

# ARJ1049

## 20 TO 1000 MHz; 1.5 WATT GULLWING CASCADABLE AMPLIFIER

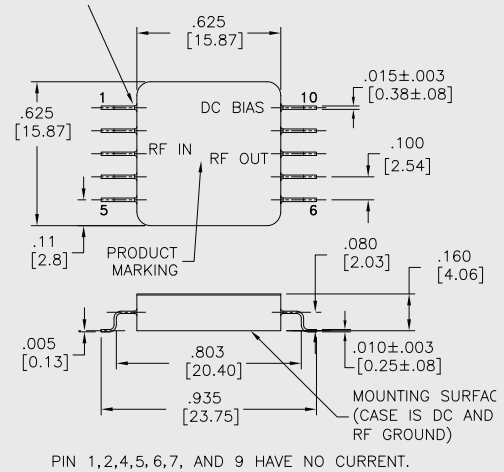
**Typical Values**

<b>High Output Power</b> .....	<b>+32.0 dBm</b>
<b>High Second Order I.P.</b> .....	<b>+74.0 dBm</b>
<b>Ridiculously High Second Order Harmonic I.P.</b> .....	<b>+80.0 dBm</b>
<b>High Third Order I.P.</b> .....	<b>+42.0 dBm</b>
<b>High Performance Thin Film 10-Pin Gullwing Package</b>	

**ARJ1049**

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**10-pin Gullwing Package**



## SPECIFICATIONS\*

Parameter	Typical	Guaranteed	
		0 to 50 °C	-55 to +85 °C
Frequency (Min.)	10-1000 MHz	20-1000 MHz	20-1000 MHz
Small Signal Gain (Min.)	11.0 dB	10.0 dB	9.5 dB
Gain Flatness (Max.)	±1.0 dB	±1.3 dB	±1.5 dB
Noise Figure (Max.) 200-1000 MHz	4.0 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.	+32.0 dBm	+30.0 dBm	+29.5 <sup>^</sup> dBm
DC Current (Max.)	600 mA	615 mA	620 mA

\* Measured in a 50-ohm system at +15 Vdc unless otherwise specified.  
^ Indicates minimum temperature at -55 /+71°C.

## INTERMODULATION PERFORMANCE

**Typical @ 25 °C**

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<b>Second Order Harmonic Intercept Point</b> .....	<b>+80 dBm</b>
<b>Second Order Two Tone Intercept Point</b> .....	<b>+74 dBm</b>
<b>Third Order Two Tone Intercept Point</b> .....	<b>+42 dBm</b>

## ABSOLUTE MAXIMUM RATINGS

<b>Storage Temperature</b> .....	<b>-62 to +125 °C</b>
<b>Maximum Case Temperature</b> .....	<b>+100 °C</b>
<b>Maximum DC Voltage</b> .....	<b>+20 Volts</b>
<b>Maximum Continuous RF Input Power</b> .....	<b>+25 dBm<sup>1</sup></b>
<b>Maximum Short Term Input Power (1 Minute Max.)</b> .....	<b>+27 dBm</b>
<b>Maximum Peak Power (3 μsec Max.)</b> .....	<b>+27 dBm</b>
<b>Burn-in Temperature</b> .....	<b>+85 °C</b>
<b>Thermal Resistance<sup>2</sup> (θjc)</b> .....	<b>+7.2 °C/Watt</b>
<b>Junction Temperature Rise Above Case (Tjc)</b> .....	<b>+64.5 °C</b>

<sup>1</sup> If no load on output; decrease input power (no damage) by 10 dBm.

<sup>2</sup> Thermal resistance is based on total power dissipation.

DIMENSIONS ARE IN INCHES [MILLIMETERS]