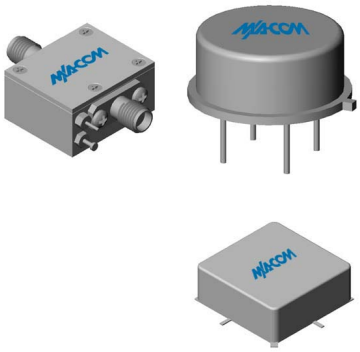
A87-2/SMA87-2



10 TO 300 MHz

CASCADABLE AMPLIFIER

· LOW NOISE FIGURE: 3.0 dB (TYP.)
· HIGH FREQUENCY: 15 mA @ +5 Vdc (TYP.)
· HIGH OUTPUT POWER AT 5 VOLTS:
  +11 dBm (TYP.)
· LOW VSWR: <1.5.1 (TYP.)

Specifications (Rev. Date: 6/01)*

Characteristics	Typical	Guaranteed	
		0° to 50°C	-54° to +85°C
Frequency	5-350 MHz	10-300 MHz	10-300 MHz
Small Signal Gain (min.)	16.0 dB	15.0 dB	14.5 dB
Gain Flatness (max.)	±0.2 dB	±0.5 dB	±0.8 dB
Reverse Isolation	20 dB		
Noise Figure (max.)	2.9 dB	3.5 dB	4.0 dB
Power Output @ 1 dB comp. (min.)	11.0 dBm	9.0 dBm	8.5 dBm
IP3	+24 dBm		
IP2	+35 dBm		
Second Order Harmonic IP	+41 dBm		
VSWR Input / Output (max.)	1.3:1 / 1.3:1	1.8:1 / 1.8:1	2.0:1 / 2.0:1
DC Current @ 5 Volts (max.)	15 mA	17 mA	18 mA

* Measured in a 50-ohm system at +5 Vdc Nominal. Subject to change without notice.

Absolute Maximum Ratings

Storage Temperature	-62° to +125°C
Max. Case Temperature	125°C
Max. DC Voltage	+10 Volts
Max. Continuous RF Input Power	+13 dBm
Max. Short Term RF Input Power (1 minute max.)	50 mW
Max. Peak Power (3 µsec max.)	0.5 W
"S" Series Burn-in Temperature (Case)	125°C

Thermal Data: V_{cc} = 5 Vdc

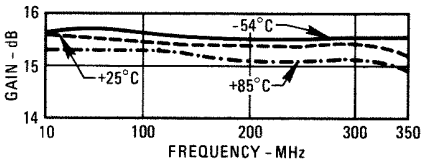
Thermal Resistance θ_{jc}	185°C/W
Transistor Power Dissipation P_d	0.034 W
Junction Temperature Rise Above Case T_{jc}	6°C

Outline Drawings

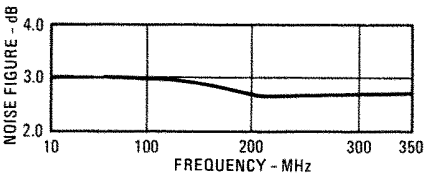
Package	TO-8	Surface Mount	SMA Connectorized
Figure	BG	AA	CE
Model	A87-2	SMA87-2	CA87-2

Typical Performance @ 25°C

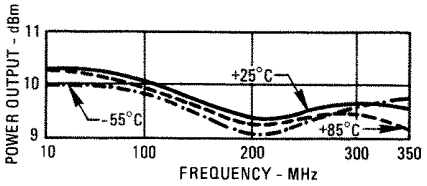
Gain



Noise Figure

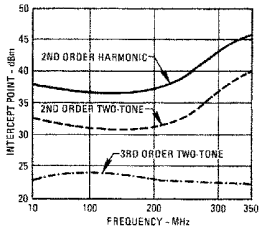


Power Output*



*at 1 dB Gain Compression

Intercept Point



VSWR

