tyco Electronics

MACOM

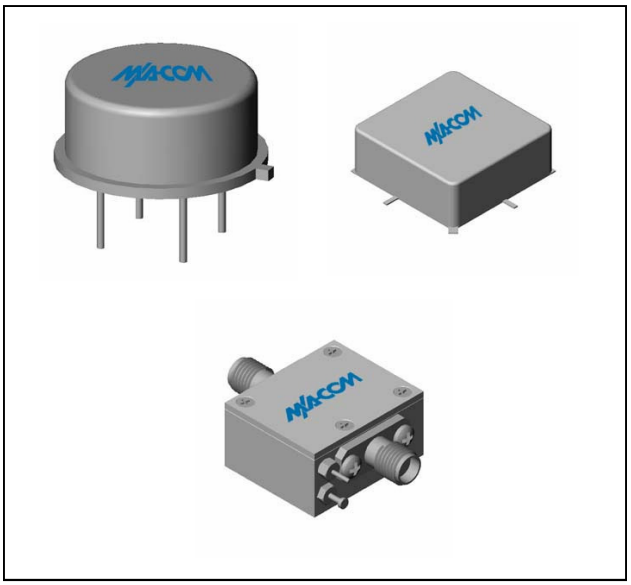
Cascadable Amplifier
10 to 800 MHz

A67/ SMA67
V2

Features

- AVAILABLE IN SURFACE MOUNT
- HIGH EFFICIENCY: +16 dBm (TYP.) OUTPUT POWER AT 32 mA (TYP.)
- LOW NOISE FIGURE: <4.0 dB (TYP.)
- WIDE POWER SUPPLY RANGE: +5 TO +15 VOLTS

Product Image



Description

The A67 RF amplifier is a discrete hybrid design, which uses 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. Use of an impedance transformer offers the benefit of high dynamic range and high efficiency.
Both TO-8 and Surface Mount packages are hermetically sealed, and MIL-STD-883 environmental screening is available

Ordering Information

Part Number	Package
A67	TO-8
SMA67	Surface Mount
CA67	SMA Connectorized

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

Parameter	Units	Typical	Guaranteed	
		25ºC	0º to 50ºC	-54º to +85ºC*
Frequency	MHz	10-900	10-800	10-800
Small Signal Gain (min)	dB	14.0	13.0	12.5
Gain Flatness (max)	dB	±0.3	±0.6	±0.7
Reverse Isolation	dB	17		
Noise Figure (max)	dB	4.0	4.3	4.5
Power Output @ 1 dB comp. (min)	dBm	16.0	15.5	15.0
IP3	dBm	+30		
IP2	dBm	+45		
Second Order Harmonic IP	dBm	+50		
VSWR Input / Output (max)		1.8:1 / 2.0:1	1.9:1 / 2.0:1	2.0:1 / 2.2:1
DC Current @ 15 Volts (max)	mA	32	34	35

Absolute Maximum Ratings

Parameter	Absolute Maximum
Storage Temperature	-62ºC to +125ºC
Case Temperature	+125ºC
DC Voltage	+17 V
Continuous Input Power	13 dBm
Short Term Input power (1 minute max.)	50 mW
Peak Power (3 µsec max.)	0.5 W
"S" Series Burn-In Temperature (case)	+125ºC

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

Parameter	Rating
Thermal Resistance θ_{jc}	45ºC/W
Transistor Power Dissipation P_d	0.269 W
Junction Temperature Rise Above Case T_{jc}	12ºC

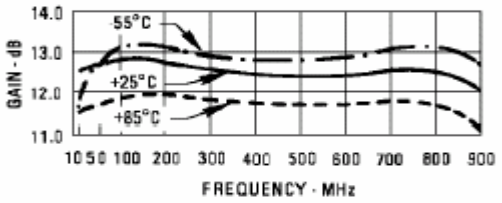
* Over temperature performance limits for part number CA67, guaranteed from 0°C to +50°C only.

- **North America** Tel: 800.366.2266 / Fax: 978.366.2266
- **Europe** Tel: 44.1908.574.200 / Fax: 44.1908.574.300
- **Asia/Pacific** Tel: 81.44.844.8296 / Fax: 81.44.844.8298

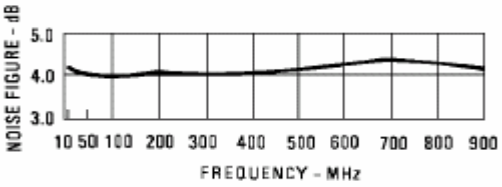
Visit www.macom.com for additional data sheets and product information.

Typical Performance Curves at +25°C

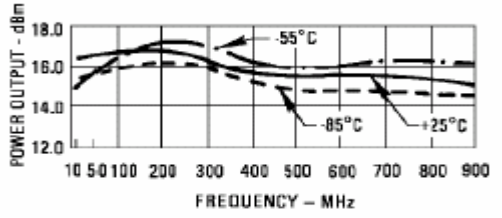
Gain



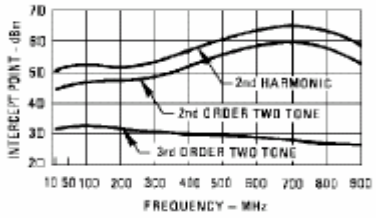
Noise Figure



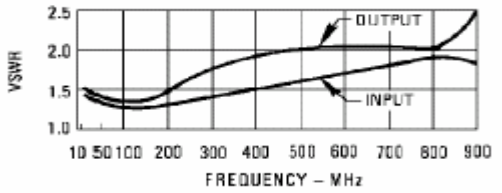
Power Output*



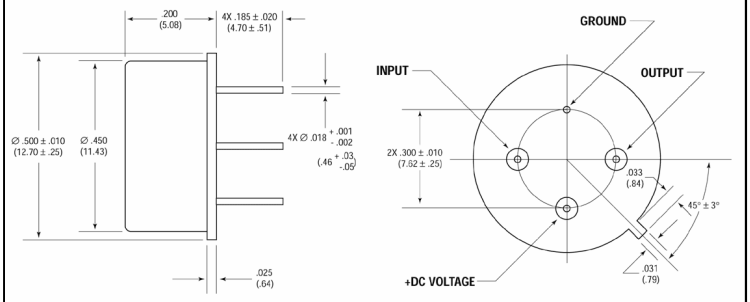
Intercept Point



VSWR

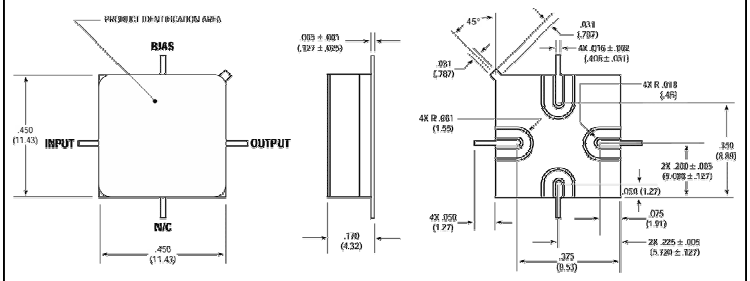


Outline Drawing: TO-8 *



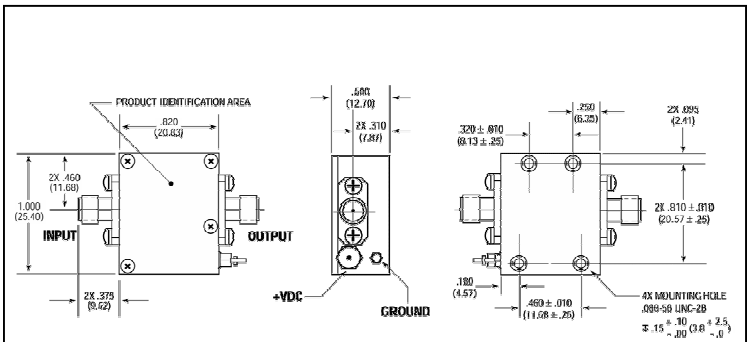
WEIGHT: 1 gram (0.04 oz.) max

Outline Drawing: Surface Mount *



WEIGHT: 1 gram (0.04 oz.) max

Outline Drawing: SMA Connectorized *



WEIGHT: 19 grams (0.67 oz.) max

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

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