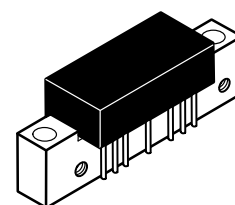


# The RF Line 110-Channel (750 MHz) CATV Line Extender Amplifier

- 24 V Supply Voltage
- Specified for 110-Channel Performance
- Superior Gain, Return Loss and DC Current Stability with Temperature
- All Gold Metallization
- 7 GHz  $f_T$  Ion-Implanted Transistors

**MHW7292**

**29 dB GAIN  
750 MHz  
110-CHANNEL  
CATV AMPLIFIER**



**CASE 714-06, STYLE 1**

## MAXIMUM RATINGS

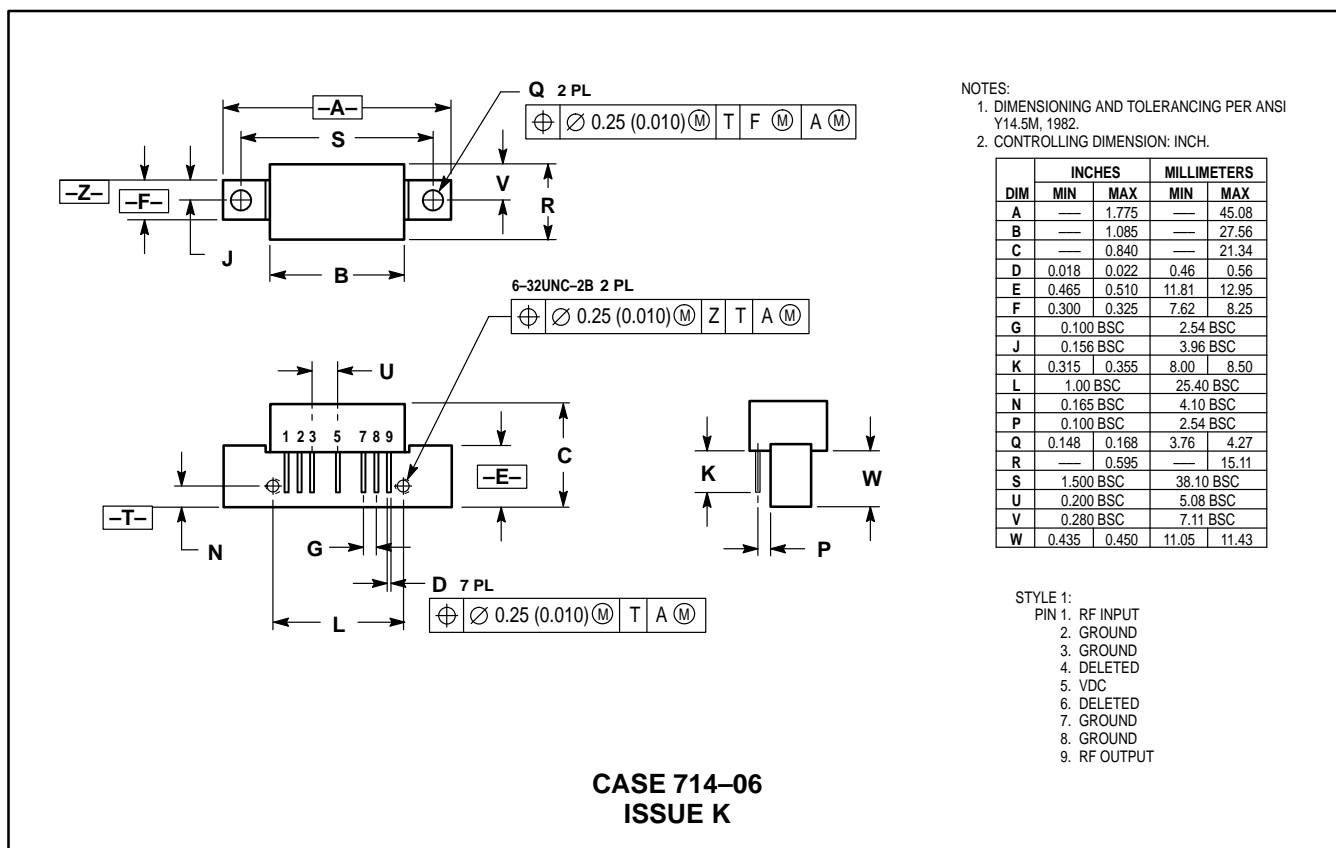
Rating	Symbol	Value	Unit
RF Voltage Input (Single Tone)	$V_{in}$	+55	dBmV
DC Supply Voltage	$V_{CC}$	+28	Vdc
Operating Case Temperature Range	$T_C$	-20 to +100	°C
Storage Temperature Range	$T_{stg}$	-40 to +100	°C

## 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	—	750	MHz
Power Gain 50 MHz 750 MHz	$G_p$	28.2 29	29 29.8	29.8 31	dB
Slope 40-750 MHz	S	0	0.7	2	dB
Gain Flatness (40-750 MHz, Peak to Valley)	—	—	0.4	0.8	dB
Return Loss — Input/Output ( $Z_0 = 75$ Ohms) @ 40 MHz @ $f > 40$ MHz (Derate)	IRL/ORL	20 —	— —	— 0.007	dB dB/MHz
Composite Second Order ( $V_{out} = +40$ dBmV/ch., Worst Case) 110-Channel FLAT	CSO <sub>110</sub>	—	-70	-60	dBc
Cross Modulation Distortion @ Ch 2 ( $V_{out} = +40$ dBmV/ch., FM = 55 MHz) 110-Channel FLAT	XMD <sub>110</sub>	—	-62	-60	dBc
Composite Triple Beat ( $V_{out} = +40$ dBmV/ch., Worst Case) 110-Channel FLAT	CTB <sub>110</sub>	—	-62	-60	dBc
Noise Figure 50 MHz 750 MHz	NF	— —	— 5.5	5.5 6.5	dB
DC Current ( $V_{DC} = 24$ V, $T_C = 30^\circ\text{C}$ )	$I_{DC}$	280	310	350	mA



## PACKAGE DIMENSIONS



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**How to reach us:**

**USA/EUROPE/Locations Not Listed:** Motorola Literature Distribution;  
 P.O. Box 20912; Phoenix, Arizona 85036. 1-800-441-2447 or 602-303-5454

**JAPAN:** Nippon Motorola Ltd.; Tatsumi-SPD-JLDC, 6F Seibu-Butsuryu-Center,  
 3-14-2 Tatsumi Koto-Ku, Tokyo 135, Japan. 03-81-3521-8315

**MFAX:** RMFA00@email.sps.mot.com – TOUCHTONE 602-244-6609  
**INTERNET:** http://Design-NET.com

**ASIA/PACIFIC:** Motorola Semiconductors H.K. Ltd.; 8B Tai Ping Industrial Park,  
 51 Ting Kok Road, Tai Po, N.T., Hong Kong. 852-26629298



MHW7292/D

