

# A4P5130

## 20 TO 500 MHz SMA CASCADED AMPLIFIER

*Typical Values*

<b>High Gain</b> .....	<b>A4P5130</b>
<b>Low Noise Figure</b> .....	<b>39.0 dB</b>
<b>High Output Level</b> .....	<b>2.3 dB</b>
<b>High Third Order I.P.</b> .....	<b>1 Watt</b>
<b>High Reverse Isolation</b> .....	<b>+42 dBm</b>
<b>High Performance Thin Film</b>	<b>55 dB</b>
<b>Power Pack SMA Package</b>	

### SPECIFICATIONS\*

Parameter	Typical	Guaranteed	
		0 to 50 °C	-55 to +85 °C
Frequency (Min.)	10-600 MHz	20-500 MHz	20-500 MHz
Small Signal Gain (Min.)	39.0 dB	37.0 dB	35.0 dB
Gain Flatness (Max.)	±0.8 dB	±1.0 dB	±1.2 dB
Noise Figure (Max.)	2.3 dB	3.2 dB	3.7 dB
SWR (Max.) Input/Output	1.7:1	2.0/2.5:1	2.0/2.7:1
Power Output (Min.) @ 1dB comp. 30-500 MHz	+30.0 dBm†	+29.0 dBm†	+28.0 dBm†
Reverse Isolation	55 dB	—	—
DC Current (Max.)	522 mA	540 mA	577 mA

\* Measured in a 50-ohm system at +15 Vdc unless otherwise specified.  
† 1.0 dB lower below 30 mHz.

### INTERMODULATION PERFORMANCE

*Typical @ 25 °C*

<b>Second Order Harmonic Intercept Point</b> .....	<b>A4P5130</b>
<b>Second Order Two Tone Intercept Point</b> .....	<b>+64 dBm</b>
<b>Third Order Two Tone Intercept Point</b> .....	<b>+58 dBm</b>
	<b>+42 dBm</b>

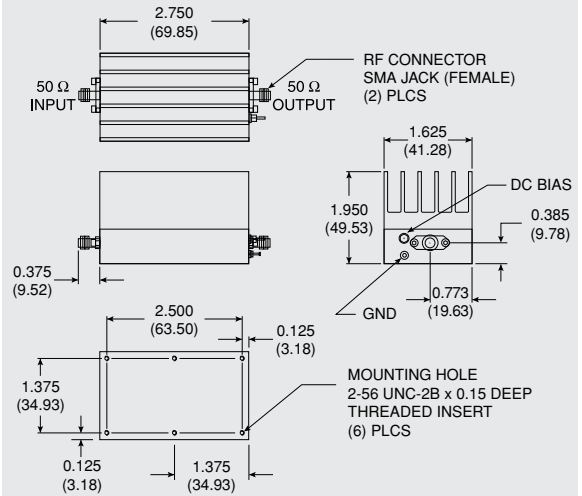
### ABSOLUTE MAXIMUM RATINGS

<b>Storage Temperature</b> .....	-62 to +125 °C
<b>Maximum Case Temperature</b> .....	+125 °C
<b>Maximum DC Voltage</b> .....	+19 Volts
<b>Maximum Continuous RF Input Power</b> .....	+13 dBm
<b>Maximum Short Term Input Power (1 Minute Max.)</b> .....	100 Milliwatts
<b>Maximum Peak Power (3 μsec Max.)</b> .....	0.5 Watt
<b>Burn-in Temperature</b> .....	+105 °C
<b>Thermal Resistance<sup>1</sup> (θjc)</b> .....	+21 °C/Watt
<b>Junction Temperature Rise Above Case (Tjc)</b> .....	+40.5 °C

<sup>1</sup> Thermal resistance is based on total power dissipation.

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#### Power Pack SMA Case (three- and four-stage)



DIMENSIONS ARE IN INCHES [MILLIMETERS]