

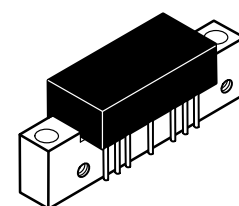
The RF Line 600 MHz CATV Amplifier Module

This module is designed specifically for 600 MHz CATV applications. Features ion-implanted arsenic emitter transistors with 7 GHz f_T and an all gold metallization system.

- Specified for 87-Channel Performance
- Broadband Power Gain — @ $f = 40-600$ MHz
 $G_p = 17.6$ dB (Min) @ 50 MHz
 18.2 dB (Min) @ 600 MHz
- Broadband Noise Figure @ 600 MHz
 $NF = 6$ dB (Max)
- Superior Gain, Return Loss and DC Current Stability with Temperature
- All Gold Metallization
- 7 GHz Ion-Implanted Transistors

MHW6182-6

**5TH GENERATION
18 dB GAIN
600 MHz
87-CHANNEL
CATV INPUT/OUTPUT
TRUNK AMPLIFIERS**



CASE 714-06, STYLE 1

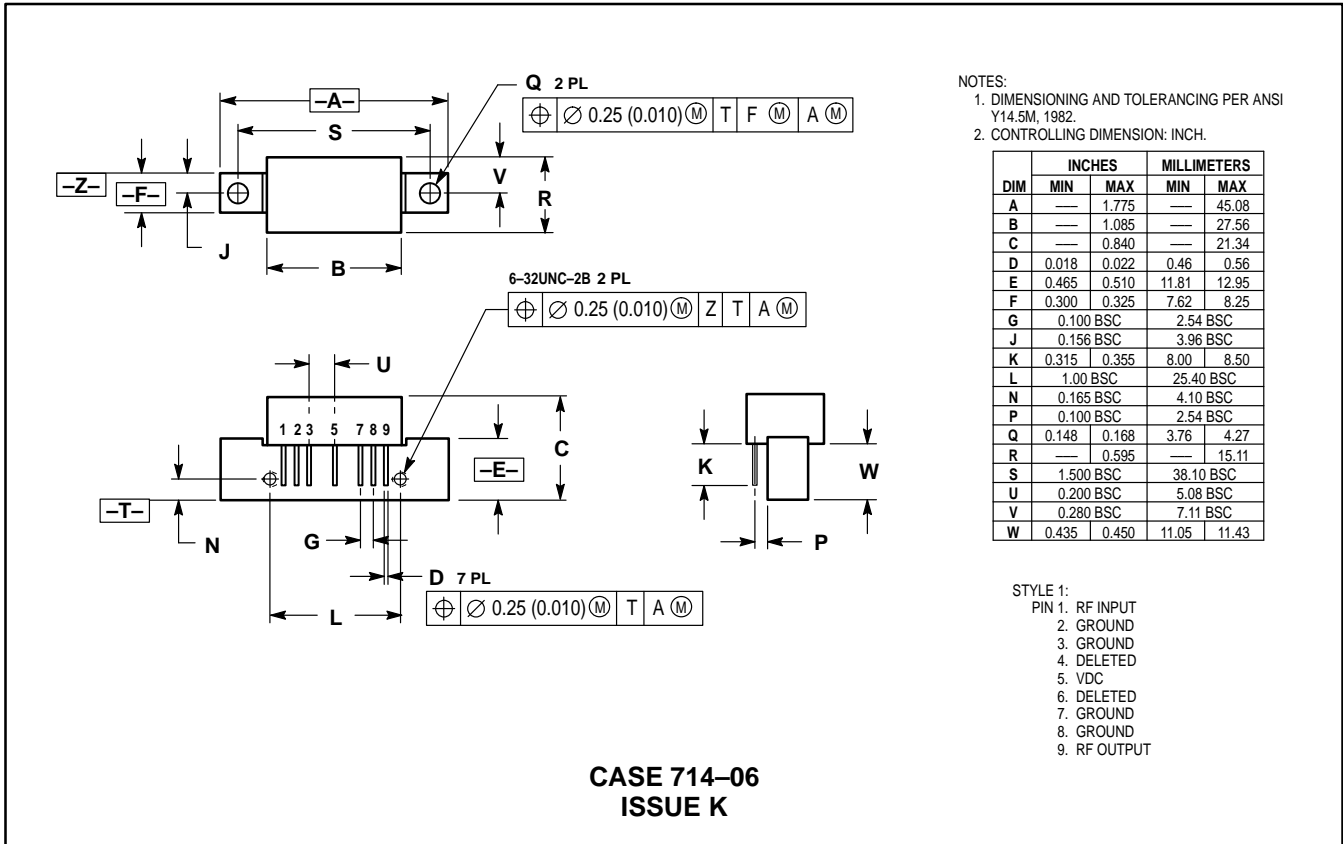
ABSOLUTE MAXIMUM RATINGS

Rating	Symbol	Value	Unit
RF Voltage Input	V_{in}	+60	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 Ω system unless otherwise noted)

Characteristic	Symbol	Min	Typ	Max	Unit
Frequency Range	BW	40	—	600	MHz
Power Gain	$f = 50$ MHz G_p	17.6	18.2	18.8	dB
Power Gain	$f = 600$ MHz G_p	18.2	19.2	20	dB
Slope	$f = 40-600$ MHz S	0	—	1.8	dB
Gain Flatness (Peak to Valley)	$f = 40-600$ MHz —	—	0.2	0.6	dB
Return Loss — Input/Output ($Z_0 = 75$ Ohms)	$f = 40-600$ MHz IRL/ORL	18	—	—	dB
Composite Second Order ($V_{out} = +44$ dBmV/Ch)	87-Channel FLAT CSO ₈₇	—	—	-56	dB
Cross Modulation Distortion ($V_{out} = +44$ dBmV/Ch, $F_m = 55$ MHz)	87-Channel FLAT XMD ₈₇	—	—	-55	dB
Composite Triple Beat ($V_{out} = +44$ dBmV/Ch)	87-Channel FLAT CTB ₈₇	—	—	-57	dB
Noise Figure	$f = 50$ MHz $f = 600$ MHz NF	— —	— —	5 6	dB
DC Current ($V_{DC} = 24$ Vdc, $T_C = 30^\circ\text{C}$)	I_{DC}	180	210	240	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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