A611 / SMA611

Cascadable Amplifier 5 to 700 MHz

Features

- LOW NOISE FIGURE: 3.2 dB (TYP.)
- HIGH EFFICIENCY: 31 mA (TYP.) at +5 Vdc
- HIGH OUTPUT POWER: +12.5 dBm (TYP.)

Description

The A611 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 temperature-stable 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

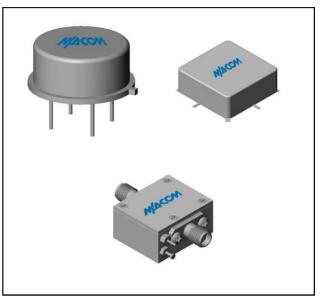
Part Number	Package	
A611	TO-8	
SMA611	Surface Mount	
MAAM-008737-0CA611	SMA Connectorized **	

** The connectorized version is not RoHs compliant.

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

Typical Guaranteed **Parameter** Units 0° to 50°C -54° to +85°C* 25°C Frequency MHz 2-700 5-600 5-600 Small Signal Gain (min) dB 15.0 14.0 13.5 Gain Flatness (max) dB ±0.2 ±0.6 ±0.8 **Reverse Isolation** dB 20 Noise Figure (max) dB 32 38 45 Power Output dBm 12 5 110 10.5 @ 1 dB comp. (min) IP3 dBm +24 IP2 dBm +30 Second Order Harmonic IP dBm +36VSWR Input / Output (max) 1.4:1 / 1.4:1 1.8:1 / 1.8:1 1.9:1 / 1.9:1 DC Current @ 5 Volts (max) mΑ 31 34 36

Product Image



ParameterAbsolute
MaximumStorage Temperature-62°C to +125°CCase Temperature125°C

Absolute Maximum Ratings

Slorage remperature	-02 C 10 + 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}	185°C/W
Transistor Power Dissipation P _d	0.123 W
Junction Temperature Rise Above Case T _{jc}	23°C

1 * Over temperature performance limits for part number CA611, guaranteed from 0°C to +50°C only.

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МЛСОМ

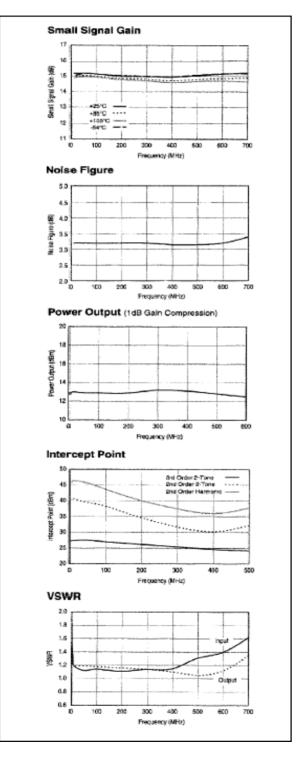
Rev. V2

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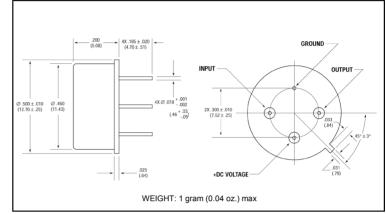


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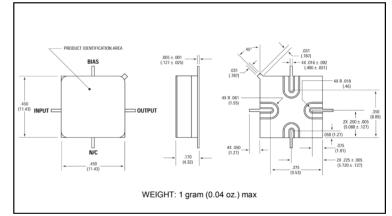
Typical Performance Curves at +25°C



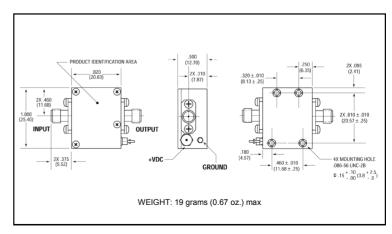
Outline Drawing: TO-8 *



Outline Drawing: Surface Mount



Outline Drawing: SMA Connectorized *



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

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Rev. V2

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