

# A2P2010

## 30 TO 2000 MHz SMA CASCADED AMPLIFIER

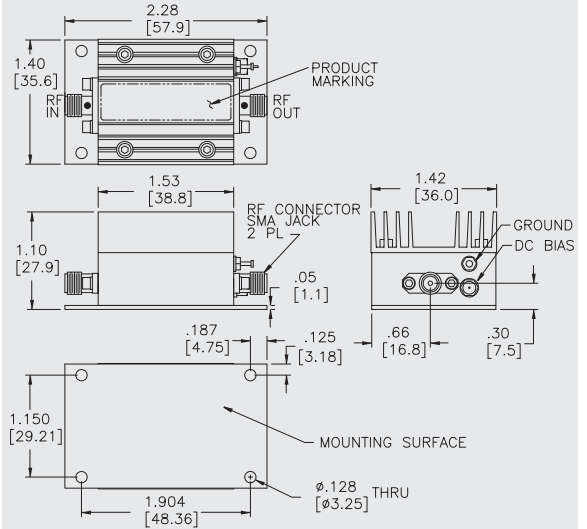
*Typical Values*

<b>High Gain</b> .....	<b>19.2 dB</b>
<b>Low Noise Figure</b> .....	<b>5.0 dB</b>
<b>High Output Level</b> .....	<b>+29.5 dBm</b>
<b>High Third Order I.P.</b> .....	<b>+40 dBm</b>
<b>High Reverse Isolation</b> .....	<b>37 dB</b>
<b>High Performance Thin Film</b>	
<b>Power Pack SMA Package</b>	

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**Power Pack SMA Case  
(two-stage)**



## SPECIFICATIONS\*

Parameter	Typical	Guaranteed	
		0 to 50 °C	-55 to +85 °C
Frequency (Min.)	20-2100 MHz	30-2000 MHz	30-2000 MHz
Small Signal Gain (Min.)	19.2 dB	17.5 dB	16.5 dB
Gain Flatness (Max.)	±0.5 dB	±0.7 dB	±0.8 dB
Noise Figure (Max.)	5.0 <sup>^</sup> dB	7.0 <sup>^</sup> dB	7.5 <sup>^</sup> dB
SWR (Max.)	Input/Output 1.7:1	1.9:1	2.0:1
Power Output (Min.) @ 1dB comp.	+29.5 <sup>†</sup> dBm	+29.0 <sup>†</sup> dBm	+28.5 <sup>†</sup> dBm
Reverse Isolation	37 dB	—	—
DC Current (Max.)	555 mA	585 mA	600 mA

\* Measured in a 50-ohm system at +15 Vdc unless otherwise specified.  
<sup>^</sup> 1.0 dB higher between 100-200 MHz and at 2000 MHz.  
<sup>†</sup> 1.0 dBm lower below 900 MHz. Indicates minimum temperature at -55/+71 °C.

## INTERMODULATION PERFORMANCE

*Typical @ 25 °C*

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<b>Second Order Harmonic Intercept Point</b> .....	<b>+61 dBm</b>
<b>Second Order Two Tone Intercept Point</b> .....	<b>+55 dBm</b>
<b>Third Order Two Tone Intercept Point</b> .....	<b>+40 dBm</b>

## ABSOLUTE MAXIMUM RATINGS

<b>Storage Temperature</b> .....	<b>-62 to +125 °C</b>
<b>Maximum Case Temperature</b> .....	<b>+105 °C</b>
<b>Maximum DC Voltage</b> .....	<b>+17 Volts</b>
<b>Maximum Continuous RF Input Power</b> .....	<b>+13 dBm<sup>1</sup></b>
<b>Maximum Short Term Input Power (1 Minute Max.)</b> .....	<b>200 Milliwatts</b>
<b>Maximum Peak Power (3 μsec Max.)</b> .....	<b>0.5 Watt</b>
<b>Burn-in Temperature</b> .....	<b>+85 °C</b>
<b>Thermal Resistance<sup>2</sup> (θjc)</b> .....	<b>+24 °C/Watt</b>
<b>Junction Temperature Rise Above Case (Tjc)</b> .....	<b>+69.5 °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]