

# The RF Line

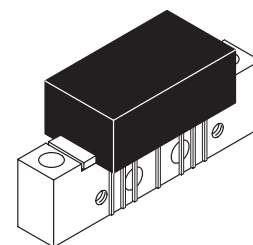
## High Output Mirror Power Doubler

### 750 MHz CATV Amplifier

**MHW7185CR**

**19.4 dB GAIN**  
**750 MHz**  
**110-CHANNEL**  
**CATV AMPLIFIER**

- Specified for 77 and 110-Channel Performance
- Broadband Power Gain — @ f = 750 MHz  
G<sub>p</sub> = 19.4 dB (Typ)
- Broadband Noise Figure  
NF = 6.2 dB (Typ) @ 750 MHz
- Pin Configuration Mirrors that of MHW7185C
- Typical CTB @ 750 MHz under 110-Channel FLAT Loading = -64 dBc



**CASE 714Y-03, STYLE 2**

#### 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

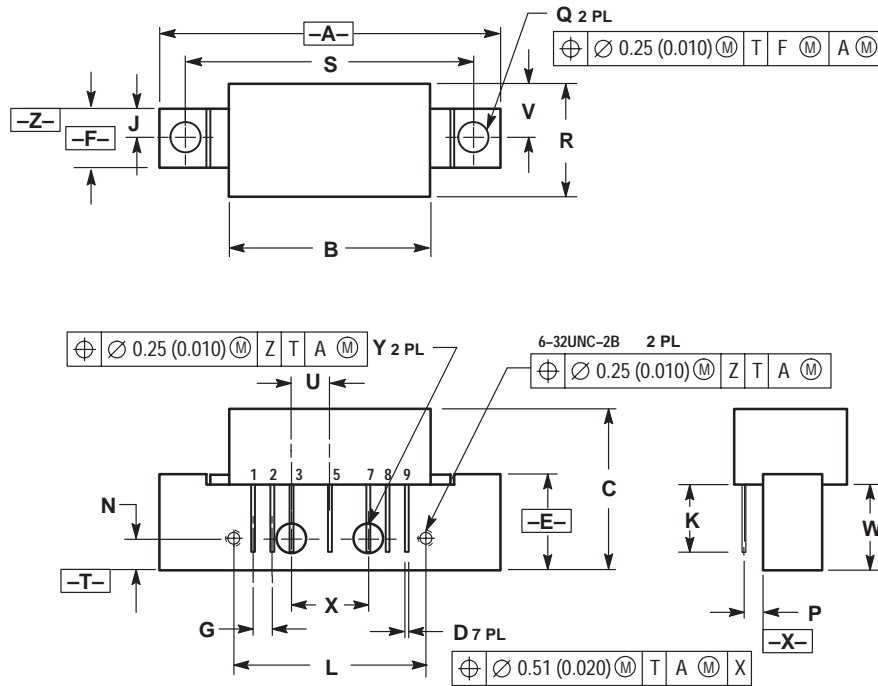
#### ELECTRICAL CHARACTERISTICS (V<sub>CC</sub> = 24 Vdc, T<sub>C</sub> = +30°C, 75 Ω system unless otherwise noted)

Characteristic	Symbol	Min	Typ	Max	Unit
Frequency Range	BW	40	—	750	MHz
Power Gain	G <sub>p</sub>	18.3 19	18.8 19.4	19.3 20	dB
Slope	S	0	.5	1.0	dB
Gain Flatness (40-750 MHz, Peak to Valley)	—	—	0.3	0.6	dB
Return Loss — Input/Output (Z <sub>0</sub> = 75 Ohms)	IRL/ORL	19	—	—	dB
		—	—	0.006	dB/MHz
Composite Second Order					dBc
(V <sub>out</sub> = +44 dBmV/ch., Worst Case)	CSO <sub>110</sub> CSO <sub>77</sub>	— —	-72 -80	-64 -68	
Cross Modulation Distortion @ Ch 2	XMD <sub>110</sub> XMD <sub>77</sub>	— —	-66 -70	-63 -68	dBc
(V <sub>out</sub> = +44 dBmV/ch., FM = 55 MHz)					
Composite Triple Beat	CTB <sub>110</sub> CTB <sub>77</sub>	— —	-64 -71	-62 -69	dBc
(V <sub>out</sub> = +44 dBmV/ch., Worst Case)					
Noise Figure	NF	— — —	5.0 5.3 6.2	6.0 — 7.5	dB
DC Current (V <sub>DC</sub> = 24 V, T <sub>C</sub> = 30°C)	I <sub>DC</sub>	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

CASE 714Y-03  
 ISSUE D

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