

# The RF Line

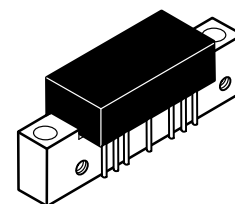
## 77-Channel (550 MHz) CATV Amplifier

**MHW6342**

... 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 — @  $f = 40-550$  MHz  
 $G_p = 34.5$  dB (Typ) @ 50 MHz  
 $35$  dB (Min) @ 550 MHz
- Broadband Noise Figure @ 550 MHz  
 $NF = 5.5$  dB (Typ)
- Superior Gain, Return Loss and DC Current Stability with Temperature
- All Gold Metallization
- 7 GHz Ion-Implanted Transistors

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



CASE 714-06, STYLE 1

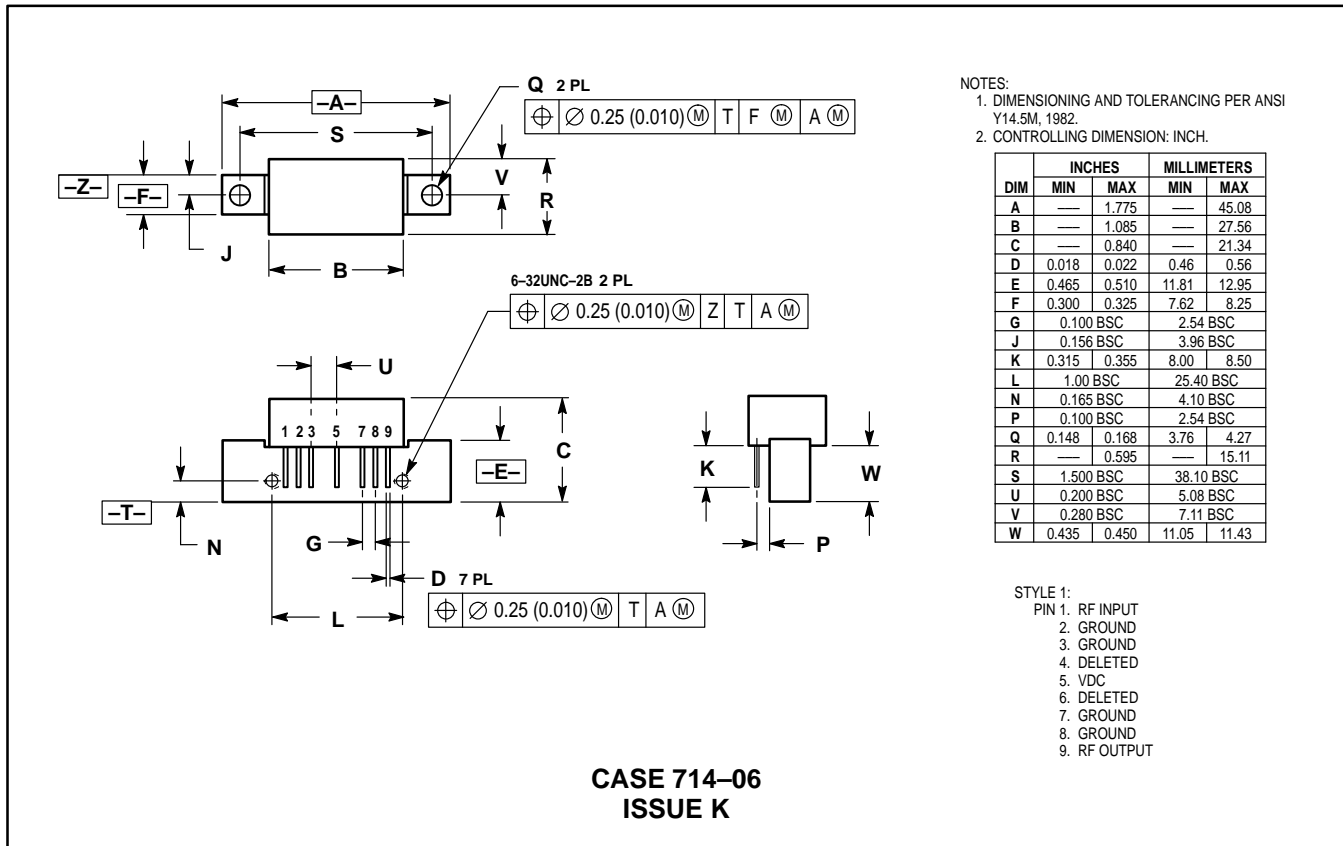
### ABSOLUTE MAXIMUM RATINGS

Rating	Symbol	Value	Unit
RF Voltage Input (Single Tone)	$V_{in}$	+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 $\Omega$ system unless otherwise noted)

Characteristic	Symbol	Min	Typ	Max	Unit
Frequency Range	BW	40	—	550	MHz
Power Gain 50 MHz	$G_p$	33.5	34.5	35.5	dB
Power Gain 550 MHz	$G_p$	34.5	—	—	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 ( $V_{out} = +46$ dBmV per ch., Ch 2, M13, M22) ( $V_{out} = +44$ dBmV per ch., Ch 2, M30, M39)	IMD	— —	-75 -70	— -64	dB
Cross Modulation Distortion ( $V_{out} = +46$ dBmV per ch.) ( $V_{out} = +44$ dBmV per ch.)	XMD <sub>60</sub> XMD <sub>77</sub>	— —	-61 -59	— -57	dB
Composite Triple Beat ( $V_{out} = +46$ dBmV per ch.) ( $V_{out} = +44$ dBmV per ch.)	CTB <sub>60</sub> CTB <sub>77</sub>	— —	-60 -58	— -57	dB
Noise Figure 550 MHz	NF	—	5.5	6.5	dB
DC Current	$I_{DC}$	—	310	340	mA

## PACKAGE DIMENSIONS



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