

## Features

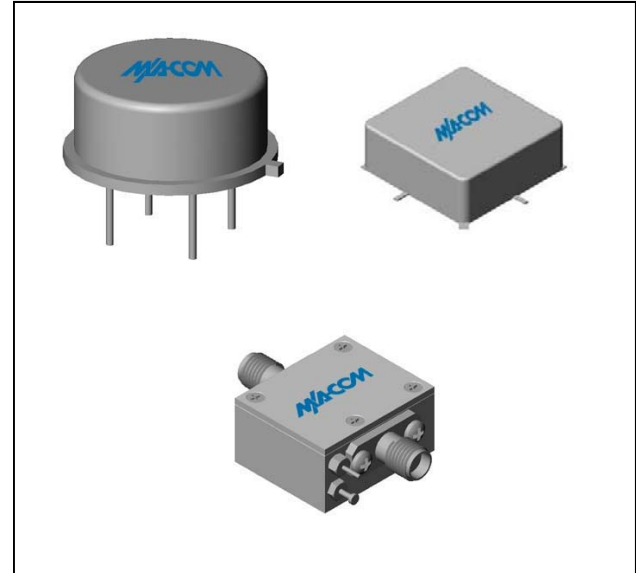
- LOW NOISE: 3.1 dB (TYP.)
- LOW VSWR: 1.3:1 (TYP.)
- FLAT BANDWIDTH:  $\pm 0.25$  dB (TYP.)

## Description

The A11 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. Both TO-8 and Surface Mount packages are Hermetically sealed, and MIL-STD-883 environmental screening is available.

## Product Image



## Ordering Information

| Part Number        | Package              |
|--------------------|----------------------|
| A11                | TO-8                 |
| MAAM-008715-0SMA11 | Surface Mount        |
| MAAM-008715-00CA11 | SMA Connectorized ** |

\*\* The connectorized version is not RoHs compliant.

## 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   | 1-1100        | 5-1000        | 5-1000         |
| Small Signal Gain (min)         | dB    | 14.7          | 14.0          | 13.5           |
| Gain Flatness (max)             | dB    | $\pm 0.3$     | $\pm 1.0$     | $\pm 1.2$      |
| Reverse Isolation               | dB    | 20            |               |                |
| Noise Figure (max)              | dB    | 3.1           | 3.5           | 4.0            |
| Power Output @ 1 dB comp. (min) | dBm   | -2.0          | -3.0          | -4.0           |
| IP3                             | dBm   | +10           |               |                |
| IP2                             | dBm   | +10           |               |                |
| Second Order Harmonic IP        | dBm   | +15           |               |                |
| VSWR Input / Output (max)       |       | 1.3:1 / 1.3:1 | 1.8:1 / 1.8:1 | 2.0:1 / 2.0:1  |
| DC Current @ 15 Volts (max)     | mA    | 9             | 11            | 12             |

## Absolute Maximum Ratings

| Parameter                              | Absolute Maximum |
|--|------------------|
| Storage Temperature                    | -62°C to +125°C  |
| Case Temperature                       | +125°C           |
| DC Voltage                             | +20 V            |
| Continuous Input Power                 | +13 dBm          |
| Short Term Input power (1 minute max.) | 50 mW            |
| Peak Power (3 $\mu$ sec max.)          | 0.5 W            |
| "S" Series Burn-In Temperature (case)  | +125°C           |

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

| Parameter                                     | Rating  |
|---|---------|
| Thermal Resistance $\theta_{jc}$              | 45°C/W  |
| Transistor Power Dissipation $P_d$            | 0.048 W |
| Junction Temperature Rise Above Case $T_{jc}$ | +2°C    |

\* Over temperature performance limits for part number CA11, guaranteed from 0°C to +50°C only.

1

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