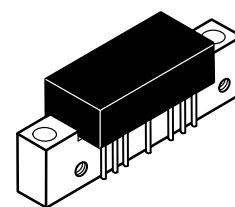


The RF Line 152-Channel (1000 MHz) CATV Line Extender Amplifier

- Specified for 152-Channel Performance
- Broadband Power Gain — @ $f = 40\text{--}1000\text{ MHz}$
 $G_p = 24\text{ dB (Typ)}$
- Broadband Noise Figure
 $NF = 8\text{ dB (Max) @ } 1000\text{ MHz}$
- Superior Gain, Return Loss and DC Current Stability with Temperature
- All Gold Metallization
- 7 GHz f_T Ion-Implanted Transistors

MHW9242

**24 dB GAIN
1000 MHz
152-CHANNEL
CATV AMPLIFIER**



CASE 714-06, STYLE 1

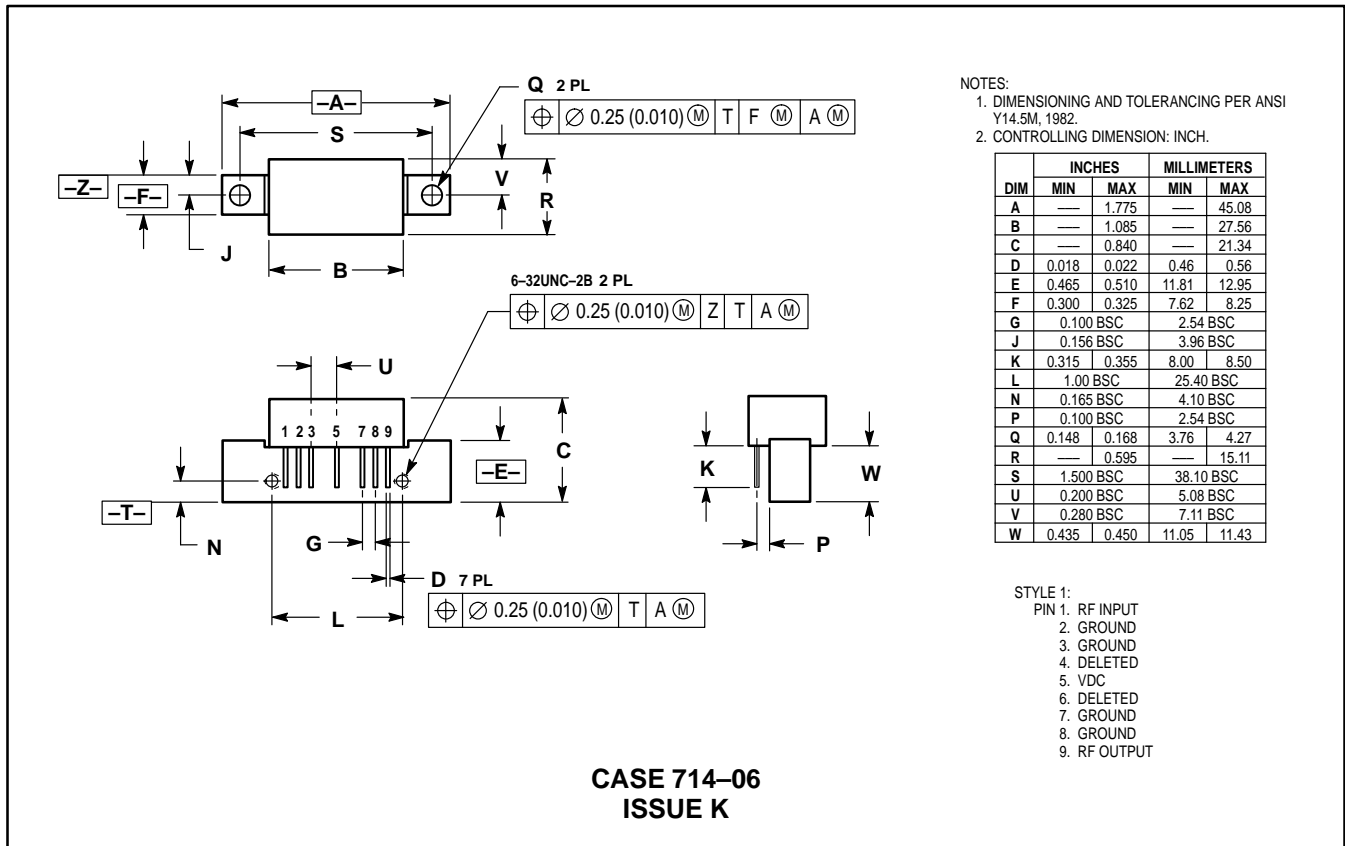
MAXIMUM RATINGS

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

Characteristic	Symbol	Min	Typ	Max	Unit	
Frequency Range	BW	40	—	1000	MHz	
Power Gain	G_p	50 MHz	23.2	24.8	dB	
		1000 MHz	24	27		
Slope	S	0	1	2.5	dB	
Gain Flatness (40-1000 MHz, Peak-to-Valley)	—	—	0.5	1.0	dB	
Return Loss — Input/Output ($Z_O = 75\text{ Ohms}$)	IRL/ORL	@ 40 MHz	20	—	dB	
		@ $f > 40\text{ MHz}$ (Derate)	—	—	0.01	dB/MHz
Composite Second Order ($V_{out} = +38\text{ dBmV/ch.}$, Worst Case)	CSO_{152}	—	-65	-59	dBc	
Cross Modulation Distortion @ Ch 2 ($V_{out} = +38\text{ dBmV/ch.}$, FM = 55 MHz)	XMD_{152}	—	-64	-59	dBc	
Composite Triple Beat ($V_{out} = +38\text{ dBmV/ch.}$, Worst Case)	CTB_{152}	—	-61	-58	dBc	
Noise Figure	NF	50 MHz	—	-5.0	5.5	dB
		1000 MHz	—	-7.0	8.0	
DC Current	I_{DC}	280	320	350	mA	

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	—	4.10 BSC	—
P	0.100 BSC	—	2.54 BSC	—
Q	0.148	0.168	3.76	4.27
R	—	0.595	—	15.11
S	1.500 BSC	—	38.10 BSC	—
U	0.200 BSC	—	5.08 BSC	—
V	0.280 BSC	—	7.11 BSC	—
W	0.435	0.450	11.05	11.43

- 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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