

The RF Line

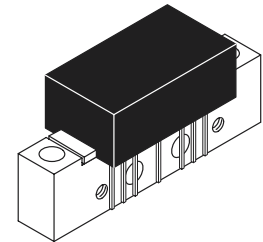
High Output Mirror Power Doubler

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°C, 75 Ω system unless otherwise noted)

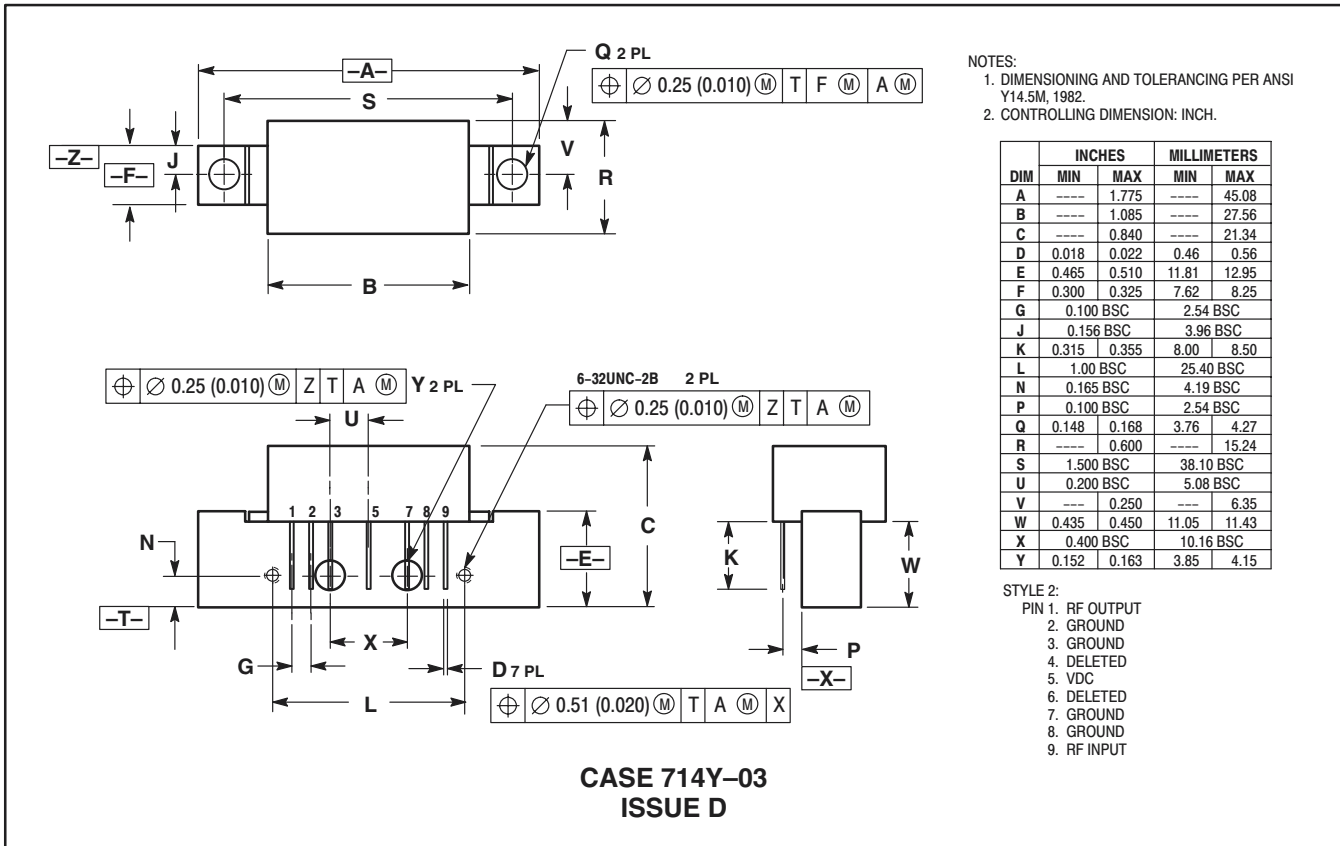
Characteristic	Symbol	Min	Typ	Max	Unit
Frequency Range	BW	40	—	860	MHz
Power Gain	G _p	18.3 19	18.8 19.4	19.3 20.5	dB
Slope	S	0	.5	1.5	dB
Gain Flatness (40-860 MHz, Peak to Valley)	—	—	0.3	1.0	dB
Return Loss — Input/Output (Z ₀ = 75 Ohms)	IRL/ORL	19 —	— —	— 0.006	dB dB/MHz
Composite Second Order					dBc
(V _{out} = +40 dBmV/ch., Worst Case)	128-Channel FLAT	CSO ₁₂₈	—	-70	-62
(V _{out} = +44 dBmV/ch., Worst Case)	110-Channel FLAT	CSO ₁₁₀	—	-72	-64
	77-Channel FLAT	CSO ₇₇	—	-80	-68
Cross Modulation Distortion @ Ch 2					dBc
(V _{out} = +40 dBmV/ch., FM = 55 MHz)	128-Channel FLAT	XMD ₁₂₈	—	-72	-64
(V _{out} = +44 dBmV/ch., FM = 55 MHz)	110-Channel FLAT	XMD ₁₁₀	—	-67	-63
	77-Channel FLAT	XMD ₇₇	—	-70	-68
Composite Triple Beat					dBc
(V _{out} = +40 dBmV/ch., Worst Case)	128-Channel FLAT	CTB ₁₂₈	—	-67	-64
(V _{out} = +44 dBmV/ch., Worst Case)	110-Channel FLAT	CTB ₁₁₀	—	-64	-62
	77-Channel FLAT	CTB ₇₇	—	-71	-69
Noise Figure	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

ARCHIVE INFORMATION

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PACKAGE DIMENSIONS



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

DIM	INCHES		MILLIMETERS	
	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

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USA/EUROPE/Locations Not Listed: Motorola Literature Distribution;
 P.O. Box 5405, Denver, Colorado 80217. 1-303-675-2140 or 1-800-441-2447

JAPAN: Nippon Motorola Ltd.: SPD, Strategic Planning Office, 141,
 4-32-1 Nishi-Gotanda, Shagawa-ku, Tokyo, Japan. 03-5487-8488

Customer Focus Center: 1-800-521-6274

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ASIA/PACIFIC: Motorola Semiconductors H.K. Ltd.; 8B Tai Ping Industrial Park,
 51 Ting Kok Road, Tai Po, N.T., Hong Kong. 852-26629298

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