



Cascadable Amplifier 100 to 2000 MHz

A32/ SMA32

VA

Features

LOW NOISE FIGURE: 3.5 dB (TYP.)
HIGH THIRD ORDER IP: +32 dBm (TYP.)

• HIGH OUTPUT LEVEL: +21 dBm (TYP.)

• LOW VSWR: 1.8:1 (TYP.)

Description

The A32 RF amplifier is a discrete hybrid design, which uses thin film manufacturing processes for accurate performance and high reliability.

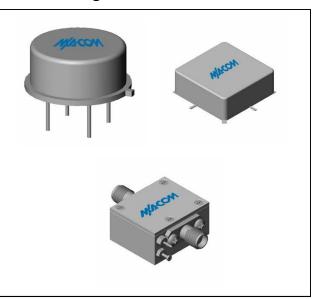
This single stage GaAs FET feedback amplifier design displays impressive performance characteristics over a broadband frequency range. An RF choke is used for DC power supply decoupling.

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

Ordering Information

Part Number	Package		
A32	TO-8		
SMA32	Surface Mount		
CA32	SMA Connectorized		

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	10-2000	10-2000	10-2000
Small Signal Gain (min)	dB	10.0	9.0	8.5
Gain Flatness (max)	dB	±3.0	±0.7	±1.0
Reverse Isolation	dB	20		
Noise Figure (max)	dB	3.5	4.0	4.5
Power Output @ 1 dB comp. (min)	dBm	21.0	19.0	18.0
IP3	dBm	+32		
IP2	dBm	+38		
Second Order Harmonic IP	dBm	+40		
VSWR Input / Output (max)		1.8:1 / 1.8:1	2.1:1 / 2.1:1	2.3:1 / 2.3:1
DC Current @ 15 Volts (max)	mA	94	98	100

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 θ_{jc}	182°C/W
Transistor Power Dissipation P _d	0.288 W
Junction Temperature Rise Above Case T _{jc}	+52°C

 $^{^{\}star}$ Over temperature performance limits for part number CA32, guaranteed from 0°C to +50°C only.

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





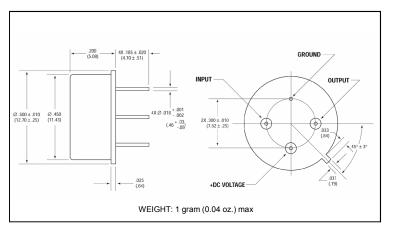
Cascadable Amplifier 100 to 2000 MHz

A32/ SMA32

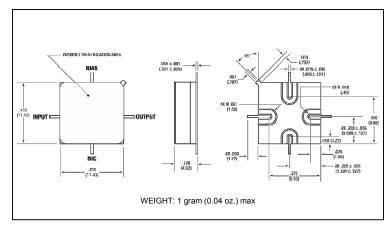
Typical Performance Curves at +25°C

Gain 10.0 SAIN 100 400 700 1000 1300 1600 1900 2200 FREQUENCY - MHz Noise Figure FIGURE - dB 5.0 1600 1900 2200 100 700 1000 1300 FREQUENCY - MHz Power Output* 700 1000 1300 1600 1900 2200 50 100 400 FREQUENCY - MHz * at 1 dB Gain Compression Intercept Point 2ND HARMONIC INTERCEPT POINT FOINT - dBm 3RD ORDER INTERCEPT POINT 400 700 1000 1300 1600 1900 2200 100 FREQUENCY - MHz VSWR 400 700 1000 1300 1600 1900 2200 FREQUENCY - MHz

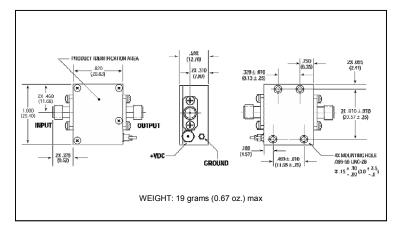
Outline Drawing: TO-8 *



Outline Drawing: Surface Mount *



Outline Drawing: SMA Connectorized *



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