



COUGAR COMPONENTS

PRELIMINARY

AC508

5 TO 500 MHz  
TO-8 CASCADABLE AMPLIFIER

Typical Values

|                            |                    |
|----------------------------|--------------------|
| Medium Output Level        | AC508<br>+19.0 dBm |
| High Third Order I.P.      | +31 dBm            |
| High Performance Thin Film |                    |
| 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

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

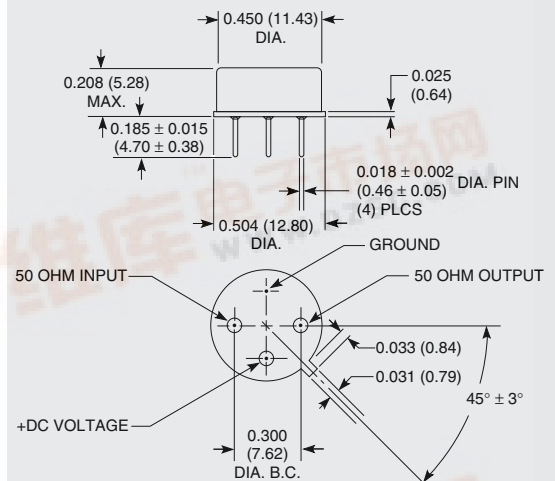
ABSOLUTE MAXIMUM RATINGS

|                                                |                |
|------------------------------------------------|----------------|
| 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.

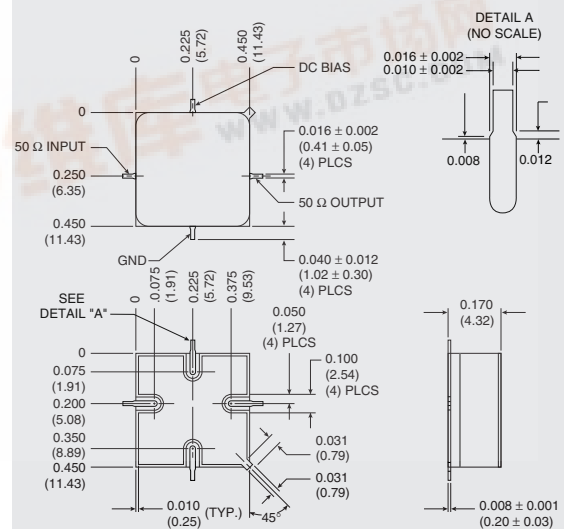
AC508

TO-8 Package for Amplifiers



AS508

SMT0-8 Package for Amplifiers



DIMENSIONS ARE IN INCHES (MILLIMETERS)