

The RF Line

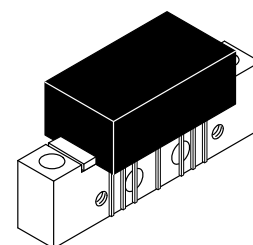
High Output Mirror Power Doubler

860 MHz CATV Amplifier

- Specified for 77, 110 and 128-Channel Performance
- Broadband Power Gain — @ $f = 860$ MHz
 $G_p = 19.4$ 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

MHW8185R

19.4 dB GAIN
860 MHz
128-CHANNEL
CATV AMPLIFIER



CASE 714Y-03, STYLE 2

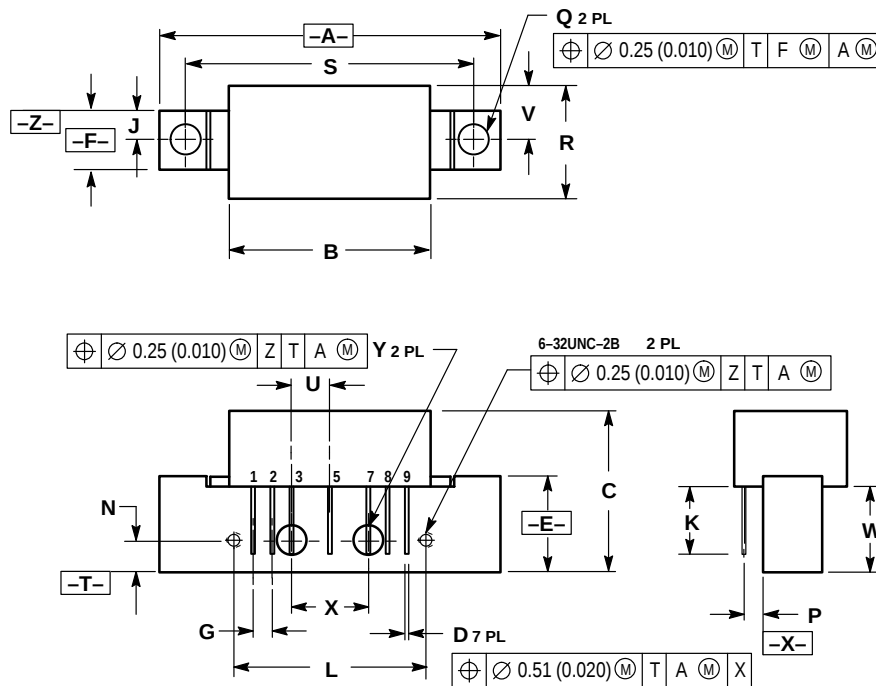
MAXIMUM RATINGS

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	50 MHz 860 MHz	G _p	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 ₀ = 75 Ohms) @ 40 MHz @ f > 40 MHz (Derate)		IRL/ORL	19 —	— —	— 0.006	dB dB/MHz
Composite Second Order (V _{out} = +40 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	— — —	–70 –72 –80	–62 — —	dBc
Cross Modulation Distortion @ Ch 2 (V _{out} = +40 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 — —	dBc
Composite Triple Beat (V _{out} = +40 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	— — —	–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 _{DC} = 24 V, T _C = 30°C)		I _{DC}	365	400	435	mA

PACKAGE DIMENSIONS



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

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

**CASE 714Y-03
ISSUE D**

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MHW8185R/D