

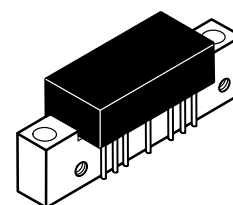
The RF Line

77-Channel (550 MHz) CATV Line Extender Amplifier

- Specified for 60- and 77-Channel Performance
- Broadband Power Gain — @ $f = 40\text{--}550$ MHz
 $G_p = 27$ dB (Typ)
- Broadband Noise Figure
 $NF = 6$ dB (Typ) @ 550 MHz
- Superior Gain, Return Loss and DC Current Stability with Temperature
- All Gold Metallization
- 7 GHz f_T Ion-Implanted Transistors

MHW6272

**27 dB GAIN
550 MHz
77-CHANNEL
CATV AMPLIFIER**



CASE 714-06, STYLE 1

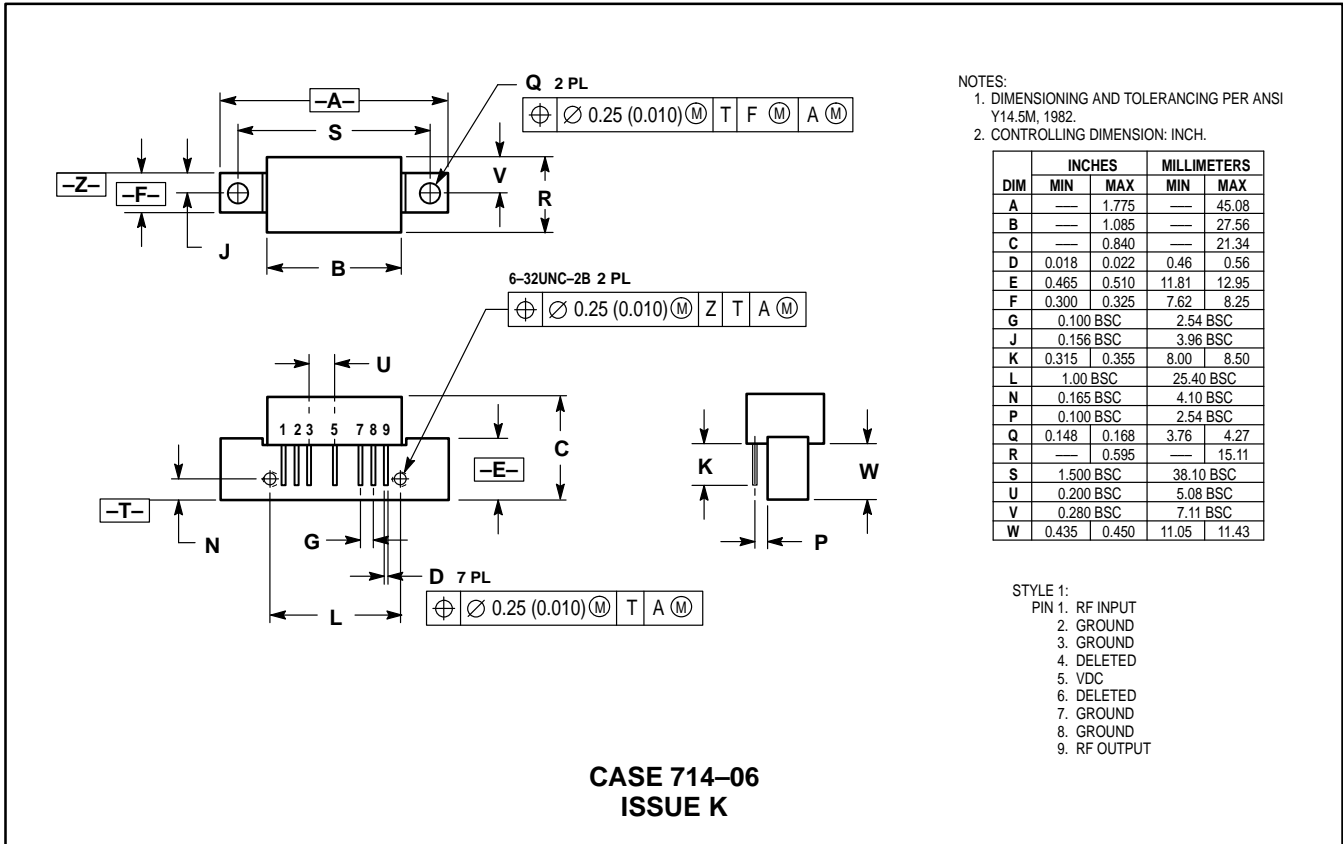
MAXIMUM RATINGS

Rating	Symbol	Value	Unit
RF Voltage Input (Single Tone)	V_{in}	+55	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	—	550	MHz
Power Gain	G_p	26.2 27	27 —	27.8 29.2	dB
Slope	S	0	1	2	dB
Gain Flatness (Peak To Valley)	—	—	0.4	0.8	dB
Return Loss — Input/Output ($Z_0 = 75$ Ohms)	IRL/ORL	18 16	— —	— —	dB
Second Order Intermodulation Distortion ($V_{out} = +48$ dBmV per ch., Ch 2, 13, R) ($V_{out} = +46$ dBmV per ch., Ch 2, M6, M15) ($V_{out} = +46$ dBmV per ch., Ch 2, M13, M22) ($V_{out} = +44$ dBmV per ch., Ch 2, M30, M39)	IMD	— — — —	-80 -78 -76 -69	— — — -64	dB
Cross Modulation Distortion @ Ch 2 ($V_{out} = +46$ dBmV per ch.) ($V_{out} = +44$ dBmV per ch.)	XMD ₅₃ XMD ₆₀ XMD ₇₀ XMD ₇₇	— — — —	-63 -62 -61 -59	— — — -57	dB
Composite Triple Beat ($V_{out} = +46$ dBmV per ch.) ($V_{out} = +44$ dBmV per ch.)	TB ₅₃ TB ₆₀ TB ₇₀ TB ₇₇	— — — —	-63 -62 -61 -59	— — — -57	dB
Noise Figure	NF	—	6.0	6.5	dB
DC Current	I_{DC}	—	310	340	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	0.100 BSC	2.54 BSC	2.54 BSC
J	0.156 BSC	0.156 BSC	3.96 BSC	3.96 BSC
K	0.315	0.355	8.00	8.50
L	1.00 BSC	1.00 BSC	25.40 BSC	25.40 BSC
N	0.165 BSC	0.165 BSC	4.10 BSC	4.10 BSC
P	0.100 BSC	0.100 BSC	2.54 BSC	2.54 BSC
Q	0.148	0.168	3.76	4.27
R	—	0.595	—	15.11
S	1.500 BSC	1.500 BSC	38.10 BSC	38.10 BSC
U	0.200 BSC	0.200 BSC	5.08 BSC	5.08 BSC
V	0.280 BSC	0.280 BSC	7.11 BSC	7.11 BSC
W	0.435	0.450	11.05	11.43

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

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