

# The RF Line

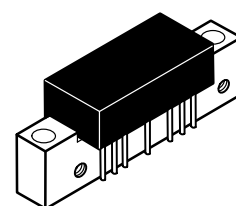
## 600 MHz CATV Amplifier Module

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  
 $G_p = 21$  dB (Min) @ 50 MHz  
 $21.7$  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

**MHW6222-6**

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



**CASE 714-06, STYLE 1**

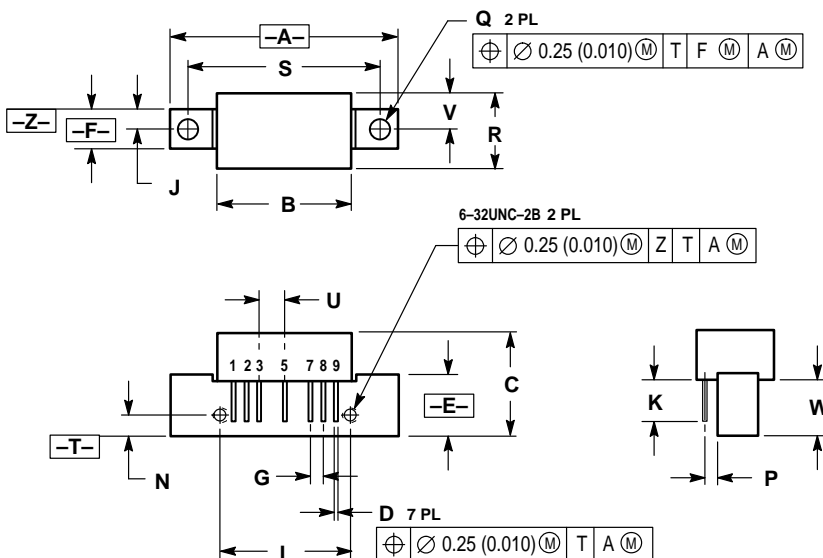
### ABSOLUTE MAXIMUM RATINGS

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 $\Omega$ system unless otherwise noted)

Characteristic	Symbol	Min	Typ	Max	Unit
Frequency Range	BW	40	—	600	MHz
Power Gain $f = 50$ MHz	$G_p$	21	21.5	22	dB
Power Gain $f = 600$ MHz	$G_p$	21.7	—	23	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 <sub>87</sub>	—	—	-56	dB
Cross Modulation Distortion ( $V_{out} = +44$ dBmV/Ch, $F_m = 55$ MHz) 87-Channel FLAT	XMD <sub>87</sub>	—	—	-56	dB
Composite Triple Beat ( $V_{out} = +44$ dBmV/Ch) 87-Channel FLAT	CTB <sub>87</sub>	—	—	-56	dB
Noise Figure $f = 50$ MHz	NF	—	—	5	dB
$f = 600$ MHz		—	—	6	
DC Current ( $V_{DC} = 24$ Vdc, $T_C = 30^\circ\text{C}$ )	$I_{DC}$	180	—	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

**CASE 714-06  
ISSUE K**

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**How to reach us:**

**USA/EUROPE:** Motorola Literature Distribution;  
P.O. Box 20912; Phoenix, Arizona 85036. 1-800-441-2447

**JAPAN:** Nippon Motorola Ltd.; Tatsumi-SPD-JLDC, Toshikatsu Otsuki,  
6F Seibu-Butsuryu-Center, 3-14-2 Tatsumi Koto-Ku, Tokyo 135, Japan. 03-3521-8315

**MFAX:** RMFAX0@email.sps.mot.com – TOUCHTONE (602) 244-6609  
**INTERNET:** <http://Design-NET.com>

**HONG KONG:** Motorola Semiconductors H.K. Ltd.; 8B Tai Ping Industrial Park,  
51 Ting Kok Road, Tai Po, N.T., Hong Kong. 852-26629298

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MHW6222-6/D

