TELEDYNE
MICROWAVE SOLUTIONS
Everywhereyoulook™

**PRELIMINARY**

# ACP8037 2.0-8.0 GHz COUGARPAK™ AMPLIFIER

| Typical Values | ACP8037 |
|---|---|
| **High Output Power** | **+28.0 dBm** |
| **Ultra Broad Bandwidth** | **2.0-8.0 GHz** |
| **High Third Order I.P.** | **+34 dBm** |
| **High Performance Thin Film** | |
| **Standard Single-stage CougarPak™ Package** | |

## SPECIFICATIONS*

| Parameter | | Typical | Guaranteed 0 to 50 °C | Guaranteed -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.)** | | 12.0 dB | 11.0 dB | 10.5 dB |
| **Gain Flatness (Max.)** | | ±0.6 dB | ±0.8 dB | ±1.5 dB |
| **Noise Figure (Max.)** | 2-4 GHZ | 8.0 dB | 8.5 dB | 9.0 dB |
| | 4-8 GHZ | 4.2 dB | 4.8 dB | 5.3 dB |
| **SWR (Max.)** | Input/Output | 1.8:1 | 2.0:1 | 2.0:1 |
| **Power Output (Min.) @ 1dB comp.** | 2-3 GHZ | +26.5 dBm | +26.0 dBm | +25.5 dBm |
| | 3-8 GHZ | +28.0 dBm | +26.5 dBm | +26.0 dBm |
| **Reverse Isolation** | | 28 dB | — | — |
| **DC Current (Max.)** | | 250 mA | 265 mA | 280 mA |

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

## INTERMODULATION PERFORMANCE

| Typical @ 25 °C | ACP8037 |
|---|---|
| **Second Order Harmonic Intercept Point** | +60 dBm |
| **Second Order Two Tone Intercept Point** | +50 dBm |
| **Third Order Two Tone Intercept Point** | +34 dBm |

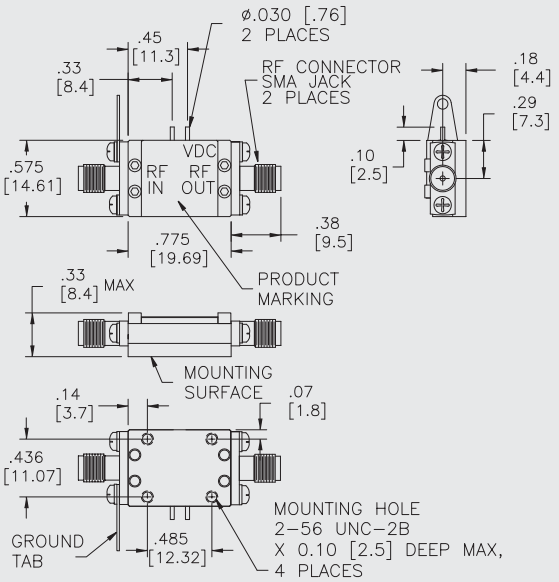
## ABSOLUTE MAXIMUM RATINGS

| | |
|---|---|
| **Storage Temperature** | -65 to +150 °C |
| **Maximum Case Temperature** | +85 °C |
| **Maximum DC Voltage** | +15 Volts |
| **Maximum Continuous RF Input Power** | +22 dBm |
| **Maximum Short Term Input Power** (1 Minute Max.) | +25 dBm |
| **Maximum Peak Power** (3 µsec Max.) | +28 dBm |
| **Burn-in Temperature** | +85 °C |
| **Thermal Resistance**[1] (θjc) | 20.3 °C/Watt |
| **Junction Temperature Rise Above Case** (Tjc) | 61 °C |

[1] Thermal resistance is based on total power dissipation.

## ACP8037

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




DIMENSIONS ARE IN INCHES [MILLIMETERS]