

Cascadable Amplifier 10 to 2600 MHz

Rev. V3

Features

- AVAILABLE IN SURFACE MOUNT
- ULTRA-WIDE BANDWIDTH 100-2600 MHz
- HIGH GAIN-TWO STAGES 15 dB (TYP.)
- MEDIUM OUTPUT LEVEL +14 dBm, 2000-2600 MHz (TYP.)

Description

The A36-2 RF amplifier is a discrete hybrid design, which uses thin film manufacturing processes for consistent performance and high reliability.

This 2 stage bipolar transistor feedback amplifier design displays impressive performance over a broadband frequency range. An active DC biasing network insures temperature-stable performance.

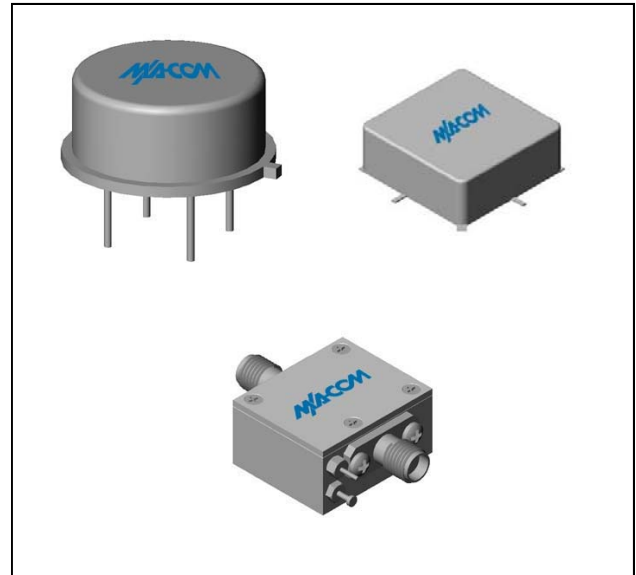
Both TO-8 and Surface Mount packages are hermetically sealed, and MIL-STD-883 environmental screening is available

Ordering Information

Part Number	Package
A36-2	TO-8
SMA36-2	Surface Mount
MAAM-007947-CA3602	SMA Connectorized **

**The connectorized version is not RoHs compliant.

Product Image



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

Parameter	Units	Typical	Guaranteed	
		25°C	0° to 50°C	-54° to +85°C*
Frequency	MHz	100-2700	100-2600	100-2600
Small Signal Gain (min)	dB	15.0	14.0	13.0
Gain Flatness (max)	dB	±0.5	±0.8	±1.2
Reverse Isolation	dB	28		
Noise Figure (max)	dB	7.0	7.5	8.0
Power Output @ 1 dB comp. (min)	dBm	14.0	12.5	12.0
IP3	dBm	+30		
IP2	dBm	+32		
Second Order Harmonic IP	dBm	+37		
VSWR Input / Output (max)		1.9:1 / 1.9:1	2.1:1 / 2.1:1	2.3:1 / 2.3:1
DC Current @ 15 Volts (max)	mA	63	64	67

Absolute Maximum Ratings

Parameter	Absolute Maximum
Storage Temperature	-62°C to +125°C
Case Temperature	+125°C
DC Voltage	+17 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: $V_{CC} = +15 V_{DC}$

Parameter	Rating
Thermal Resistance θ_{jc}	45°C/W
Transistor Power Dissipation P_d	0.426 W
Junction Temperature Rise Above Case T_{jc}	+19°C

* Over temperature performance limits for part number CA36-2, guaranteed from 0°C to +50°C only.

ADVANCED: Data Sheets contain information regarding a product M/A-COM Technology Solutions is considering for development. Performance is based on target specifications, simulated results, and/or prototype measurements. Commitment to develop is not guaranteed.

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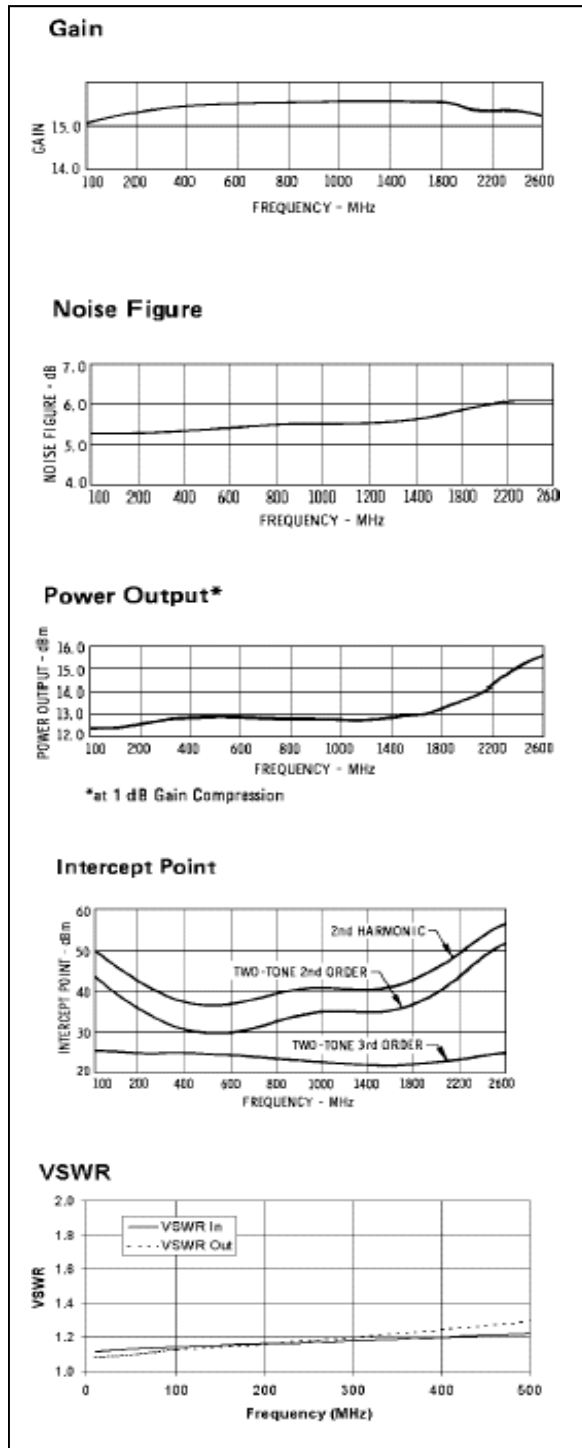
• **North America** Tel: 800.366.2266 • **Europe** Tel: +353.21.244.6400
 • **India** Tel: +91.80.4155721 • **China** Tel: +86.21.2407.1588
 Visit www.macomtech.com for additional data sheets and product information.

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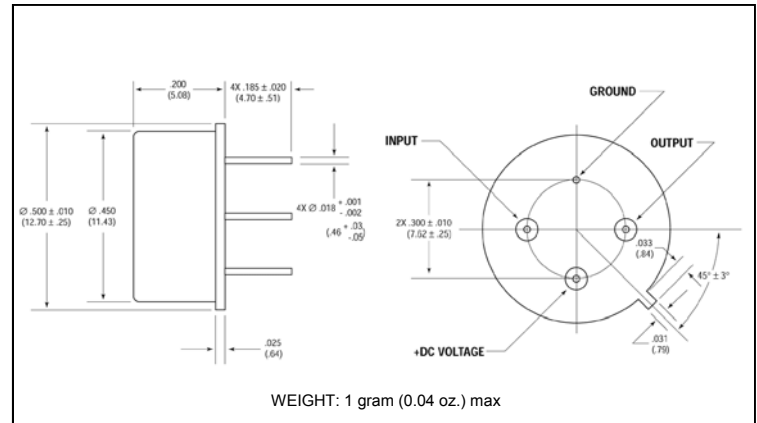
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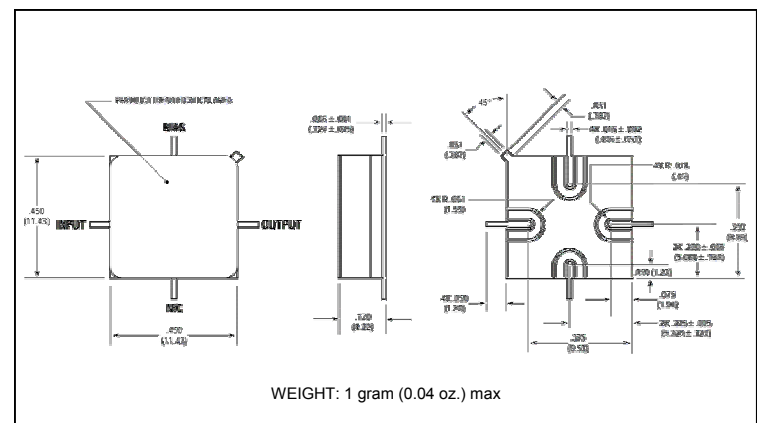
Typical Performance Curves at +25°C



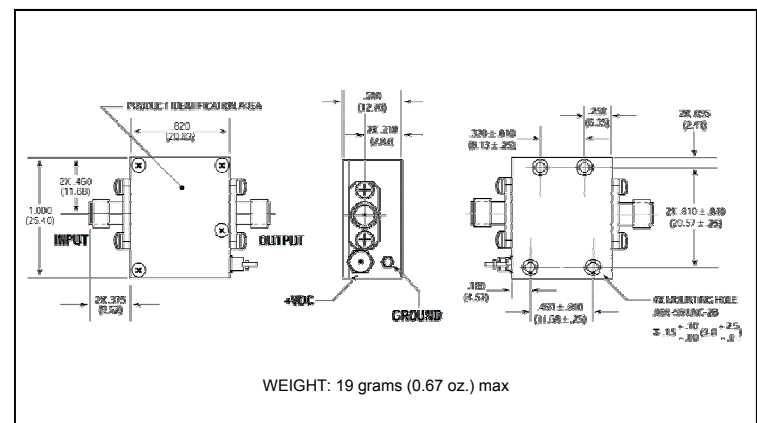
Outline Drawing: TO-8 *



Outline Drawing: Surface Mount *



Outline Drawing: SMA Connectorized *



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