

A3CP8049

2.0-8.0 GHz COUGARPAK™ AMPLIFIER

| Typical Values | A3CP8049 |
|---|-----------|
| High Output Level | +29.0 dBm |
| High Gain | 22.5 dB |
| High Third Order I.P. | +36 dBm |
| High Reverse Isolation | 45 dB |
| High Performance Thin Film Standard Three-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.) | 22.5 dB | 21.5 dB | 20.5 dB | |
| Gain Flatness (Max.) | ±0.8 dB | ±1.0 dB | ±1.2 dB | |
| Noise Figure (Max.) | 2.0-4.0 GHz | 8.5 dB | 9.0 dB | 9.5 dB |
| | 4.0-8.0 GHz | 4.4 dB | 5.0 dB | 5.5 dB |
| SWR (Max.) | Input/Output | 1.8:1 | 2.0:1 | 2.1:1 |
| Power Output (Min.) @ 1dB comp. | 2.0-4.0 GHz | +26.0 dBm | +23.0 dBm | +24.0 dBm |
| | 4.0-8.0 GHz | +29.0 dBm | +28.0 dBm | +27.0 dBm |
| Reverse Isolation | 45 dB | — | — | |
| DC Current (Max.) | 550 mA | 580 mA | 610 mA | |

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

INTERMODULATION PERFORMANCE

| Typical @ 25 °C; 4.0 - 8.0 GHz | A3CP8049 |
|---|----------|
| Second Order Harmonic Intercept Point | +58 dBm |
| Second Order Two Tone Intercept Point | +52 dBm |
| Third Order Two Tone Intercept Point | +36 dBm |

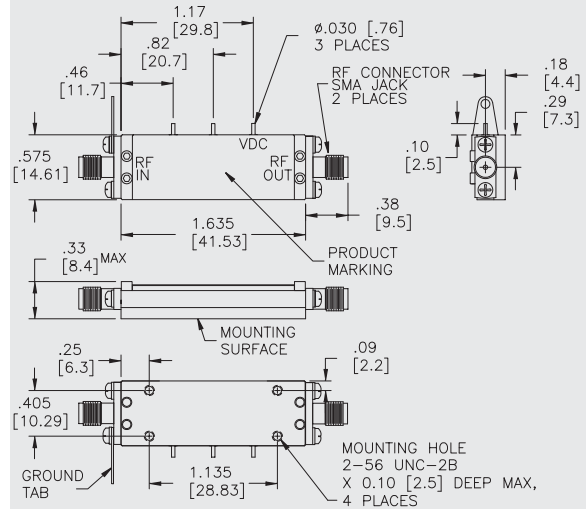
ABSOLUTE MAXIMUM RATINGS

| | |
|--|----------------|
| Storage Temperature | -65 to +150 °C |
| Maximum Case Temperature | +85 °C |
| Maximum DC Voltage | +13 Volts |
| Maximum Continuous RF Input Power | +18 dBm |
| Maximum Short Term Input Power (1 Minute Max.) | +22 dBm |
| Maximum Peak Power (3 μsec Max.) | +25 dBm |
| Burn-in Temperature | +85 °C |
| Thermal Resistance ¹ (θjc) | +12.6 °C/Watt |
| Junction Temperature Rise Above Case (Tjc) | +82.2 °C |

¹ Thermal resistance is based on total power dissipation.

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CougarPak™ Connectorized Package (three-stage)



DIMENSIONS ARE IN INCHES [MILLIMETERS]