

**Cascadable Amplifier  
100 to 3200 MHz**

**A43/ SMA43**

V3

**Features**

- ULTRAWIDE BANDWIDTH: 10-3200 MHz
- EXCELLENT GAIN BLOCK: 11.5 dB (TYP.)
- MEDIUM OUTPUT POWER: +8.5 dBm (TYP.)

**Description**

The A43 RF amplifier is a discrete hybrid design, which uses thin film manufacturing processes for consistent performance and high reliability.

This 2 stage bipolar transistor feedback amplifier design displays impressive performance over a broadband frequency range. An active DC biasing network insures temperature-stable performance.

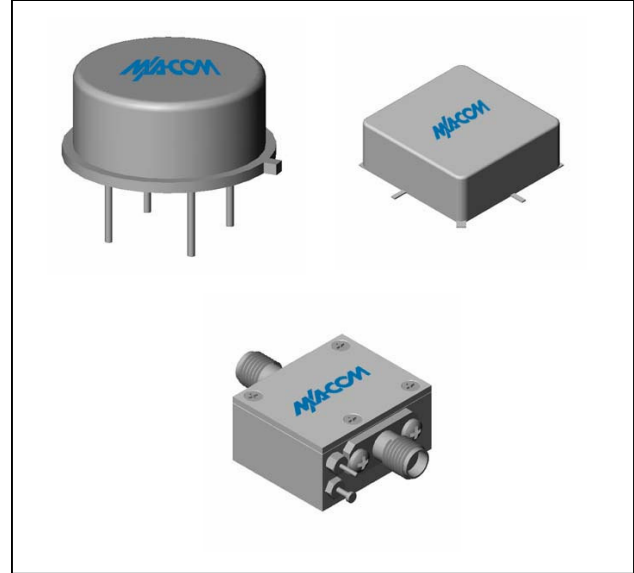
Both TO-8 and Surface Mount packages are hermetically sealed, and MIL-STD-883 environmental screening is available

**Ordering Information**

| Part Number | Package           |
|-------------|-------------------|
| A43         | TO-8              |
| SMA43       | Surface Mount     |
| CA43 **     | SMA Connectorized |

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

**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   | 80-3200       | 10-3200       | 10-3200        |
| Small Signal Gain (min)         | dB    | 11.5          | 10.5          | 9.8            |
| Gain Flatness (max)             | dB    | ±0.3          | ±0.7          | ±1.0           |
| Reverse Isolation               | dB    | 27            |               |                |
| Noise Figure (max)              | dB    | 7.0           | 7.5           | 8.0            |
| Power Output @ 1 dB comp. (min) | dBm   | 8.5           | 7.0           | 6.5            |
| IP3                             | dBm   | +21           |               |                |
| IP2                             | dBm   | +40           |               |                |
| Second Order Harmonic IP        | dBm   | +45           |               |                |
| VSWR Input / Output (max)       |       | 1.6:1 / 1.8:1 | 2.3:1 / 2.3:1 | 2.4:1 / 2.4:1  |
| DC Current @ 15 Volts (max)     | mA    | 45            | 48            | 50             |

**Absolute Maximum Ratings**

| Parameter                              | Absolute Maximum |
|--|------------------|
| Storage Temperature                    | -62°C to +125°C  |
| Case Temperature                       | 125°C            |
| DC Voltage                             | +17 V            |
| Continuous Input Power                 | +10 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 $\theta_{jc}$              | 150°C/W |
| Transistor Power Dissipation $P_d$            | 0.193 W |
| Junction Temperature Rise Above Case $T_{jc}$ | 29°C    |

\* Over temperature performance limits for part number CA43, guaranteed from 0°C to +50°C only.

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