The RF Line 550 MHz CATV Amplifier

. . . designed specifically for 550 MHz CATV applications. Features ion–implanted arsenic emitter transistors with 7.0 GHz $\,$ fT and an all gold metallization system.

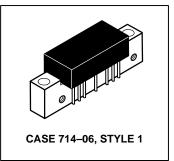
- Specified for 77-Channel Performance
- Broadband Power Gain @ f = 40−550 MHz

 $G_p = 22 dB (Typ) @ 50 MHz$ 22 dB (Min) @ 550 MHz

- Broadband Noise Figure @ 550 MHz
 NF = 6.0 dB (Max)
- Superior Gain, Return Loss and DC Current Stability with Temperature
- · All Gold Metallization
- 7.0 GHz Ion-Implanted Transistors

MHW6222

22 dB GAIN 550 MHz 77-CHANNEL CATV INPUT/OUTPUT TRUNK AMPLIFIER



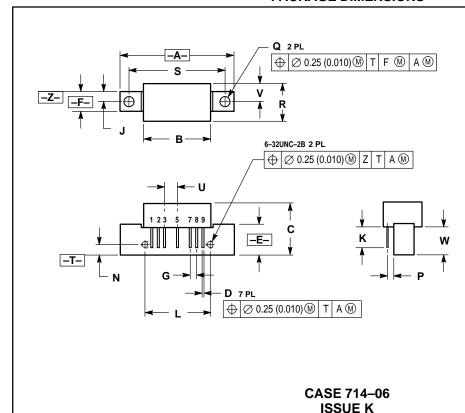
ABSOLUTE MAXIMUM RATINGS

Rating	Symbol	Value	Unit
RF Voltage Input (Single Tone)	V _{in}	+60	dBmV
DC Supply Voltage	Vcc	+28	Vdc
Operating Case Temperature Range	TC	-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 Ω system unless otherwise noted)

Characteristic		Symbol	Min	Тур	Max	Unit
Frequency Range		BW	40	_	550	MHz
Power Gain — 50 MHz		Gp	21.4	22	22.6	dB
Power Gain — 550 MHz		Gp	22	_	_	dB
Slope		S	0.2	_	1.5	dB
Gain Flatness (Peak To Valley)		_	_	0.2	0.4	dB
Return Loss — Input/Output (Z _O = 75 Ohms)	40-550 MHz	IRL/ORL	18	_	_	dB
Second Order Intermodulation Distortion (V _{Out} = +46 dBmV per ch., Ch 2, M13 (V _{Out} = +44 dBmV per ch., Ch 2, M30	3, M22)	IMD	_ _	-80 -72	— -66	dB
Cross Modulation Distortion (Vout = +46 dBmV per ch.) (Vout = +44 dBmV per ch.)	60-Channel FLAT 77-Channel FLAT	XMD ₆₀ XMD ₇₇	_ _	-60 -60	— -57	dB
Composite Triple Beat (V _{out} = +46 dBmV per ch.) (V _{out} = +44 dBmV per ch.)	60-Channel FLAT 77-Channel FLAT	СТВ ₆₀ СТВ ₇₇	_ _	-61 -59	— -57	dB
Noise Figure (f = 550 MHz)		NF	_	5.0	6.0	dB
DC Current		I _{DC}	_	210	240	mA

PACKAGE DIMENSIONS



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

	INCHES		MILLIMETERS		
DIM	MIN	MAX	MIN	MAX	
Α		1.775		45.08	
В		1.085		27.56	
С		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		4.10 BSC		
Р	0.100	BSC	2.54 BSC		
Q	0.148	0.168	3.76	4.27	
R		0.595		15.11	
S	1.500	1.500 BSC		BSC	
U	0.200	0.200 BSC		BSC	
٧	0.280	BSC	7.11 BSC		
W	0.435	0.450	11.05	11.43	

STYLF 1:

PIN 1. RF INPUT

- 2. GROUND
- 3. GROUND 4. DELETED

- 5. VDC 6. DELETED 7. GROUNT
- 8. GROUND
- 9. RF OUTPUT

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