

## Cascadable Amplifier 100 to 2000 MHz

Rev. V4

### 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.

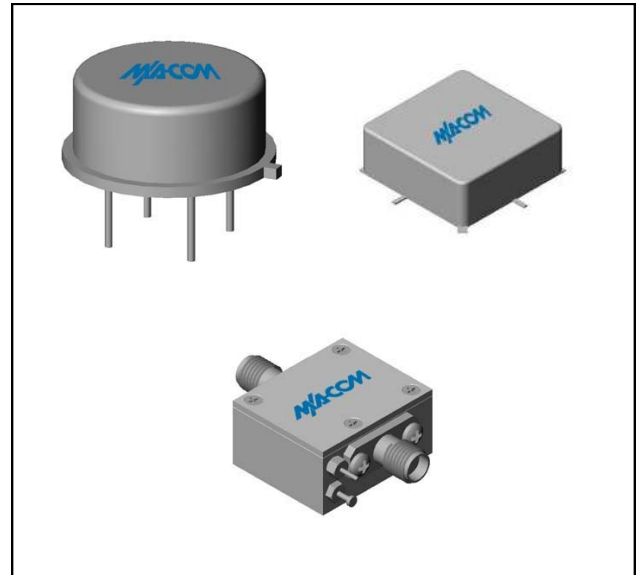
This single stage GaAs FET feedback amplifier design displays impressive performance characteristics over a broadband frequency range. An RF choke is used for DC power supply decoupling.

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

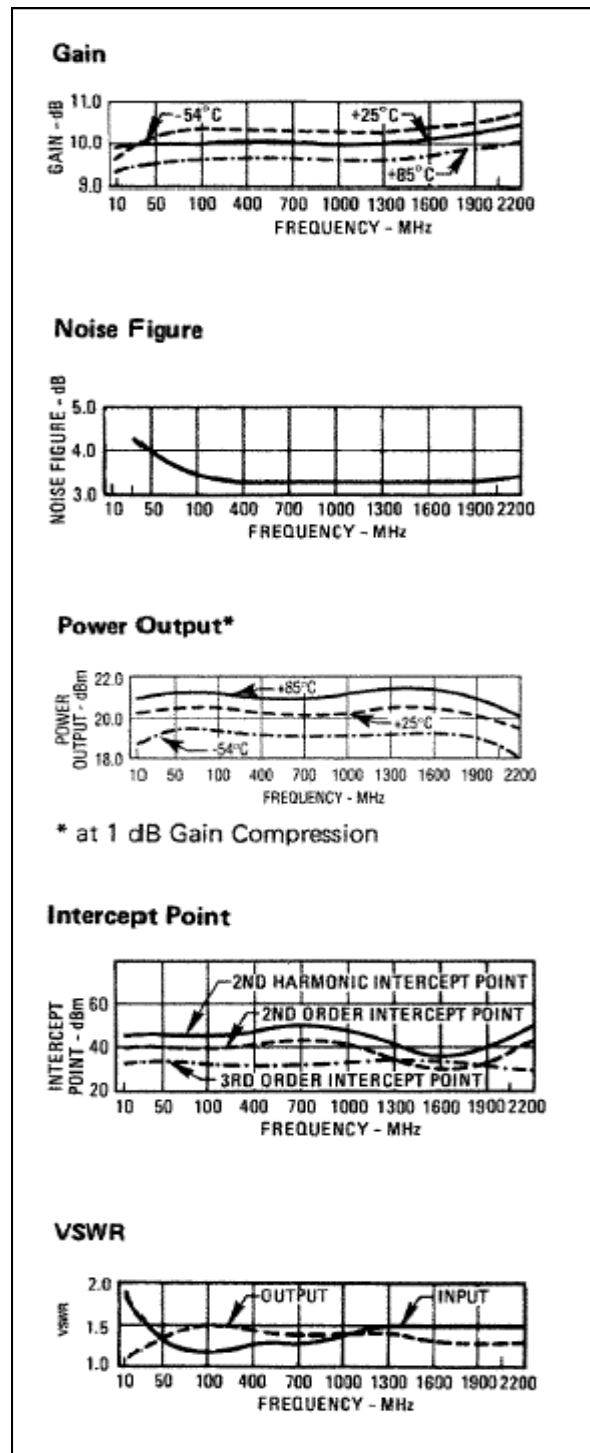
Parameter	Absolute Maximum
Storage Temperature	-62°C to +125°C
Case Temperature	+125°C
DC Voltage	+17 V
Continuous Input Power	13 dBm
Short Term Input power (1 minute max.)	50 mW
Peak Power (3 μsec max.)	0.5 W
"S" Series Burn-In Temperature (case)	+125°C

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

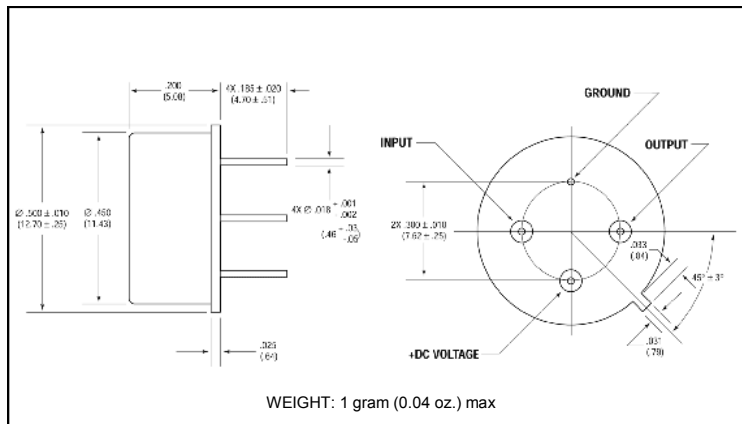
Parameter	Rating
Thermal Resistance $\theta_{jc}$	182°C/W
Transistor Power Dissipation $P_d$	0.288 W
Junction Temperature Rise Above Case $T_{jc}$	+52°C

1 \* Over temperature performance limits for part number CA32, guaranteed from 0°C to +50°C only.

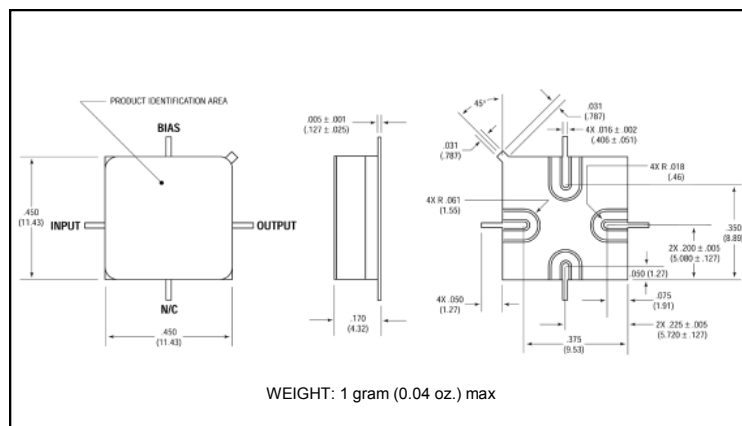
### Typical Performance Curves at +25°C



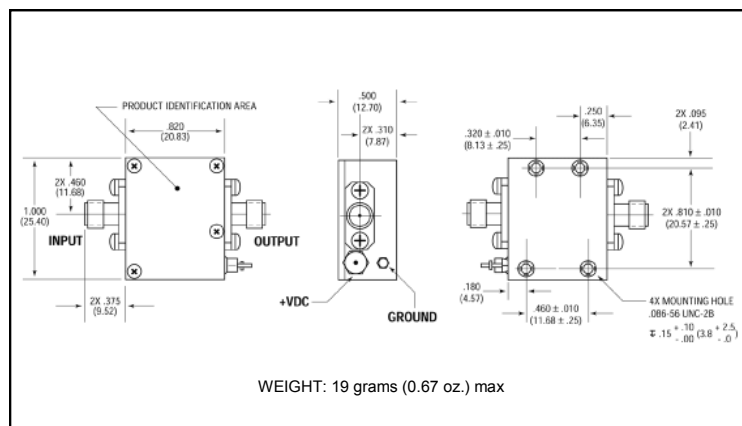
### Outline Drawing: TO-8 \*



### Outline Drawing: Surface Mount \*



### Outline Drawing: SMA Connectorized \*



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