

## The RF Line

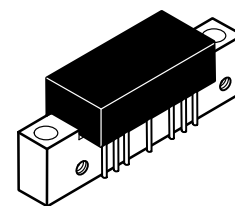
# 77-Channel (550 MHz) CATV Input/Output Trunk Amplifier

... 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**

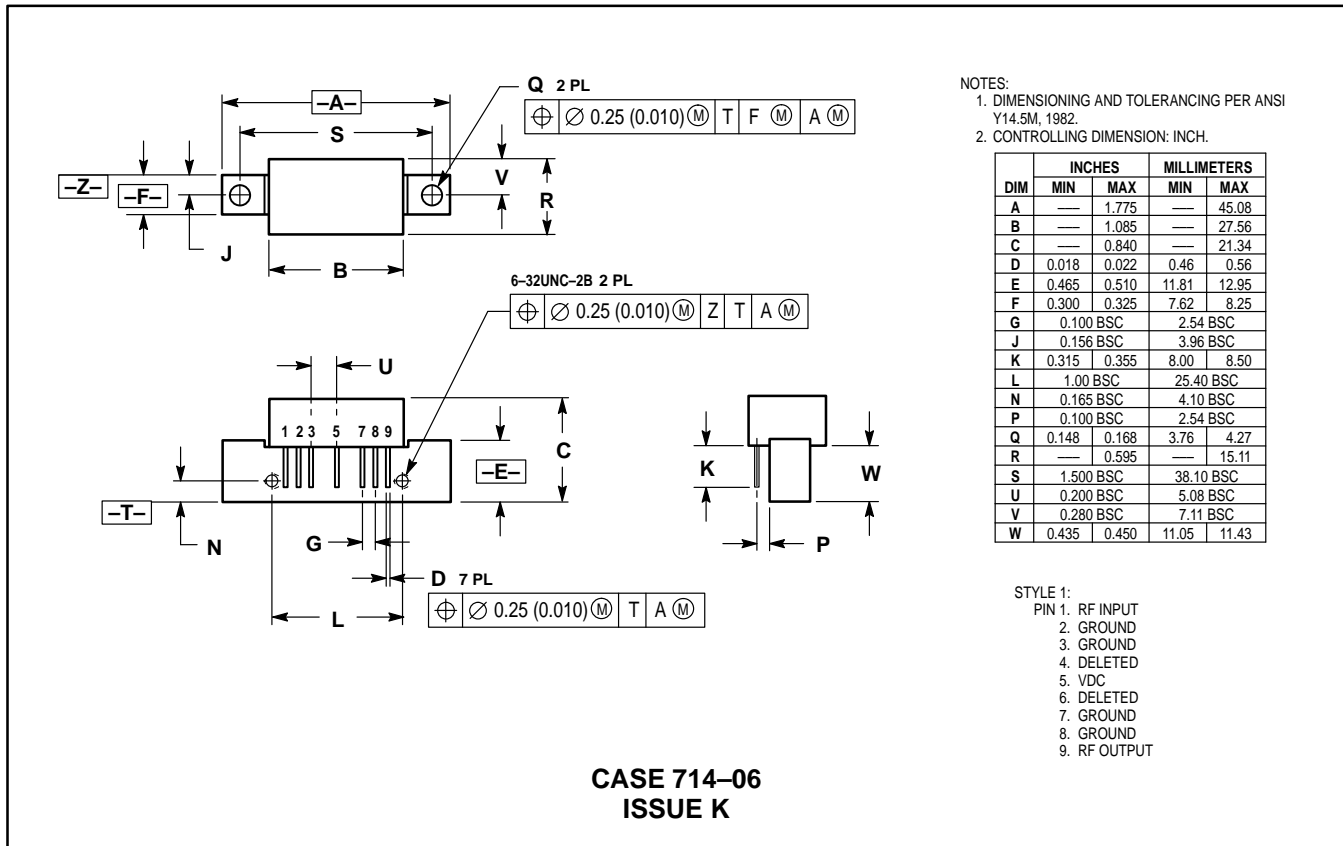
### ABSOLUTE MAXIMUM RATINGS

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 $\Omega$ 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)	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 <sub>60</sub> XMD <sub>77</sub>	— —	-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 <sub>60</sub> CTB <sub>77</sub>	— —	-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



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