

## 2W Linear Power Amplifier

### 1.2 ~ 2.0 GHz

The RPAM1220G02 is a compact, broadband linear amplifier ideal for use in test and measurement systems and RF Lab set-up.



### Key Features:

Broad Frequency Range:	1.2 ~ 2.0 GHz
High Power ( $P_{1dB}$ ):	33 dBm
Monitoring Parameters:	Through RS-232 Gain, $P_{FWD}$ , $P_{REV}$ , Supply Voltage, Supply Current, Temperature
Control parameter:	10 dB Gain Range; in 0.5 dB Step
Small size:	118 x 78 x 21.5 mm

### Absolute Maximum Ratings:

Parameters	Symbol	Value	Units
DC Power Supply Voltage	$V_{dd}$	15	V
DC Power Supply Current	$I_{dd}$	1700	mA
Total Power Dissipation	$P_{diss}$	22	W
RF Input Power	$P_{In,Max}$	+7	dBm
Maximum Operating Heatsink Temp.	$T_{O,Max}$	+65	°C

### Electrical Specifications: (at room temperature)

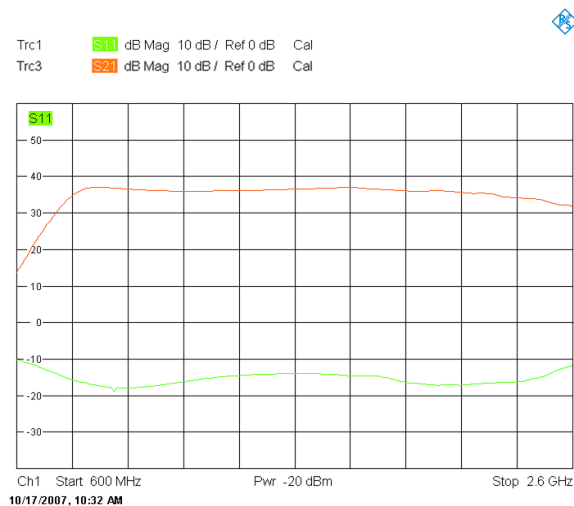
Testing Item	Symbol	Test Constraints	Min	Typ	Max	Unit
Nominal Gain	$S_{21}$	1.2 ~ 2.0 GHz	34	35		dB
Gain Variation	$\Delta G$	1.2 ~ 2.0 GHz		$\pm 0.5$	$\pm 1.5$	dB
Input Reflection	$S_{11}$	1.2 ~ 2.0 GHz		-10		dB
Output Reflection	$S_{22}$	1.2 ~ 2.0 GHz		-10		dB
Output Power @ 1dB Gain Comp. Point	$P_{1dB}$	1.2 ~ 2.0 GHz	32	33.5		dBm
Output $IP_3$	$OIP_3$	1.2 ~ 2.0 GHz	42			dBm
Current Consumption @ no RF	$I_{dq}$	$V_{dd} = +12 V$		1100		mA
Power Supply Voltage	$V_{dd}$		11.5	12	14	V
Operating Heatsink Temperature	$T_O$		0		+50	°C

Designed and manufactured for Richardson Electronics by BHE.

Available exclusively from Richardson Electronics, Ltd. - 800-737-6937 (U.S. & Canada) - 630-208-3637 (International) - or visit [www.rfwireless.rell.com](http://www.rfwireless.rell.com). See important product notice on last page of this document.

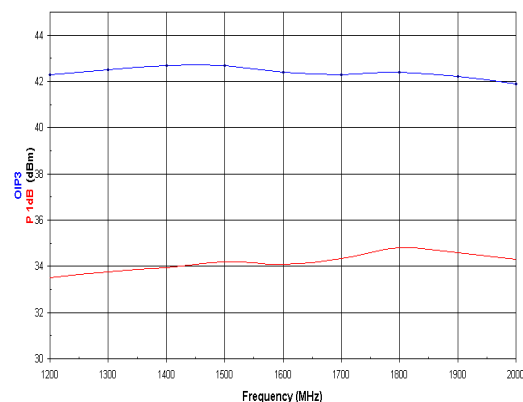
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## Frequency Response



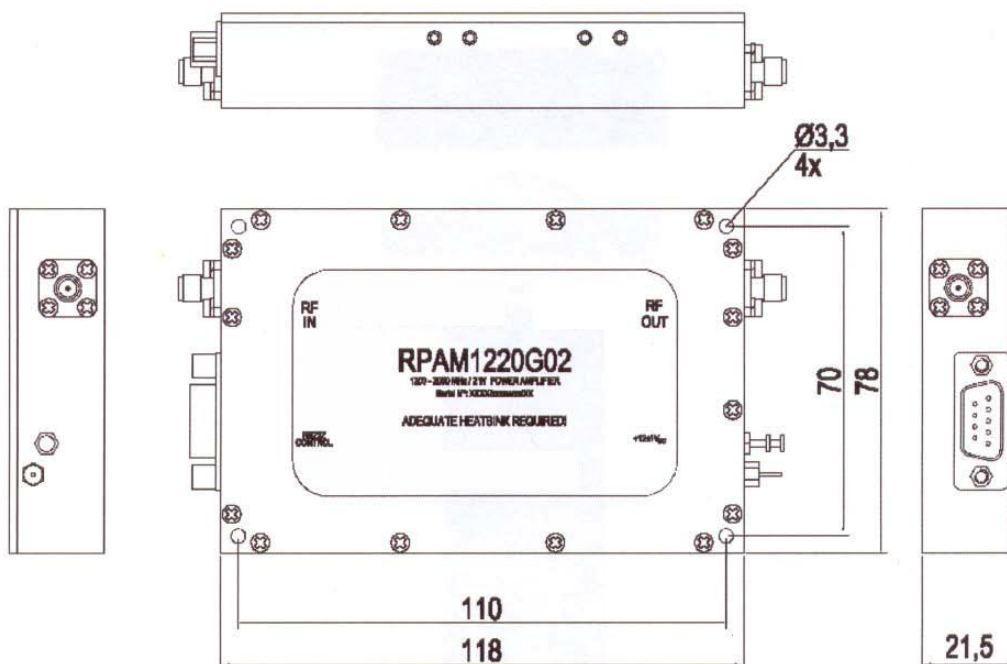
**FIG.1** Small signal performance

**RPAM1220G02 Power Amplifier Measurement**



**FIG.2** OIP3 and P<sub>1dB</sub>

## Mechanical Outline:



Note: Proper heat sinking required.

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**Ordering Information**

<b>Part Number</b>	RPAM1220G02
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**Richardson RFPD, Inc.**  
40W267 Keslinger Road  
P.O. Box 307  
LaFox, IL 60147  
Telephone: (800) 737-6937  
(630) 208-2700  
Fax: (630) 208-2662  
Internet: [www.richardsonrfpd.com](http://www.richardsonrfpd.com)

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