

The RF Line

110-Channel 750 MHz CATV Amplifier

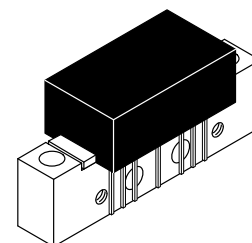
MHW7182A

- Specified for 77 and 110-Channel Performance
- Broadband Power Gain — @ f = 750 MHz
G_p = 18.8 dB (Typ)
- Broadband Noise Figure
NF = 5.0 dB (Typ) @ 750 MHz
- All Gold Metallization
- 7 GHz f_T Ion-Implanted Transistors
- Improved Ruggedness

**18 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



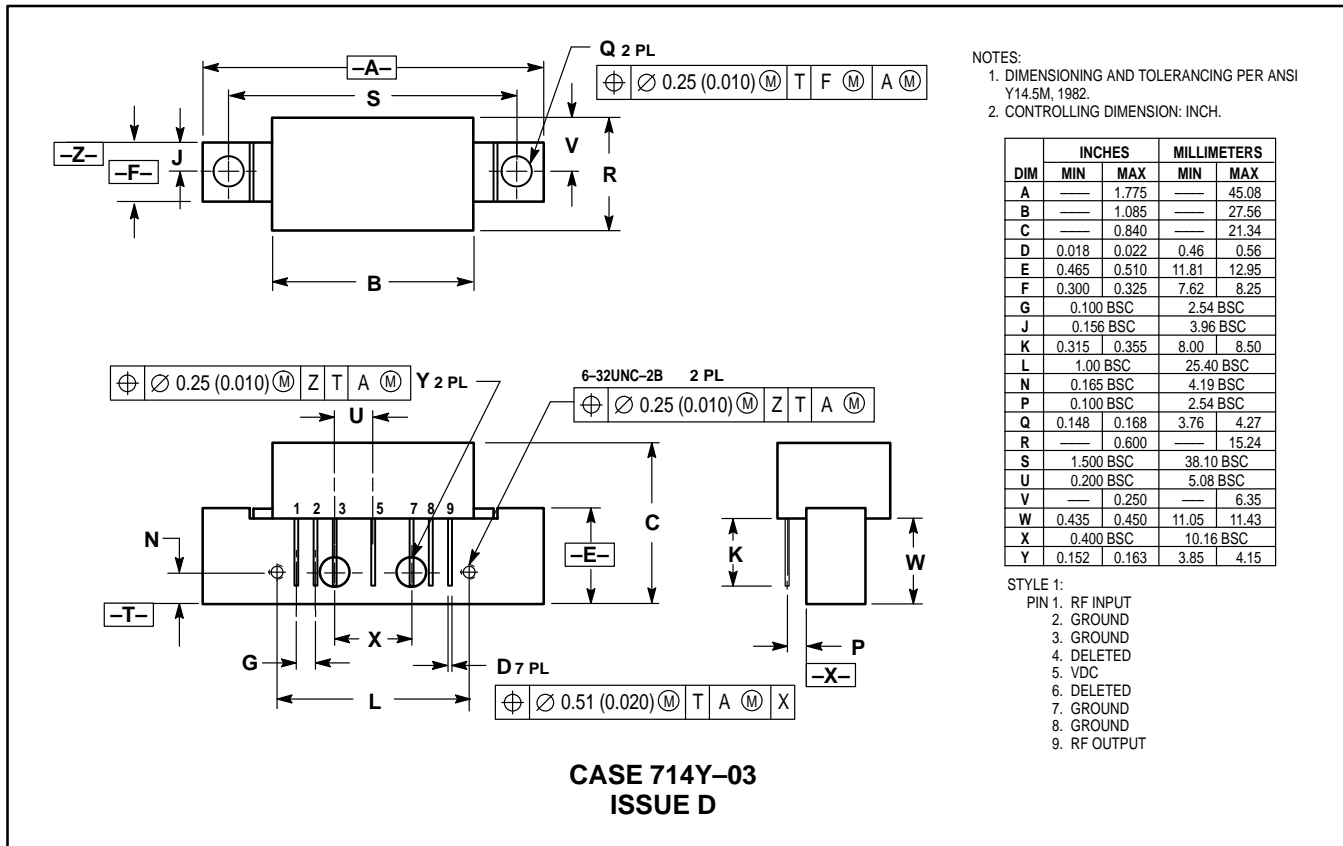
CASE 714Y-03, STYLE 1

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	—	750	MHz
Power Gain	G _p	17.6 18.2	18.3 18.8	18.8 20.5	dB
Slope	S	0	0.6	2.5	dB
Gain Flatness (40–750 MHz, Peak to Valley)	—	—	0.3	0.6	dB
Return Loss — Input/Output (Z ₀ = 75 Ohms)	IRL/ORL	20	—	—	dB
	@ 40 MHz	—	—	0.007	dB/MHz
	@ f > 40 MHz (Derate)	—	—	—	—
Composite Second Order					dBc
(V _{out} = +40 dBmV/ch., Worst Case)	CSO ₁₁₀	—	-70	-62	
(V _{out} = +44 dBmV/ch., Worst Case)	CSO ₇₇	—	-70	—	
Cross Modulation Distortion @ Ch 2					dBc
(V _{out} = +40 dBmV/ch., FM = 55 MHz)	XMD ₁₁₀	—	-66	-64	
(V _{out} = +44 dBmV/ch., FM = 55 MHz)	XMD ₇₇	—	-61	—	
Composite Triple Beat					dBc
(V _{out} = +40 dBmV/ch., Worst Case)	CTB ₁₁₀	—	-64	-62	
(V _{out} = +44 dBmV/ch., Worst Case)	CTB ₇₇	—	-63	—	
Noise Figure	NF	—	4.0 4.5 5.0	5.0 — 6.5	dB
DC Current (V _{DC} = 24 V, T _C = 30°C)	I _{DC}	180	235	240	mA



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

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How to reach us:
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, 4-32-1,
 Nishi-Gotanda, Shinagawa-ku, Tokyo 141, Japan. 81-3-5487-8488

Customer Focus Center: 1-800-521-6274

Mfax™: RMFAX0@email.sps.mot.com – TOUCHTONE 1-602-244-6609
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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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