

Cascadable Amplifier 5 to 400 MHz

Rev. V2

Features

- LOW COST
- MEDIUM OUTPUT LEVEL: +9 dBm (TYP.)
- ULTRA SMALL SIZE

Description

The EA2 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. The unit is packaged in a TO-5 hermetically sealed, and MIL-STD-883 environmental screening is available.

Product Image



Ordering Information

| Part Number | Package |
|-------------|---------|
| EA2 | TO-5 |

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

| Parameter | Units | Typical | Guaranteed | |
|------------------------------------------|-------|---------|------------|---------------|
| | | | 0° to 50°C | -54° to +85°C |
| Frequency | MHz | 5-400 | 5-400 | 5-400 |
| Small Signal Gain (min) | dB | 13.5 | 13.0 | 12.5 |
| Gain Flatness (max) | dB | ±0.3 | ±1.0 | ±1.2 |
| Noise Figure (max) | dB | 5.7 | 6.5 | 7.0 |
| Power Output @ 1 dB Compression (min) | dBm | +9.0 | +6.5 | +6.0 |
| IP3 | dBm | +21 | | |
| IP2 | dBm | +28 | | |
| 2nd Order Harmonic IP | dBm | +33 | | |
| VSWR Input / Output (max) | | 1.6:1 | 1.9:1 | 2.0:1 |
| DC Current @ 15 Volts (max) | mA | 26 | 27 | 29 |

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 |
| CW Input power (1 minute max.) | 50 mW |
| Peak Power (3 μsec max.) | 0.5 W |
| "S" Series Burn-In Temperature (case) | +125°C |

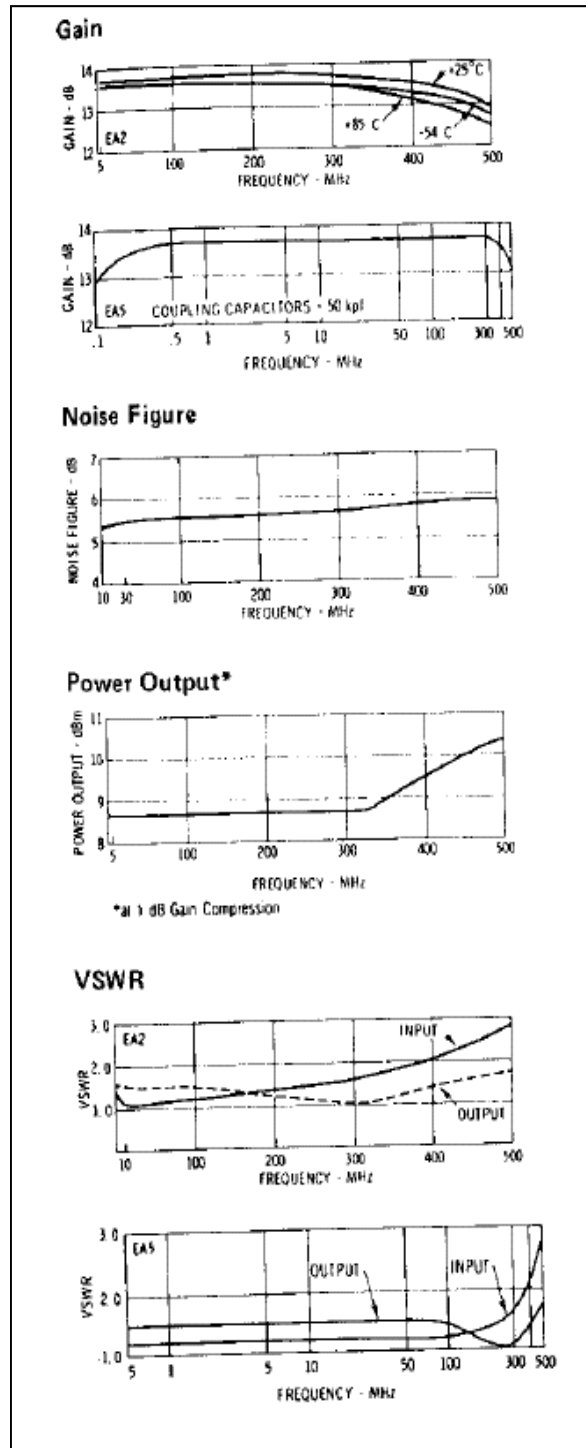
Thermal Data: $V_{CC} = +15 V_{DC}$

| Parameter | Rating |
|--------------------------------------------------|---------|
| Thermal Resistance θ_{jc} | 45°C/W |
| Transistor Power Dissipation P_d | 0.068 W |
| Junction Temperature Rise Above Case T_{jc} | 3°C |

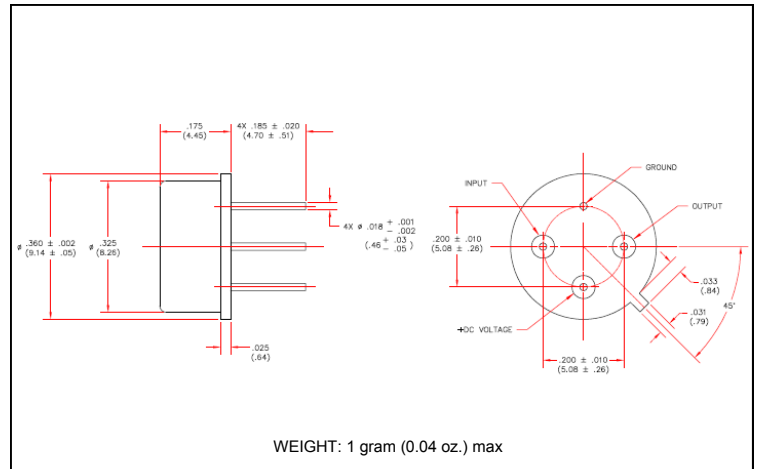
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Typical Performance Curves at +25°C



Outline Drawing: TO-5 *



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