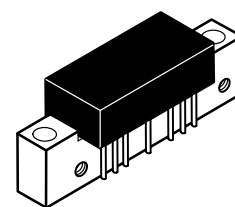


# The RF Line 110-Channel (750 MHz) CATV Line Extender Amplifier

- Specified for 110-Channel Performance
- Broadband Power Gain — @  $f = 40-750$  MHz  
 $G_p = 24$  dB (Typ)
- Broadband Noise Figure  
 $NF = 7$  dB (Max) @ 750 MHz
- Superior Gain, Return Loss and DC Current Stability with Temperature
- All Gold Metallization
- 7 GHz  $f_T$  Ion-Implanted Transistors

**MHW7242**

**24 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	$G_p$	23.2 24	24 24.7	24.8 26	dB
Slope	S	0	0.7	2	dB
Gain Flatness (40-750 MHz, Peak To Valley)	—	—	0.4	0.8	dB
Return Loss — Input/Output ( $Z_O = 75$ Ohms)	IRL/ORL	20 —	— —	— 0.007	dB dB/MHz
Composite Second Order ( $V_{out} = +40$ dBmV/ch., Worst Case)	CSO <sub>110</sub>	—	-65	-60	dBc
Cross Modulation Distortion @ Ch 2 ( $V_{out} = +40$ dBmV/ch., FM = 55 MHz)	XMD <sub>110</sub>	—	-63	-60	dBc
Composite Triple Beat ( $V_{out} = +40$ dBmV/ch., Worst Case)	CTB <sub>110</sub>	—	-63	-60	dBc
Noise Figure	NF	— —	— —	5.5 7	dB
DC Current	$I_{DC}$	280	—	350	mA

