



COUGAR COMPONENTS

PRELIMINARY

AR2538 10 TO 2500 MHz TO-8B CASCADABLE AMPLIFIER

Typical Values

	AR2538
High Gain.....	21.0 dB
High Output Power.....	+26.0 dBm
Low Noise Figure.....	3.5 dB
High Performance Thin Film TO-8B Package	

SPECIFICATIONS*

Parameter	Typical	Guaranteed	
		0 to 50° C	-55 to +85° C
Frequency (Min.)	5-2500 MHz	10-2500 MHz	10-2500 MHz
Small Signal Gain (Min.)	21.0 dB	20.0 dB	19.5 dB
Gain Flatness (Max.)	±0.5 dB	±0.8 dB	±1.0 dB
Noise Figure (Max.) 100-2500 MHz	3.5 dB	4.0 dB	4.5 dB
SWR (Max.) Input/Output 20-2500 MHz	1.6:1	1.8:1	2.0:1
Power Output (Min.) @ 1dB comp.	+26.0 dBm	+24.5 dBm	+24.0 dBm
DC Current (Max.)	185 mA	190 mA	195 mA

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

INTERMODULATION PERFORMANCE

Typical @ 25° C

	AR2538
Second Order Harmonic Intercept Point.....	+60 dBm
Second Order Two Tone Intercept Point.....	+54 dBm
Third Order Two Tone Intercept Point.....	+40 dBm

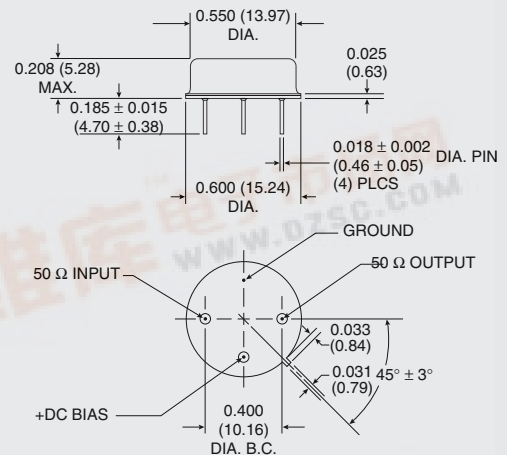
ABSOLUTE MAXIMUM RATINGS

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 ¹ (θjc).....	—° C/Watt
Junction Temperature Rise Above Case (Tjc).....	—° C

¹ Thermal resistance is based on total power dissipation.

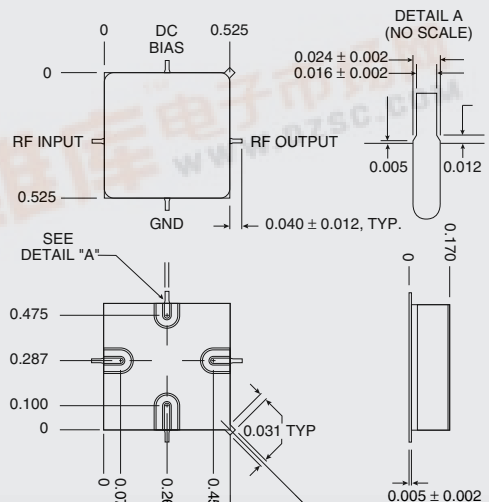
AR2538

TO-8B Package for Amplifiers



ARS2538

SMT0-8B Package for Amplifiers



DIMENSIONS ARE IN INCHES (MILLIMETERS)