A29-1 / SMA29-1

Cascadable Amplifier 10 to 1500 MHz

Features

- HIGH OUTPUT POWER: +22 dBm (TYP.)
- HIGH THIRD ORDER I.P.: +32 dBm (TYP.)

Description

The A29-1 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

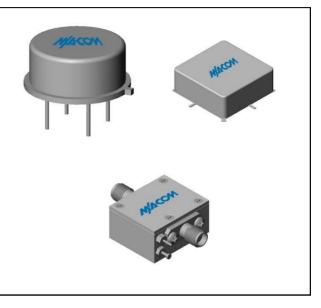
Part Number	Package	
A29-1	TO-8	
SMA29-1	Surface Mount	
CA29-1	SMA Connectorized **	

** The connectorized version is not RoHs compliant.

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

Typical Guaranteed **Parameter** Units 25°C 0° to 50°C -54° to +85°C* Frequency MHz 10-1600 10-1500 10-1500 Small Signal Gain (min) dB 9.0 85 7.5 Gain Flatness (max) dB ±0.2 ±0.5 ±1.0 **Reverse Isolation** dB 14 Noise Figure (max) dB 55 6.5 7.0 Power Output dBm 22 0 20.0 19.0 @ 1 dB comp. (min) IP3 dBm +32 IP2 dBm +49 Second Order Harmonic IP dBm +57 VSWR Input / Output (max) 1.6:1 / 1.6:1 1.9:1 / 1.9:1 2.0:1 / 2.0:1 DC Current @ 15 Volts (max) mΑ 90 94 99

Product Image



Parameter Absolute Maximum Storage Temperature -62°C to +125°C **Case Temperature** +125°C DC Voltage +17 V **Continuous Input Power** 15.5 dBm Short Term Input power 100 mW (1 minute max.) Peak Power (3 µsec max.) 0.5 W "S" Series Burn-In +125°C Temperature (case)

Absolute Maximum Ratings

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

Parameter	Rating
Thermal Resistance θ_{jc}	100°C/W
Transistor Power Dissipation P_d	0.966 W
Junction Temperature Rise Above Case T _{jc}	+96°C

1 * Over temperature performance limits for part number CA29-1, guaranteed from 0°C to +50°C only.

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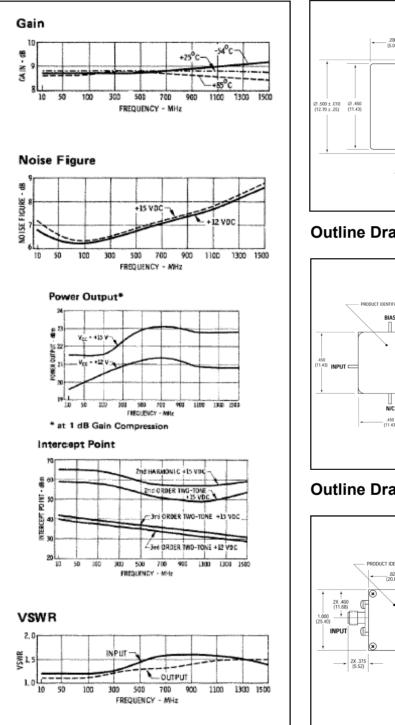
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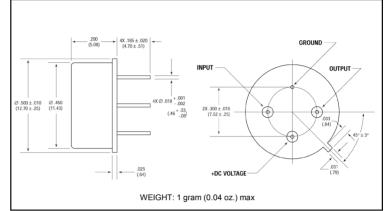


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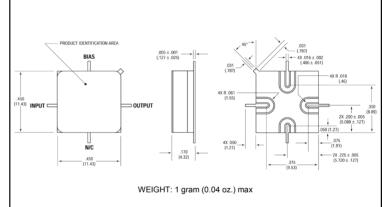
Typical Performance Curves at +25°C



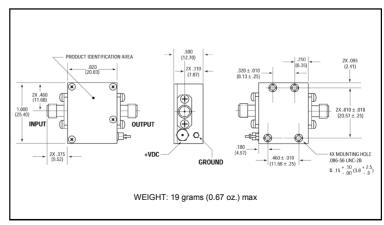
Outline Drawing: TO-8 *



Outline Drawing: Surface Mount



Outline Drawing: SMA Connectorized *



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

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A29-1 / SMA29-1

Cascadable Amplifier 10 to 1500 MHz



Rev. V3

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