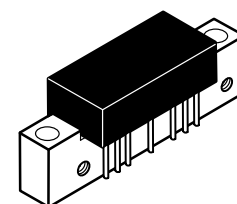


The RF Line  
**High Output Doubler**  
**600 MHz CATV Amplifier**

- 24 V Supply Voltage
- Specified for 87-Channel Performance
- 6th Generation Die Technology
- Improvement in Distortion Over Conventional Hybrids
- Allows Higher Output Level Operation
- All Gold Metallization
- 7 GHz  $f_T$  Ion-Implanted Transistors

**MHW6205-6A**

**20 dB GAIN**  
**600 MHz**  
**87-CHANNEL**  
**CATV AMPLIFIER**



**CASE 714-06, STYLE 1**

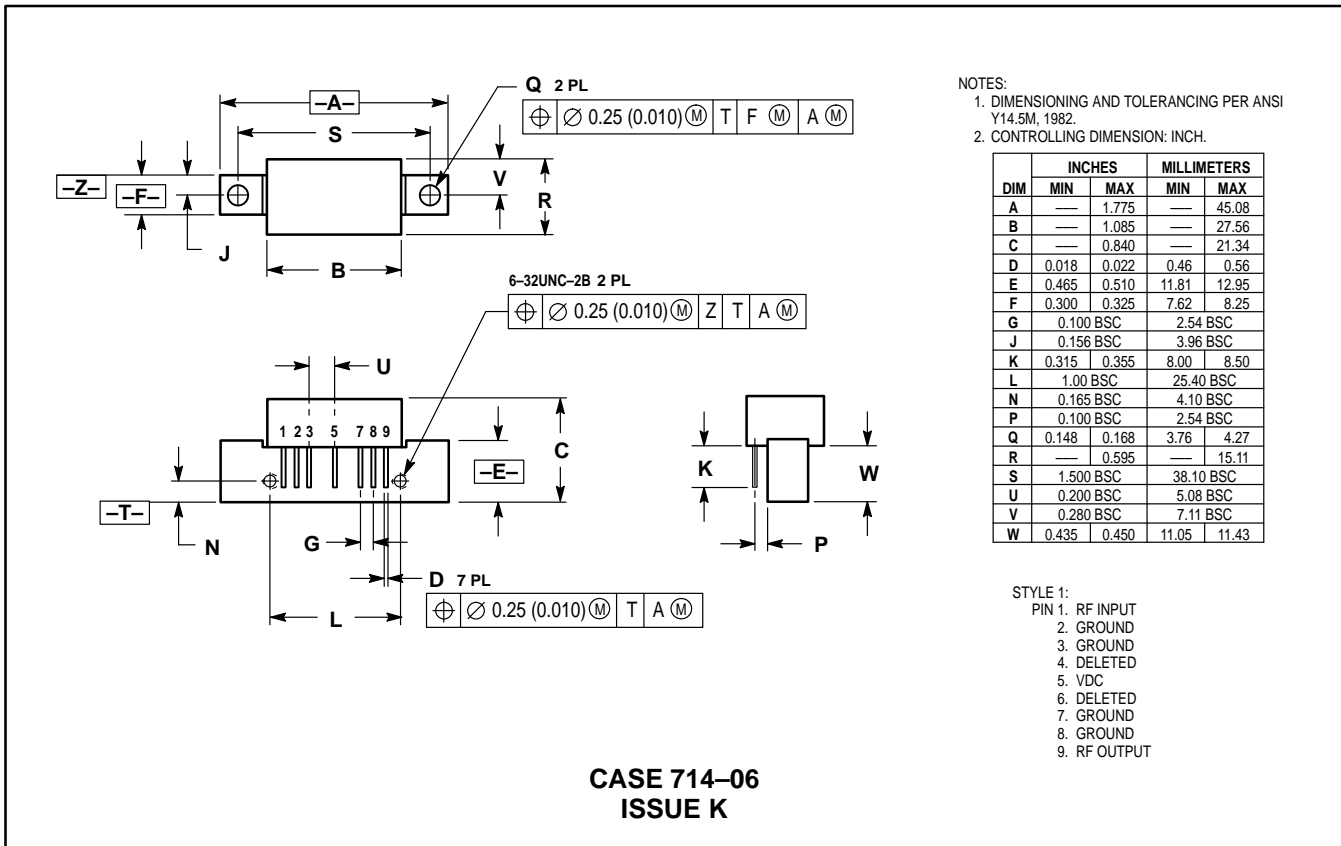
**ABSOLUTE MAXIMUM RATINGS**

Rating	Symbol	Value	Unit
RF Voltage Input (Single Tone)	$V_{in}$	+70	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,  $T_A = +30^\circ\text{C}$ , 75  $\Omega$  system unless otherwise noted)

Characteristic	Symbol	Min	Typ	Max	Unit
Frequency Range	BW	40	—	600	MHz
Power Gain 50 MHz 600 MHz	$G_p$	19.5 19.8	20 20.1	20.5 21.5	dB
Slope 40 – 600 MHz	S	0	0.2	1.5	dB
Gain Flatness (40 – 600 MHz, Peak to Valley)	—	—	0.3	0.6	dB
Return Loss — Input/Output ( $Z_0 = 75$ Ohms) 40 – 600 MHz	IRL/ORL	18	—	—	dB
Composite Second Order — Intermodulation Distortion ( $V_{out} = +44$ dBmV/ch., Worst Case) 87-Channel FLAT	CSO <sub>87</sub>	—	-65	-63	dBc
Cross Modulation Distortion ( $V_{out} = +44$ dBmV/ch., FM = 55 MHz) 87-Channel FLAT	XMD <sub>87</sub>	—	-67	-65	dBc
Composite Triple Beat ( $V_{out} = +44$ dBmV/ch., Worst Case) 87-Channel FLAT	CTB <sub>87</sub>	—	-68	-63	dBc
Noise Figure 50 MHz 600 MHz	NF	— —	4.5 5.5	5.5 6.5	dB
DC Current ( $V_{DC} = 24 \pm 0.5$ Vdc, $T_C = 30^\circ\text{C}$ )	$I_{DC}$	380	435	460	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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MHW6205-6A/D

