

The RF Line

High Output Mirror Power Doubler

750 MHz CATV Amplifier

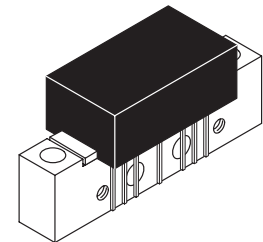
MHW7205CR

- Specified for 77 and 110-Channel Performance
- Broadband Power Gain — @ $f = 40\text{--}750$ MHz
 $G_p = 20.2$ dB (Typ)
- Broadband Noise Figure
NF = 6.2 dB (Typ) @ 750 MHz
- All Gold Metallization
- 7 GHz f_T Ion-Implanted Transistors
- Composite Triple Beat — @ 110-Channel Loading
CTB = -63 dB (Typ)

20.2 dB GAIN
750 MHz
110-CHANNEL
CATV AMPLIFIER

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



CASE 714Y-03, STYLE 2

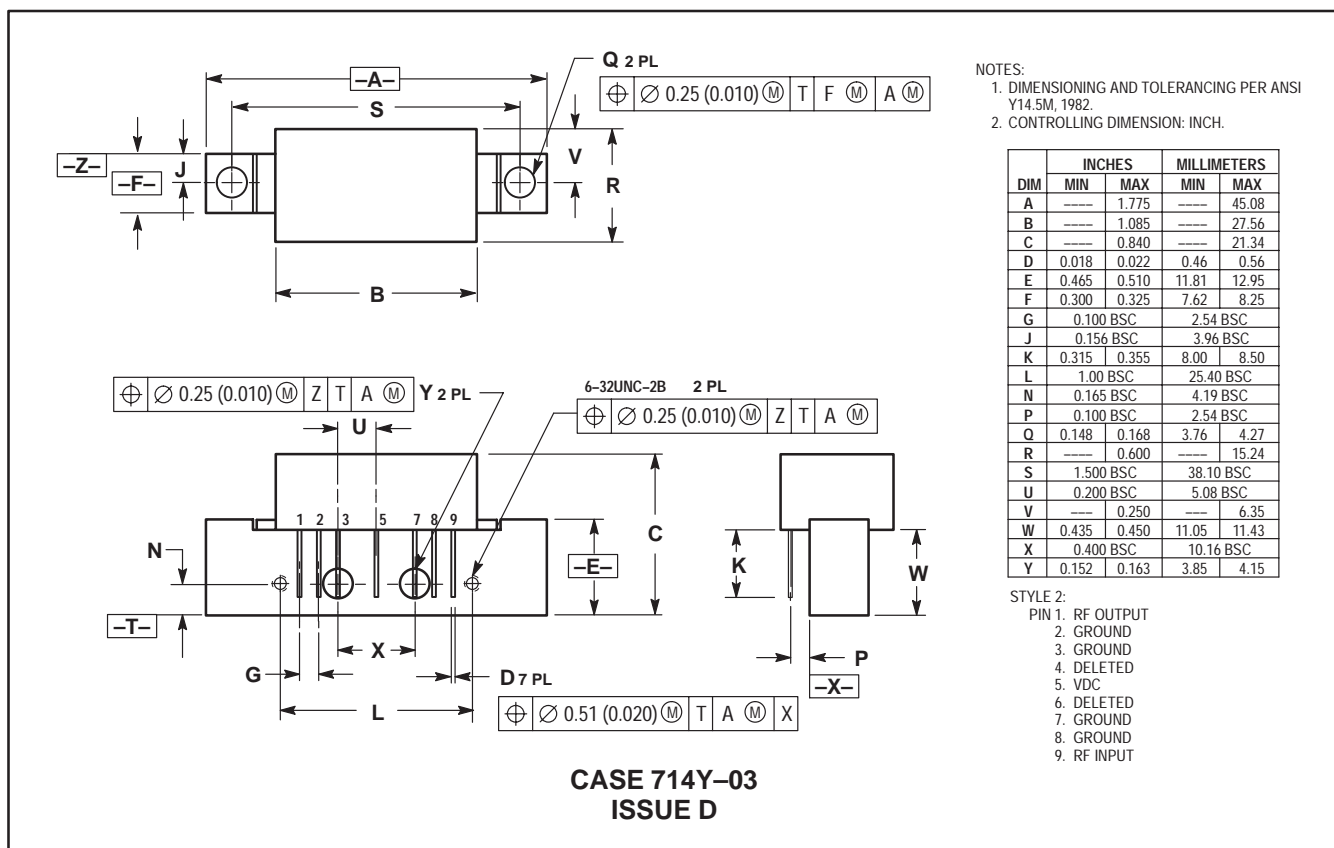
ELECTRICAL CHARACTERISTICS ($V_{CC} = 24$ Vdc, $T_C = +30^\circ\text{C}$, 75 Ω system unless otherwise noted)

Characteristic	Symbol	Min	Typ	Max	Unit
Frequency Range	BW	40	—	750	MHz
Power Gain	G_p	19.3	19.8	20.3	dB
		20	20.2	21	
Slope	S	0	0.4	1.0	dB
Gain Flatness (40-750 MHz, Peak to Valley)	—	—	0.3	0.6	dB
Return Loss — Input/Output ($Z_0 = 75$ Ohms)	IRL/ORL				
		19	—	—	dB
		—	—	0.006	dB/MHz
Composite Second Order					dBc
($V_{out} = +44$ dBmV/ch., Worst Case)					
110-Channel FLAT	CSO ₁₁₀	—	-70	-63	
77-Channel FLAT	CSO ₇₇	—	-80	-68	
Cross Modulation Distortion @ Ch 2					dBc
($V_{out} = +44$ dBmV/ch., FM = 55 MHz)					
110-Channel FLAT	XMD ₁₁₀	—	-67	-62	
77-Channel FLAT	XMD ₇₇	—	-70	-68	
Composite Triple Beat					dBc
($V_{out} = +44$ dBmV/ch., Worst Case)					
110-Channel FLAT	CTB ₁₁₀	—	-63	-61	
77-Channel FLAT	CTB ₇₇	—	-71	-69	
Noise Figure	NF	—	5.0	6.0	dB
		—	5.8	—	
		—	6.2	7.5	
DC Current ($V_{DC} = 24$ V, $T_C = 30^\circ\text{C}$)	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
 - GROUND
 - GROUND
 - DELETED
 - VDC
 - DELETED
 - GROUND
 - GROUND
 - RF INPUT

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