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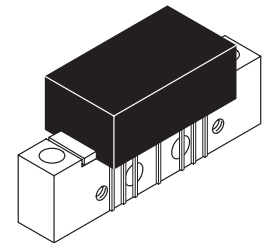
MHW8222

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 = 40–860 MHz
G_p = 22.3 dB Typ @ 860 MHz
- Broadband Noise Figure
NF = 6.4 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 Vdc, T_C = +30°C, 75 Ω system unless otherwise noted)

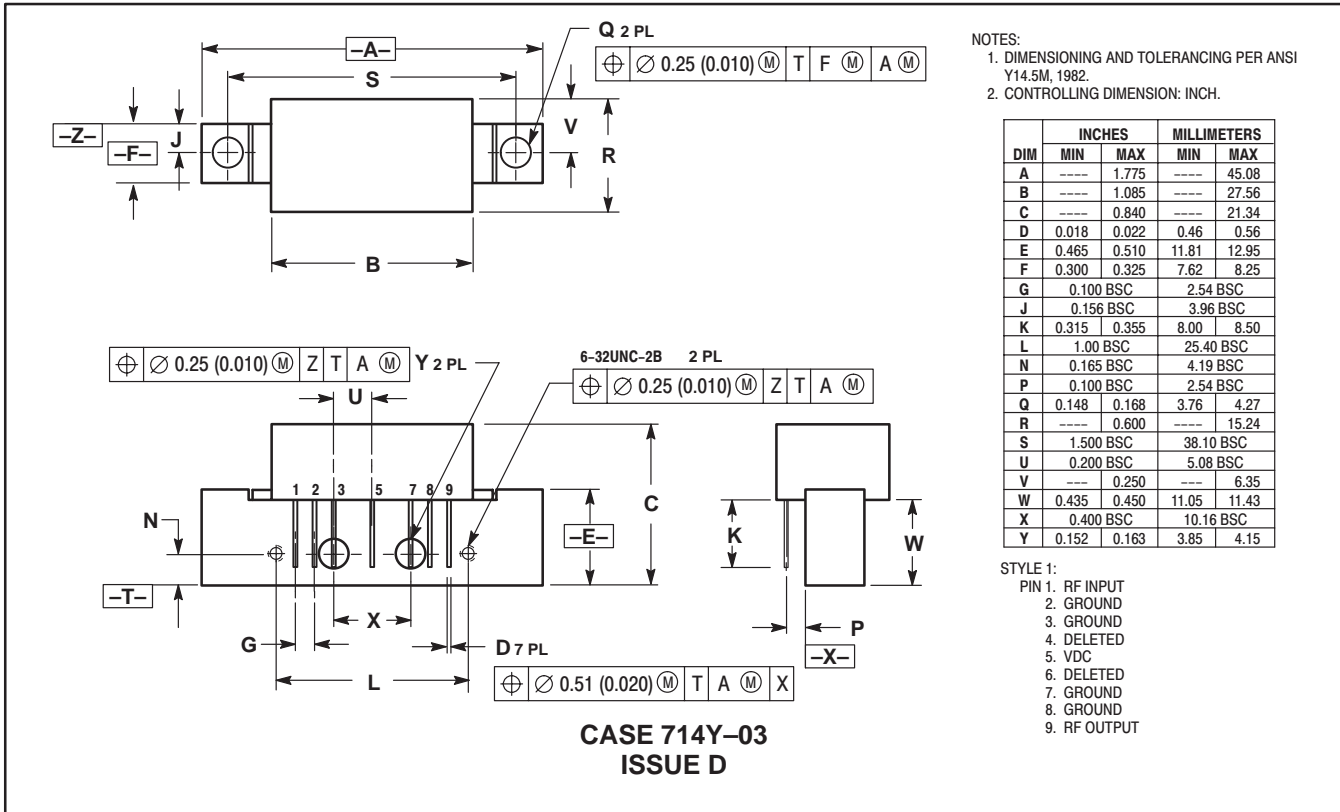
Characteristic	Symbol	Min	Typ	Max	Unit
Frequency Range	BW	40	—	860	MHz
Power Gain f = 50 MHz f = 860 MHz	G _p	20.8 21.8	21.5 22.3	22.2 24	dB
Slope (f = 40–860 MHz)	S	0	1	2	—
Gain Flatness (Peak To Valley) (f = 40–860 MHz)	—	—	0.4	0.8	—
Input/Output Return Loss @ f = 40 MHz	IRL/ORL	20	24	—	dB
Derate Return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



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PACKAGE DIMENSIONS



NOTES:
 1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
 2. CONTROLLING DIMENSION: INCH.

DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	----	1.775	----	45.08
B	----	1.085	----	27.56
C	----	0.840	----	21.34
D	0.018	0.022	0.46	0.56
E	0.465	0.510	11.81	12.95
F	0.300	0.325	7.62	8.25
G	0.100 BSC		2.54 BSC	
J	0.156 BSC		3.96 BSC	
K	0.315	0.355	8.00	8.50
L	1.00 BSC		25.40 BSC	
N	0.165 BSC		4.19 BSC	
P	0.100 BSC		2.54 BSC	
Q	0.148	0.168	3.76	4.27
R	----	0.600	----	15.24
S	1.500 BSC		38.10 BSC	
U	0.200 BSC		5.08 BSC	
V	----	0.250	----	6.35
W	0.435	0.450	11.05	11.43
X	0.400 BSC		10.16 BSC	
Y	0.152	0.163	3.85	4.15

STYLE 1:
 PIN 1. RF INPUT
 2. GROUND
 3. GROUND
 4. DELETED
 5. VDC
 6. DELETED
 7. GROUND
 8. GROUND
 9. RF OUTPUT

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