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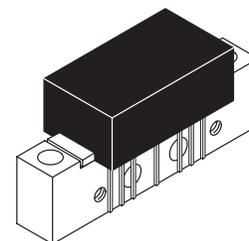
**MHW8222**

## The RF Line 128-Channel (860 MHz) CATV Amplifier

The MHW8222 is designed specifically for up to 860 MHz CATV systems as amplifiers in trunk and line extender applications. These amplifiers feature ion-implanted, arsenic emitter transistors and an all gold metallization system.

- Specified for 128-Channel Performance
- Broadband Power Gain — @  $f = 40\text{--}860\text{ MHz}$   
 $G_p = 22.3\text{ dB Typ @ } 860\text{ MHz}$
- Broadband Noise Figure  
 $NF = 6.4\text{ dB Typ}$
- Superior Gain, Return Loss and DC Current Stability with Temperature
- All Gold Metallization

**22 dB GAIN  
860 MHz  
128 CHANNEL  
CATV AMPLIFIER**



**CASE 714Y-03, STYLE 1**

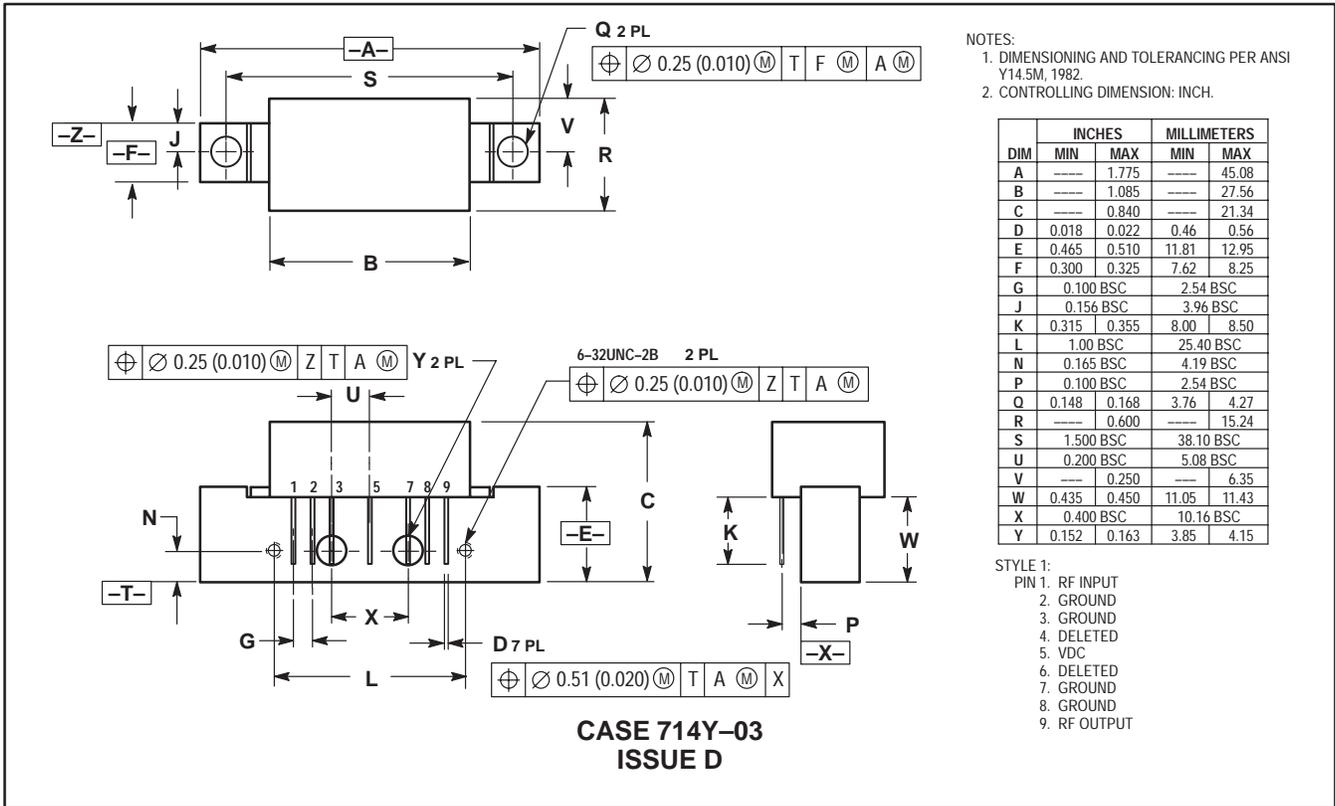
### ABSOLUTE MAXIMUM RATINGS

Rating	Symbol	Value	Unit
DC Supply Voltage	$V_{CC}$	+28	Vdc
RF Input Voltage (Single Tone)	$V_{in}$	+70	dBmV
Operating Case Temperature Range	$T_C$	-20 to +100	°C
Storage Temperature Range	$T_{stg}$	-40 to +100	°C

### ELECTRICAL CHARACTERISTICS ( $V_{CC} = 24\text{ Vdc}$ , $T_C = +30^\circ\text{C}$ , 75 $\Omega$ system unless otherwise noted)

Characteristic	Symbol	Min	Typ	Max	Unit
Frequency Range	BW	40	—	860	MHz
Power Gain $f = 50\text{ MHz}$ $f = 860\text{ MHz}$	$G_p$	20.8 21.8	21.5 22.3	22.2 24	dB
Slope ( $f = 40\text{--}860\text{ MHz}$ )	S	0	1	2	—
Gain Flatness (Peak To Valley) ( $f = 40\text{--}860\text{ MHz}$ )	—	—	0.4	0.8	—
Input/Output Return Loss @ $f = 40\text{ MHz}$	IRL/ORL	20	24	—	dB
Derate Return Loss @ $f > 40\text{ MHz}$	RLD	—	—	0.009	dB/MHz
Composite Second Order ( $V_{out} = +38\text{ dBmV/ch}$ ; 128 Channels)	$CSO_{128}$	—	-63	-56	dB
Cross Modulation Distortion ( $V_{out} = +38\text{ dBmV/ch}$ , 128-Channel @ $F_m = 55.25\text{ MHz}$ )	$XMD_{128}$	—	-68	-60	dBc
Composite Triple Beat ( $V_{out} = +38\text{ dBmV/ch}$ , 128-Channels, Worst Case)	$CTB_{128}$	—	-62	-60	dBc
Noise Figure $f = 50\text{ MHz}$ $f = 860\text{ MHz}$	NF	— —	3.6 6.4	5 7.5	dB
DC Current	$I_{DC}$	180	220	240	mA

## PACKAGE DIMENSIONS



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 P.O. Box 5405, Denver, Colorado 80217. 1-303-675-2140 or 1-800-441-2447

**JAPAN:** Motorola Japan Ltd.; SPS, Technical Information Center, 3-20-1,  
 Minami-Azabu, Minato-ku, Tokyo 106-8573 Japan. 81-3-3440-3569

**Customer Focus Center: 1-800-521-6274**

**Mfax™:** RMFAX0@email.sps.mot.com – TOUCHTONE 1-602-244-6609  
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**ASIA/PACIFIC:** Motorola Semiconductors H.K. Ltd.; Silicon Harbour Centre,  
 2, Dai King Street, Tai Po Industrial Estate, Tai Po, N.T., Hong Kong.  
 852-26668334

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