

# AR2087

## 10 TO 2000 MHz TO-8B CASCADABLE AMPLIFIER

**Typical Values**

|   |                                   |
|---|-----------------------------------|
| High Second Order I.P. ....                 | <b>AR2087</b><br><b>+54.0 dBm</b> |
| High Second Order Harmonic I.P. ....        | <b>+60.0 dBm</b>                  |
| High Output Power .....                     | <b>+21.0 dBm</b>                  |
| High Performance Thin Film<br>TO-8B Package |                                   |

### SPECIFICATIONS\*

| Parameter                           | Typical    | Guaranteed  |               |
|-------------------------------------|------------|-------------|---------------|
|                                     |            | 0 to 50 °C  | -55 to +85 °C |
| Frequency (Min.)                    | 5-2000 MHz | 10-2000 MHz | 10-2000 MHz   |
| Small Signal Gain (Min.)            | 16.0 dB    | 15.0 dB     | 14.5 dB       |
| Gain Flatness (Max.)                | ±0.5 dB    | ±0.8 dB     | ±1.0 dB       |
| Noise Figure (Max.)<br>200-2000 MHz | 4.5 dB     | 5.5 dB      | 6.0 dB        |
| SWR (Max.) Input/Output             | 1.5:1      | 1.7:1       | 2.0:1         |
| Power Output (Min.)<br>@ 1dB comp.  | +21.0 dBm  | +20.0 dBm   | +19.5 dBm     |
| Reverse Isolation                   | 30 dB      | —           | —             |
| DC Current (Max.)                   | 115 mA     | 118 mA      | 122 mA        |

\* Measured in a 50-ohm system at +15 Vdc unless otherwise specified.

### INTERMODULATION PERFORMANCE

**Typical @ 25 °C**

|   |                                 |
|---|---------------------------------|
| Second Order Harmonic Intercept Point ..... | <b>AR2087</b><br><b>+60 dBm</b> |
| Second Order Two Tone Intercept Point ..... | <b>+54 dBm</b>                  |
| Third Order Two Tone Intercept Point .....  | <b>+34 dBm</b>                  |

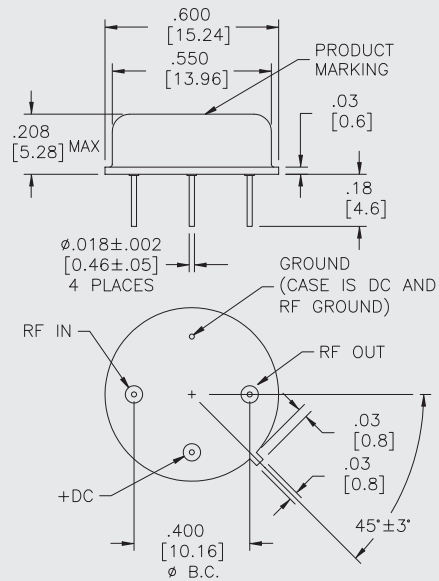
### ABSOLUTE MAXIMUM RATINGS

|  |                |
|--|----------------|
| Storage Temperature .....                            | -62 to +125 °C |
| Maximum Case Temperature .....                       | +125 °C        |
| Maximum DC Voltage .....                             | +17 Volts      |
| Maximum Continuous RF Input Power .....              | +15 dBm        |
| Maximum Short Term Input Power (1 Minute Max.) ..... | 100 Milliwatts |
| Maximum Peak Power (3 μsec Max.) .....               | 0.5 Watt       |
| Burn-in Temperature .....                            | +100°C         |
| Thermal Resistance <sup>1</sup> (θjc) .....          | — °C/Watt      |
| Junction Temperature Rise Above Case (Tjc) .....     | — °C           |

<sup>1</sup> Thermal resistance is based on total power dissipation.

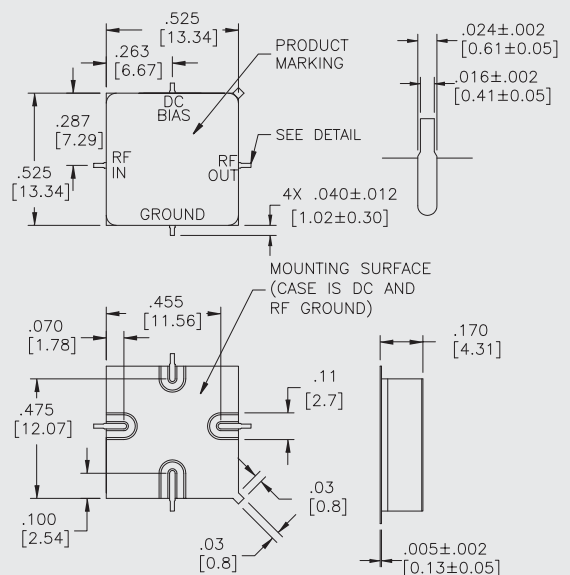
### AR2087

#### TO-8B Package for Amplifiers



### ARS2087

#### SMT0-8B Package for Amplifiers



DIMENSIONS ARE IN INCHES [MILLIMETERS]