

**AC508****5 TO 500 MHz  
TO-8 CASCADABLE AMPLIFIER***Typical Values*

|                                                          | <b>AC508</b>     |
|----------------------------------------------------------|------------------|
| Medium Output Level .....                                | <b>+19.0 dBm</b> |
| High Third Order I.P. ....                               | <b>+31 dBm</b>   |
| High Performance Thin Film<br>Standard Size TO-8 Package |                  |

**SPECIFICATIONS\***

| Parameter                          | Typical   | Guaranteed |               |
|------------------------------------|-----------|------------|---------------|
|                                    |           | 0 to 50° C | -55 to +85° C |
| Frequency (Min.)                   | 5-600 MHz | 5-500 MHz  | 5-500 MHz     |
| Small Signal Gain (Min.)           | 13.5 dB   | 13.0 dB    | 12.5 dB       |
| Gain Flatness (Max.)               | ±0.4 dB   | ±0.5 dB    | ±0.7 dB       |
| Noise Figure (Max.)                | <4.5 dB   | 5.0 dB     | 5.5 dB        |
| SWR (Max.) Input/Output            | 1.5:1     | 1.7:1      | 1.9:1         |
| Power Output (Min.)<br>@ 1dB comp. | +19.5 dBm | +18.0 dBm  | +17.5 dBm     |
| DC Current (Max.)                  | 65 mA     | 69 mA      | 71 mA         |

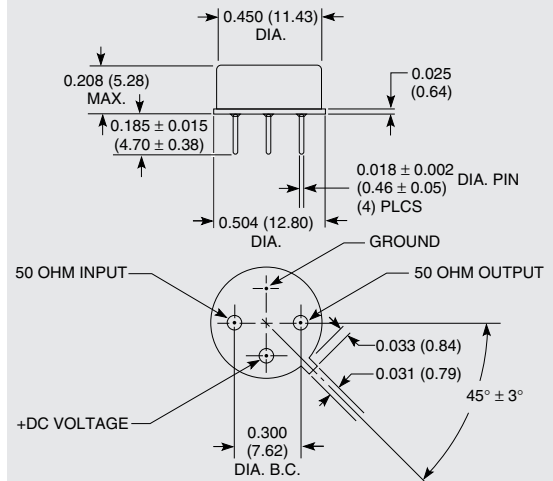
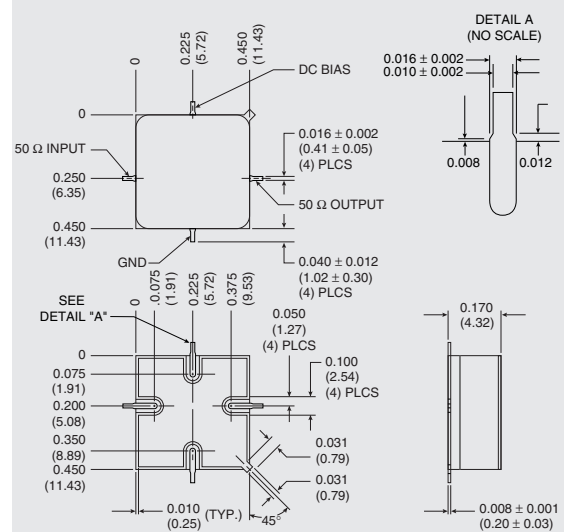
\* Measured in a 50-ohm system at +15 Vdc unless otherwise specified.

**INTERMODULATION PERFORMANCE***Typical @ 25° C; 100 MHz*

|                                             | <b>AC508</b>   |
|---------------------------------------------|----------------|
| Second Order Harmonic Intercept Point ..... | <b>+52 dBm</b> |
| Second Order Two Tone Intercept Point ..... | <b>+46 dBm</b> |
| Third Order Two Tone Intercept Point .....  | <b>+33 dBm</b> |

**ABSOLUTE MAXIMUM RATINGS**

|                                                      |                |
|------------------------------------------------------|----------------|
| Storage Temperature .....                            | -62 to 125° C  |
| Maximum Case Temperature .....                       | +125° C        |
| Maximum DC Voltage .....                             | +19 Volts      |
| Maximum Continuous RF Input Power .....              | +13 dBm        |
| Maximum Short Term Input Power (1 Minute Max.) ..... | 100 Milliwatts |
| Maximum Peak Power (3 µsec Max.) .....               | 0.5 Watt       |
| Burn-in Temperature .....                            | +105° C        |
| Thermal Resistance <sup>1</sup> (θjc) .....          | +28° C/Watt    |
| Junction Temperature Rise Above Case (Tjc) .....     | +31.7° C       |

<sup>1</sup> Thermal resistance is based on total power dissipation.**AC508****TO-8 Package for Amplifiers****AS508****SMT0-8 Package for Amplifiers**

DIMENSIONS ARE IN INCHES (MILLIMETERS)