

# ACP8039 2.0-8.0 GHz COUGARPAK™ AMPLIFIER

**Typical Values** **ACP8039**  
**High Output Power** ..... 1 Watt  
**Ultra Broad Bandwidth** ..... 2.0-8.0 GHz  
**High Third Order I.P.** ..... +38 dBm  
**High Performance Thin Film**  
**Standard Single-stage CougarPak™ Package**

## SPECIFICATIONS\*

Parameter	Typical	Guaranteed	
		0 to 50° C	-55 to +85° C
Frequency (Min.)	2.0-8.0 GHz	2.0-8.0 GHz	2.0-8.0 GHz
Small Signal Gain (Min.)	10.8 dB	10.0 dB	9.5 dB
Gain Flatness (Max.)	±0.6 dB	±0.8 dB	±1.5 dB
Noise Figure (Max.)	4.0 dB	4.5 dB	5.0 dB
SWR (Max.) Input/Output	1.5:1	1.6:1	1.7:1
Power Output (Min.) @ 1dB comp.	+30.0 dBm	+28.5 dBm	+28.0 dBm
Reverse Isolation	27 dB	—	—
DC Current (Max.)	410 mA	440 mA	470 mA

\* Measured in a 50-ohm system at +12 Vdc unless otherwise specified.

## INTERMODULATION PERFORMANCE

**Typical @ 25° C** **ACP8039**  
**Second Order Harmonic Intercept Point** ..... +62 dBm  
**Second Order Two Tone Intercept Point** ..... +56 dBm  
**Third Order Two Tone Intercept Point** ..... +38 dBm

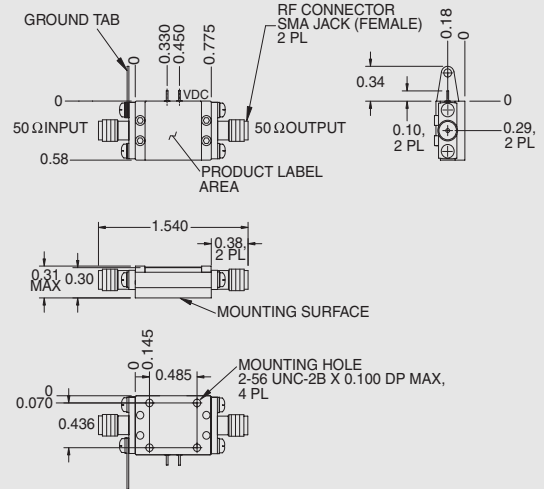
## ABSOLUTE MAXIMUM RATINGS

**Storage Temperature** ..... -62 to +125° C  
**Maximum Case Temperature** ..... +125° C  
**Maximum DC Voltage** ..... +14 Volts  
**Maximum Continuous RF Input Power** ..... +17 dBm  
**Maximum Short Term Input Power (1 Minute Max.)** ..... 100 Milliwatts  
**Maximum Peak Power (3 μsec Max.)** ..... 1.0 Watt  
**Burn-in Temperature** ..... +125° 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.

## ACP8039

### CougarPak™ Connectorized Package (single-stage)



DIMENSIONS ARE IN INCHES (MILLIMETERS)