

A32-1 / SMA32-1

Cascadable Amplifier 100 to 2000 MHz

Rev. V3

Features

- LOW NOISE FIGURE: 2.5 dB (TYP.)
- HIGH OUTPUT LEVEL: 15.5 dBm (TYP.)
- MEDIUM THIRD ORDER IP: +25.0 dBm (TYP.)
- GaAs FET DESIGN

Description

The A32-1 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 |
|-------------|-------------------|
| A32-1 | TO-8 |
| SMA32-1 | Surface Mount |
| CA32-1 ** | SMA Connectorized |

** The connectorized version is not RoHs compliant.

Product Image



Electrical Specifications: $Z_0 = 50\Omega$, $V_{CC} = +5 V_{DC}$

| Parameter | Units | Typical | Guaranteed | |
|---------------------------------|-------|---------------|---------------|----------------|
| | | 25°C | 0° to 50°C | -54° to +85°C* |
| Frequency | GHz | 0.1-2.0 | 0.1-2.0 | 0.1-2.0 |
| Small Signal Gain (min) | dB | 11.5 | 9.0 | 8.5 |
| Gain Flatness (max) | dB | ±0.3 | ±0.7 | ±1.0 |
| Reverse Isolation | dB | 20 | | |
| Noise Figure (max) | dB | 2.5 | 3.0 | 3.5 |
| Power Output @ 1 dB comp. (min) | dBm | 15.5 | 13.5 | 12.5 |
| IP3 | dBm | +25 | | |
| IP2 | dBm | +30 | | |
| Second Order Harmonic IP | dBm | +37 | | |
| VSWR Input / Output (max) | | 1.8:1 / 1.8:1 | 2.1:1 / 2.1:1 | 2.3:1 / 2.3:1 |
| DC Current @ 5 Volts (max) | mA | 44 | 50 | 52 |

Absolute Maximum Ratings

| Parameter | Absolute Maximum |
|--|------------------|
| Storage Temperature | -62°C to +125°C |
| Case Temperature | +125°C |
| DC Voltage | +8 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} | 165°C/W |
| Transistor Power Dissipation P_d | 0.111 W |
| Junction Temperature Rise Above Case T_{jc} | +16.2°C |

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

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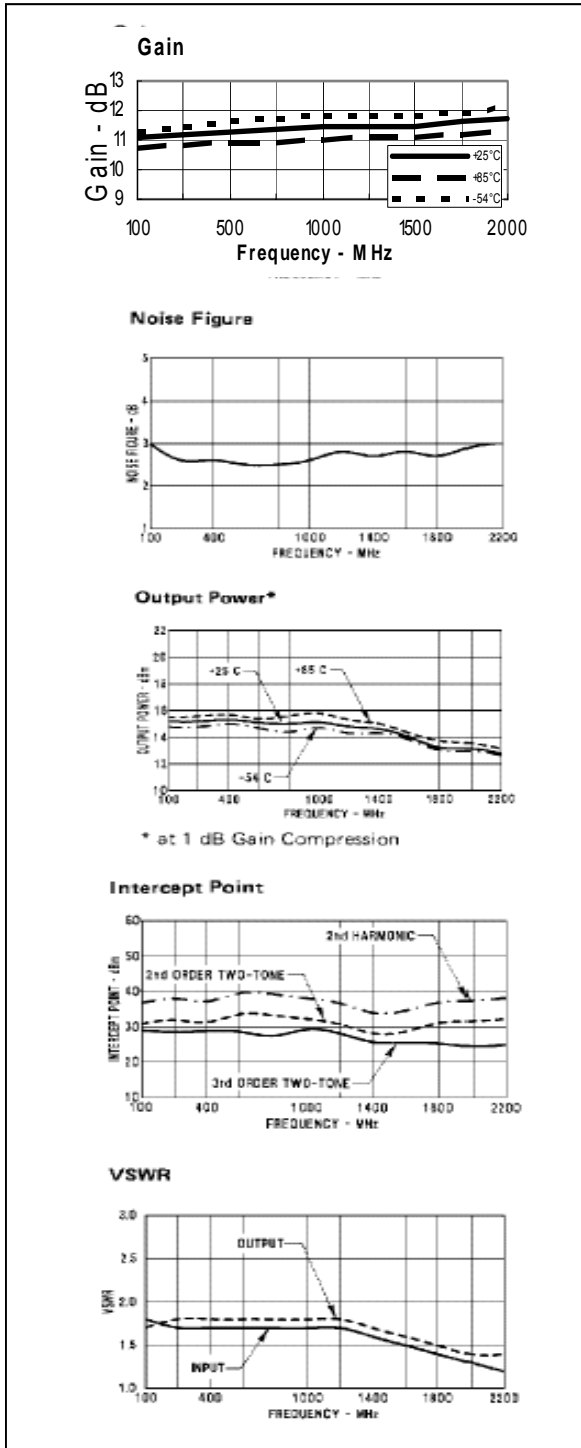
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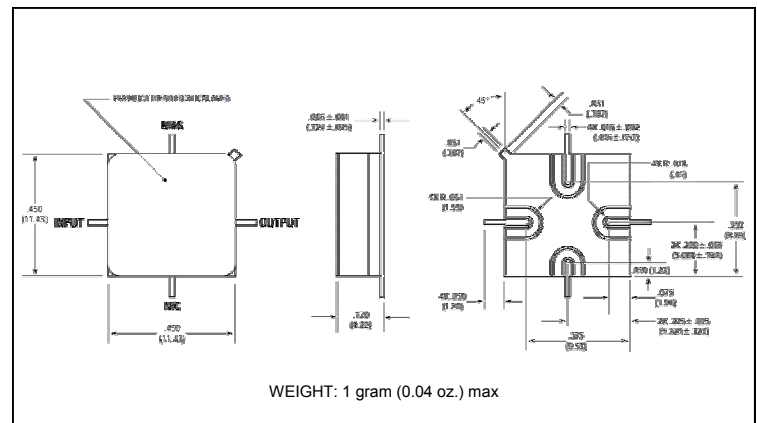
Typical Performance Curves at +25°C



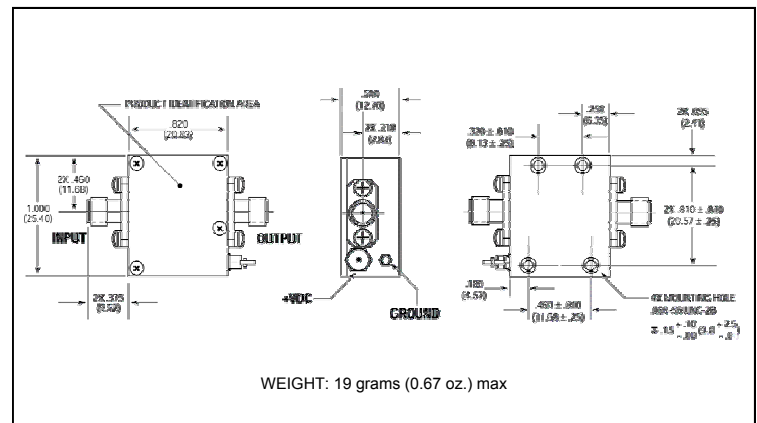
Outline Drawing: TO-8 *



Outline Drawing: Surface Mount *



Outline Drawing: SMA Connectorized *



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

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- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

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