

Electronics

Cascadable Amplifier 5 to 300 MHz



A88-1/ SMA88-1

Features

- AVAILABLE IN SURFACE MOUNT
- HIGH GAIN 18.5 dB (TYP.)
- HIGH OUTPUT POWER +18.5 dBm (TYP.)
- HIGH THIRD ORDER IP +30 dBm (TYP.)

Description

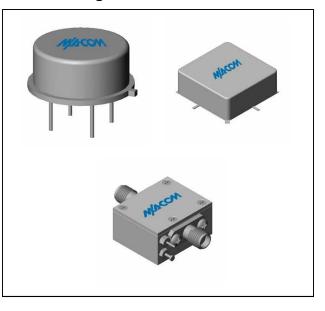
The A88-1 RF amplifier is a discrete thin film hybrid design, which incorporates the use of thin film manufacturing processes for accurate performance and high reliability. This single stage bipolar transistor feedback amplifier design displays impressive performance over a broadband frequency range. An active DC biasing network is used for temperaturestable performance, in addition to an RF Choke, used for power supply decoupling.

Both TO-8 and Surface Mount packages are hermetically sealed, and MIL-STD-883 environmental screening is available.

Ordering Information

Part Number	Package	
A88-1	TO-8	
SMA88-1	Surface Mount	
CA88-1	SMA Connectorized	

Product Image



Electrical Specifications: $Z_0 = 50\Omega$, $V_{CC} = +15 V_{DC}$

Parameter	Unito	Typical	Guaranteed	
Parameter	Units	25°C	0º to 50ºC	-54° to +85°C*
Frequency	MHz	2-300	5-300	5-300
Small Signal Gain (min)	dB	18.5	17.5	17.0
Gain Flatness (max)	dB	±0.4	±0.6	±0.8
Reverse Isolation	dB	22		
Noise Figure (max)	dB	3.8	5.0	5.5
Power Output @ 1 dB comp. (min)	dBm	18.5	17.0	16.5
IP3	dBm	+30		
IP2	dBm	+42		
Second Order Harmonic IP	dBm	+48		
VSWR Input / Output (max)		1.4:1 / 1.4:1	1.7:1 / 1.7:1	1.9:1 / 1.9:1
DC Current @ 15 Volts (max)	mA	52	54.5	56.5

Absolute Maximum Ratings

Parameter	Absolute Maximum	
Storage Temperature	-62°C to +125°C	
Case Temperature	+125°C	
DC Voltage	+17 V	
Continuous Input Power	+13 dBm	
Short Term Input power (1 minute max.)	100 mW	
Peak Power (3 µsec max.)	0.5 W	
"S" Series Burn-In Temperature (case)	+125°C	

Thermal Data: V_{CC} = +15 V_{DC}

Parameter	Rating
Thermal Resistance θ_{jc}	45°C/W
Transistor Power Dissipation P_d	0.393 W
Junction Temperature Rise Above Case T _{jc}	18°C

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* Over temperature performance limits for part number CA88-1, guaranteed from 0°C to +50°C only.

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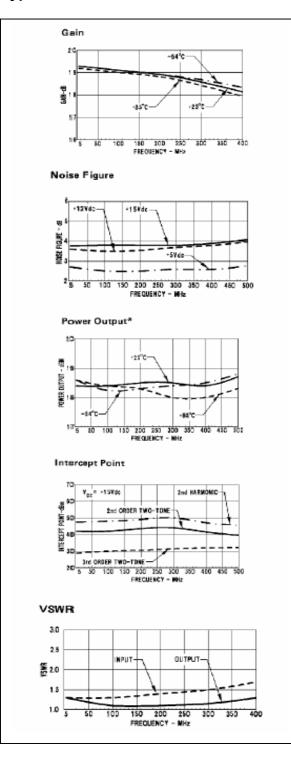
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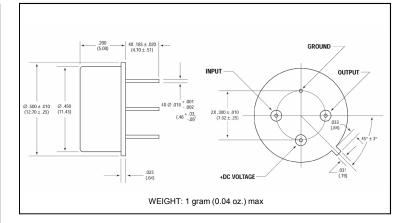


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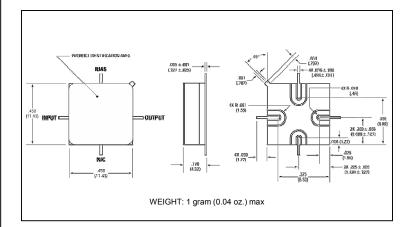




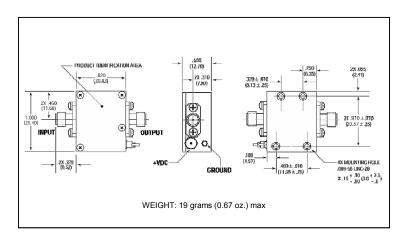
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A88-1/ SMA88-1

Outline Drawing: Surface Mount



Outline Drawing: SMA Connectorized *



* Dimensions are inches (millimeters) ±0.015 (0.38) unless otherwise specified.

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