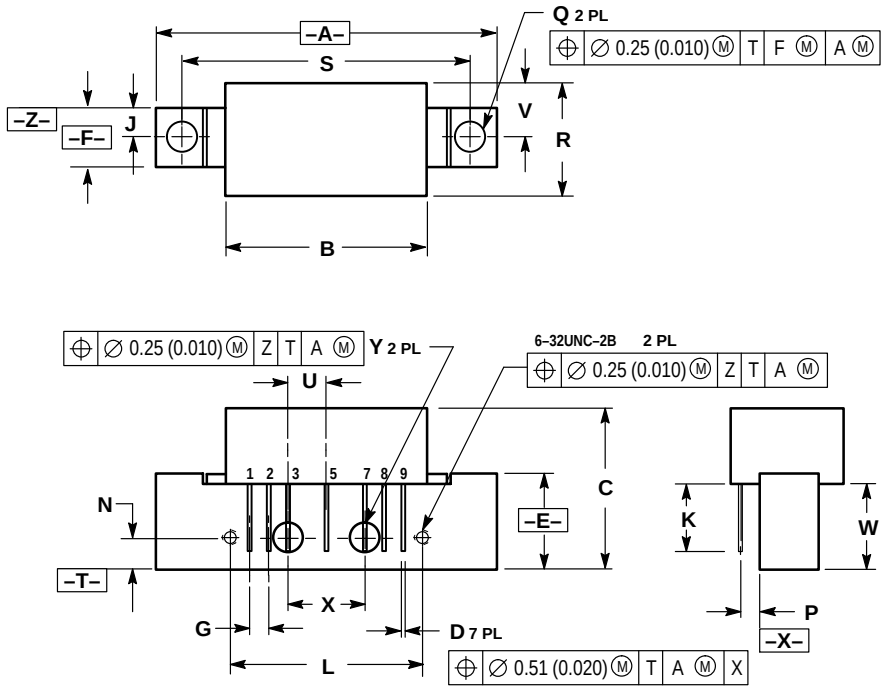
MAXIMUM RATINGS

Rating	Symbol	Value	Unit
RF Voltage Input (Single Tone)	V_{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_o = 75 Ohms) @ 40 MHz @ f > 40 MHz (Derate)		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)	 128–Channel FLAT 110–Channel FLAT 77–Channel FLAT	 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)	 128–Channel FLAT 110–Channel FLAT 77–Channel FLAT	 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)	 128–Channel FLAT 110–Channel FLAT 77–Channel FLAT	 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



NOTES:
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.

	INCHES		MILLIMETERS	
DIM	MIN	MAX	MIN	MAX
A	——	1.775	——	45.08
B	——	1.085	——	27.56
C	——	0.840	——	21.34
D	0.018	0.022	0.46	0.56
E	0.465	0.510	11.81	12.95
F	0.300	0.325	7.62	8.25
G	0.100 BSC		2.54 BSC	
J	0.156 BSC		3.96 BSC	
K	0.315	0.355	8.00	8.50
L	1.00 BSC		25.40 BSC	
N	0.165 BSC		4.19 BSC	
P	0.100 BSC		2.54 BSC	
Q	0.148	0.168	3.76	4.27
R	——	0.600	——	15.24
S	1.500 BSC		38.10 BSC	
U	0.200 BSC		5.08 BSC	
V	——	0.250	——	6.35
W	0.435	0.450	11.05	11.43
X	0.400 BSC		10.16 BSC	
Y	0.152	0.163	3.85	4.15

STYLE 1:
PIN 1. RF INPUT
2. GROUND
3. GROUND
4. DELETED
5. VDC
6. DELETED
7. GROUND
8. GROUND
9. RF OUTPUT

CASE 714Y–03
ISSUE D

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