

**Cascadable Amplifier  
10 to 2000 MHz**

**A37/ SMA37**

V3

**Features**

- HIGH OUTPUT LEVEL: +15 dBm (TYP.)
- HIGH THIRD ORDER I.P.: +28 dBm (TYP.)
- WIDE POWER SUPPLY RANGE: +5 TO +15 VOLTS

**Description**

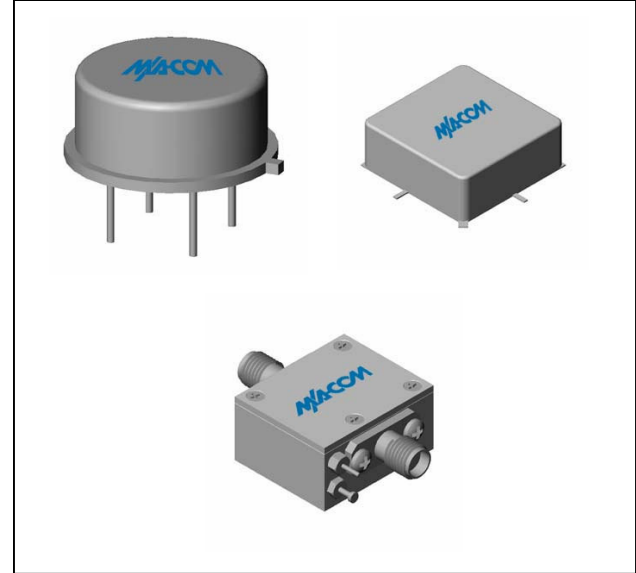
The A37 RF amplifier is a discrete thin film hybrid design, which incorporates the use of thin film manufacturing processes for accurate performance and high reliability. This single stage bipolar transistor feedback amplifier design displays impressive performance over a broadband frequency range. An 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
A37	TO-8
SMA37	Surface Mount
CA37 **	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	5-2100	10-2000	10-2000
Small Signal Gain (min)	dB	10.0	8.5	8.0
Gain Flatness (max)	dB	±0.3	±0.8	±1.0
Reverse Isolation	dB	14		
Noise Figure (max)	dB	6.8	7.5	8.0
Power Output @ 1 dB comp. (min)	dBm	15.0	14.0	13.5
IP3	dBm	+28		
IP2	dBm	+36		
Second Order Harmonic IP	dBm	+41		
VSWR Input / Output (max)		1.6:1 / 1.6:1	2.0:1 / 2.0:1	2.1:1 / 2.1:1
DC Current @ 15 Volts (max)	mA	47	50	53

**Absolute Maximum Ratings**

Parameter	Absolute Maximum
Storage Temperature	-62°C to +125°C
Case Temperature	125°C
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)	125°C

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

Parameter	Rating
Thermal Resistance $\theta_{jc}$	145°C/W
Transistor Power Dissipation $P_d$	0.428 W
Junction Temperature Rise Above Case $T_{jc}$	62°C

\* Over temperature performance limits for part number CA37, guaranteed from 0°C to +50°C only.

1

M/A-COM Inc. and its affiliates reserve the right to make changes to the product(s) or information contained herein without notice. M/A-COM makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does M/A-COM assume any liability whatsoever arising out of the use or application of any product(s) or information.

• **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

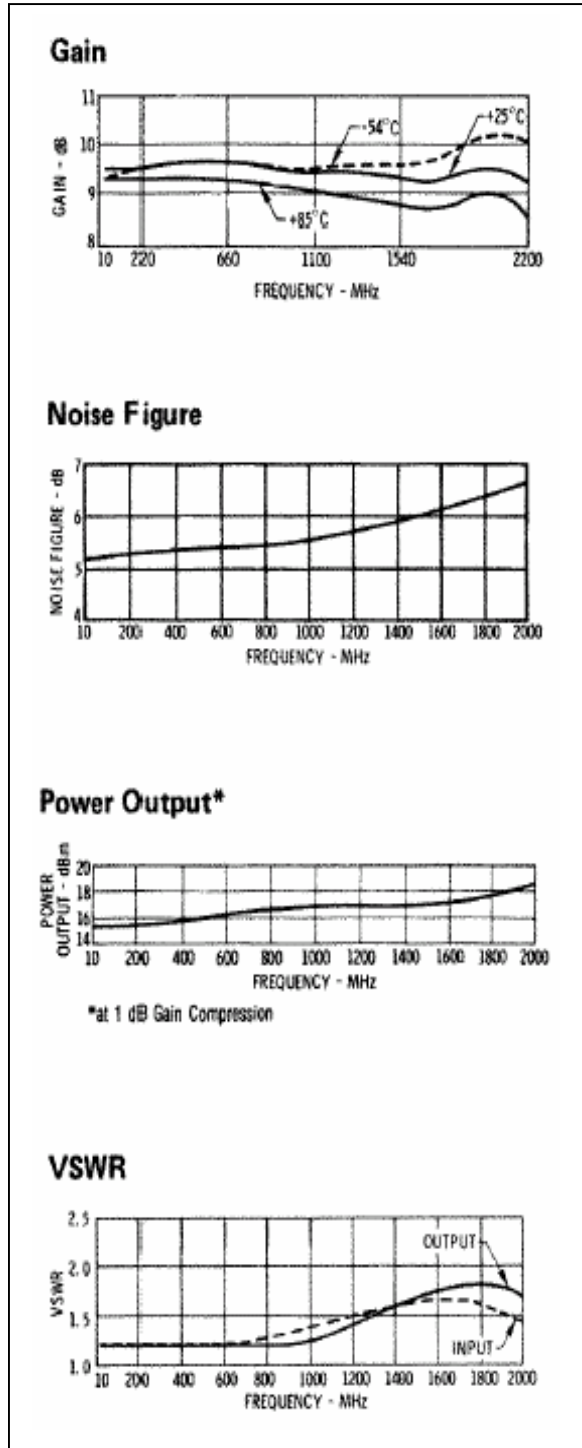
Visit [www.macom.com](http://www.macom.com) for additional data sheets and product information.

**Cascadable Amplifier  
10 to 2000 MHz**

**A37/ SMA37**

V3

**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.