

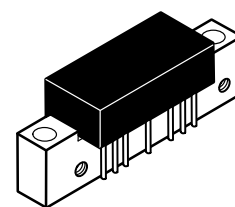
# The RF Line

## 128-Channel (860 MHz) CATV Line Extender Amplifier

- Specified for 128-Channel Performance
- Broadband Power Gain — @  $f = 40\text{--}860$  MHz  
 $G_p = 29$  dB (Typ)
- Broadband Noise Figure  
NF = 6 dB (Typ) @ 860 MHz
- Superior Gain, Return Loss and DC Current Stability with Temperature
- All Gold Metallization
- 7 GHz  $f_T$  Ion-Implanted Transistors

**MHW8292**

**29 dB GAIN**  
**860 MHz**  
**128-CHANNEL**  
**CATV AMPLIFIER**



**CASE 714-06, STYLE 1**

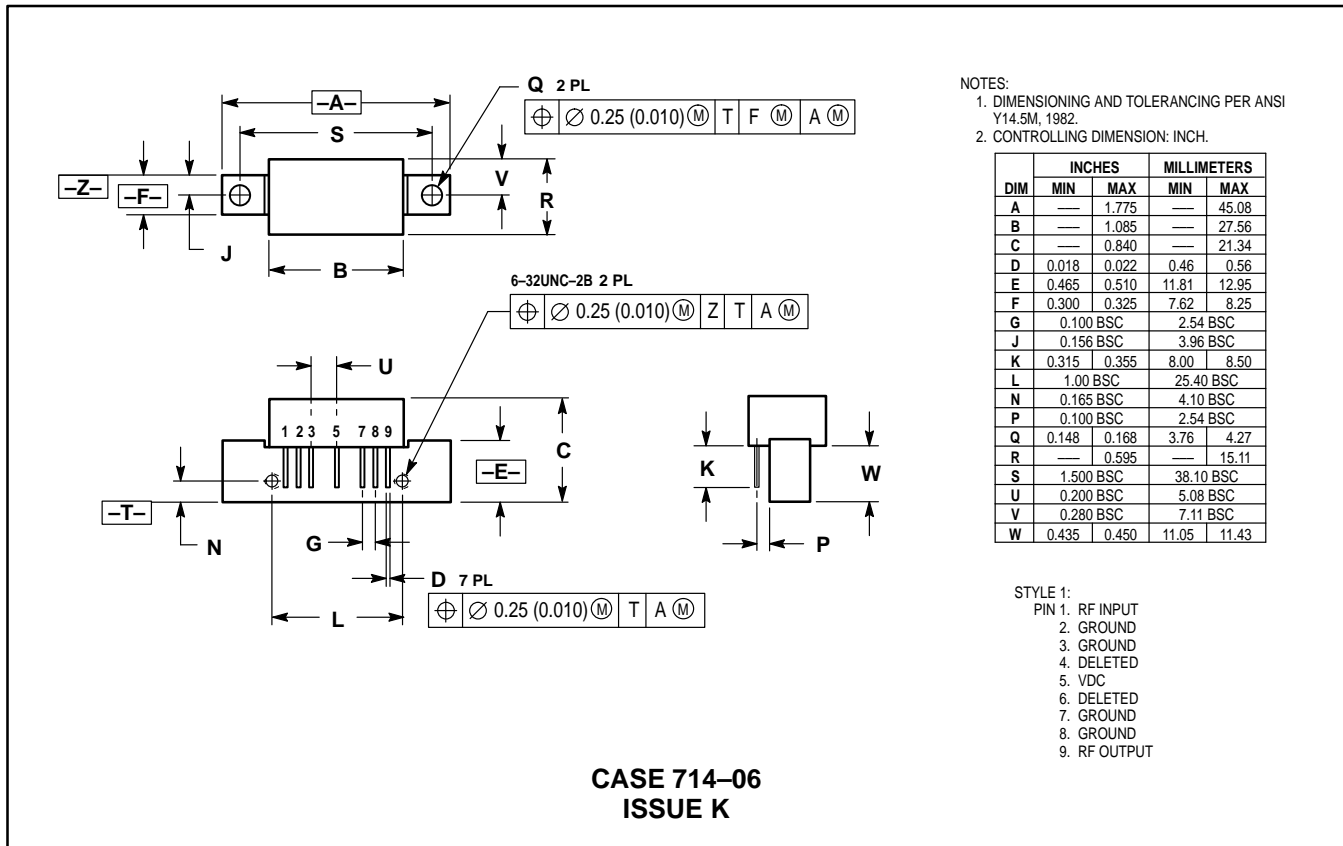
### MAXIMUM RATINGS

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 $\Omega$ system unless otherwise noted)

Characteristic	Symbol	Min	Typ	Max	Unit
Frequency Range	BW	40	—	860	MHz
Power Gain	$G_p$	50 MHz 28.2	29	29.8	dB
		860 MHz 29	—	31.5	
Slope	S	0	1.0	2.5	dB
Gain Flatness (40-860 MHz, Peak to Valley)	—	—	0.4	0.8	dB
Return Loss — Input/Output ( $Z_0 = 75$ Ohms)	IRL/ORL	@ 40 MHz 20	—	—	dB
		@ $f > 40$ MHz (Derate) —	—	0.007	
Composite Second Order ( $V_{out} = +38$ dBmV/ch., Worst Case)	$CSO_{128}$	—	—	-56	dBc
Cross Modulation Distortion @ Ch 2 ( $V_{out} = +38$ dBmV/ch., FM = 55 MHz)	$XMD_{128}$	—	—	-60	dBc
Composite Triple Beat ( $V_{out} = +38$ dBmV/ch., Worst Case)	$CTB_{128}$	—	—	-60	dBc
Noise Figure	NF	50 MHz —	—	5.5	dB
		860 MHz —	6.0	7.0	
DC Current ( $V_{DC} = 24$ V, $T_C = 30^\circ\text{C}$ )	$I_{DC}$	280	310	350	mA

## PACKAGE DIMENSIONS



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