

The RF Line

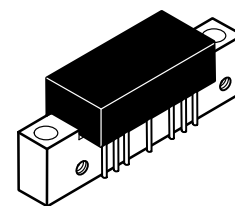
77-Channel (550 MHz) CATV Input/Output Trunk Amplifier

... designed specifically for 550 MHz CATV applications. Features ion-implanted arsenic emitter transistors with 7 GHz f_T and an all gold metallization system.

- Specified for 77-Channel Performance
- Broadband Power Gain — @ $f = 40\text{--}550$ MHz
 $G_p = 17.2$ dB (Typ)
- Broadband Noise Figure — @ $f = 550$ MHz
 $NF = 6$ dB (Typ)
- Superior Gain, Return Loss and DC Current Stability with Temperature
- All Gold Metallization
- 7 GHz Ion-Implanted Transistors

MHW6172

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



CASE 714-06, STYLE 1

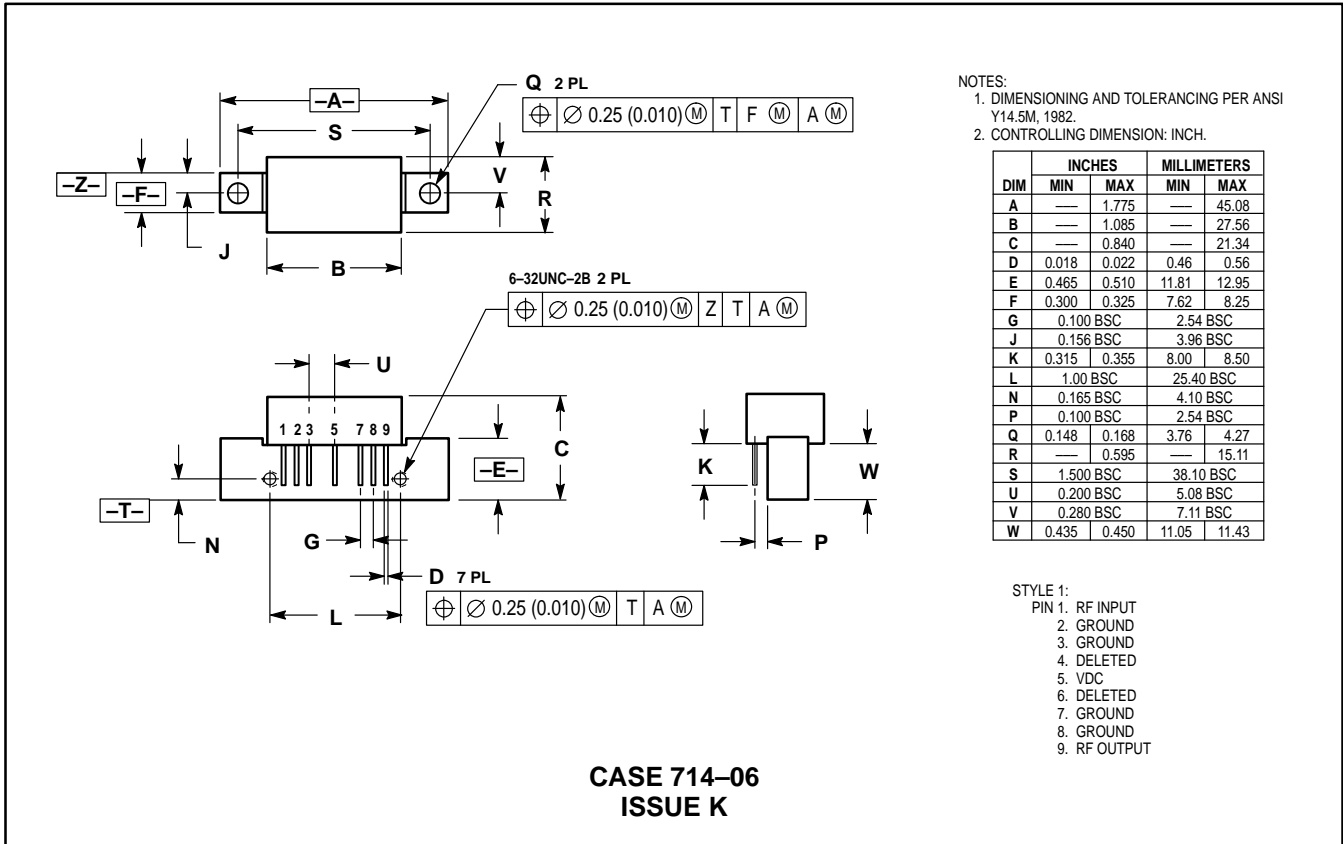
ABSOLUTE MAXIMUM RATINGS

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, $T_C = +30^\circ\text{C}$, 75 Ω system unless otherwise noted)

Characteristic	Symbol	Min	Typ	Max	Unit
Frequency Range	BW	40	—	550	MHz
Power Gain 50 MHz	G_p	16.8	17.2	17.8	dB
Slope	S	0	+0.5	2.0	dB
Gain Flatness (Peak To Valley)	—	—	0.2	0.4	dB
Return Loss — Input/Output ($Z_0 = 75$ Ohms) 40–550 MHz	IRL/ORL	18	—	—	dB
Second Order Intermodulation ($V_{out} = +46$ dBmV per ch., Ch 2, M13, M22) ($V_{out} = +44$ dBmV per ch., Ch 2, M30, M39)	IMD	—	-80 -78	— -70	dB
Cross Modulation Distortion ($V_{out} = +46$ dBmV per ch.) ($V_{out} = +44$ dBmV per ch.) 60-Channel FLAT 77-Channel FLAT	XMD ₆₀ XMD ₇₇	—	-63 -65	— -62	dB
Composite Triple Beat Noise ($V_{out} = +46$ dBmV per ch.) ($V_{out} = +44$ dBmV per ch.) 60-Channel FLAT 77-Channel FLAT	CTB ₆₀ CTB ₇₇	—	-62 -60	— -59	dB
Noise Figure 450 MHz 550 MHz	NF	—	5.5 6	— 7	dB
DC Current	I_{DC}	—	210	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	4.10 BSC		
P	0.100 BSC	2.54 BSC		
Q	0.148	0.168	3.76	4.27
R	—	0.595	—	15.11
S	1.500 BSC	38.10 BSC		
U	0.200 BSC	5.08 BSC		
V	0.280 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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