

Cascadable Amplifier 10 to 1200 MHz

Rev. V3

Features

- HIGH EFFICIENCY: 16 mA at +5 Vdc
- LOW NOISE FIGURE: 2.8 dB at 5 Vdc (TYP.)
- LOW CURRENT DRAIN: 15.5 mA at 5 Vdc
- MEDIUM OUTPUT POWER: +11 dBm at 8 Vdc (TYP.)
- MEDIUM THIRD I.P.: +25 dBm at 8 Vdc

Description

The A1211 RF amplifier is a discrete hybrid design, which uses thin film manufacturing processes for accurate performance and high reliability.

This single stage GaAs FET feedback amplifier design displays impressive performance characteristics over a broadband frequency range. An RF choke is used for DC power supply decoupling.

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

Ordering Information

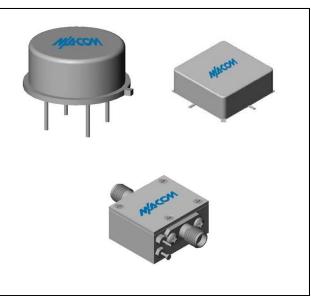
Part Number	Package	
A1211	TO-8	
SMA1211	Surface Mount	
CA1211 **	SMA Connectorized	

^{**} The connectorized version is not RoHs compliant.

Electrical Specifications: $Z_0 = 50\Omega$, $V_{CC} = +5 V_{DC}$

Desembles	Units	Typical	Guaranteed	
Parameter		25°C	0º to 50ºC	-54º to +85ºC*
Frequency	MHz	5-1300	10-1200	10-1200
Small Signal Gain (min)	dB	14.0	12.5	12.0
Gain Flatness (max)	dB	±0.3	±0.6	±0.8
Reverse Isolation	dB	16		
Noise Figure (max)	dB	2.8	3.5	4.0
Power Output @ 1 dB comp. (min)	dBm	6.0	5.0	4.5
IP3	dBm	+20		
IP2	dBm	+27		
Second Order Harmonic IP	dBm	+33		
VSWR Input / Output (max)		1.4:1 / 1.4:1	1.9:1 / 1.9:1	2.0:1 / 2.0:1
DC Current @ 5 Volts (max)	mA	15.5	18	19

Product Image



Absolute Maximum Ratings

Parameter	Absolute Maximum	
Storage Temperature	-62°C to +125°C	
Case Temperature	125°C	
DC Voltage	+10 V	
Continuous Input Power	+10 dBm	
Short Term Input power (1 minute max.)	50 mW	
Peak Power (3 µsec max.)	0.5 W	
"S" Series Burn-In Temperature (case)	125°C	

Thermal Data: $V_{CC} = +5 V_{DC}$

Parameter	Rating	
Thermal Resistance θ_{jc}	184°C/W	
Transistor Power Dissipation Pd	0.051 W	
Junction Temperature Rise Above Case T _{jc}	9°C	

^{*} Over temperature performance limits for part number CA1211, guaranteed from 0°C to +50°C only.

Commitment to produce in volume is not guaranteed.

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Visit www.macomtech.com for additional data sheets and product information.



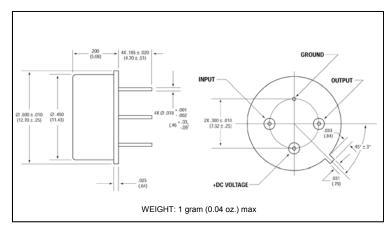
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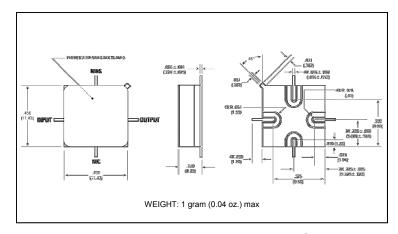
Typical Performance Curves at +25°C

Small Signal Gain Ä 1000 1200 Frequency (MHz) Noise Figure Ŧ 400 800 1000 1200 1400 Frequency (MHz) Power Output (1dB Gain Compression) Yower Output (dBm) 10 800 1200 Frequency (MHz) Intercept Point 1200 VSWR 100 200 300 400 500 600 700

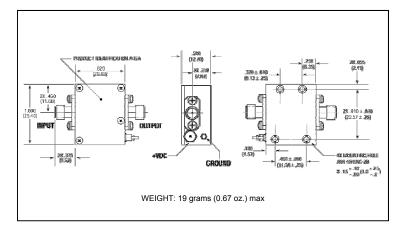
Outline Drawing: TO-8 *



Outline Drawing: Surface Mount



Outline Drawing: SMA Connectorized



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

- India Tel: +91.80.4155721
- China Tel: +86.21.2407.1588 Visit www.macomtech.com for additional data sheets and product information.