

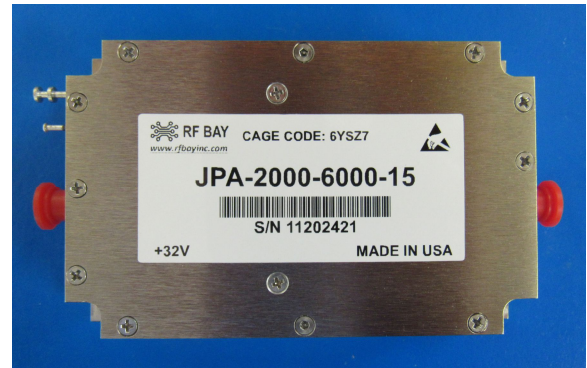
## JPA Series

## 2-6GHz 15W RF Power Amplifier

### Features

- Frequency Range: 2 - 6GHz
- Small Signal Gain: 43dB
- P<sub>SAT</sub>: +42dBm (15W)
- DC Power: +32V @ 1100mA
- DC Power Reverse Protected
- RF Connector: SMA Female
- GaN RF Power Amplifier
- Class AB Power Amplifier

### Picture



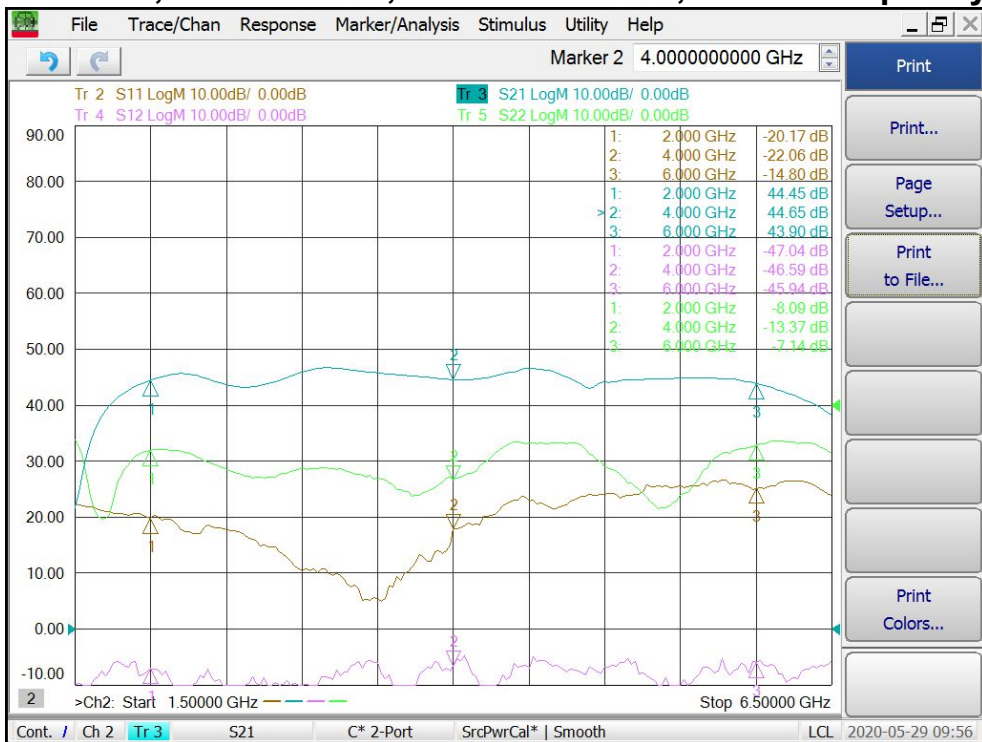
### Electrical Specifications @+25°C, Z<sub>in</sub>=Z<sub>out</sub>=50 Ω, V<sub>supply</sub> = +32VDC

Parameter	Unit	Minimum	Typical	Maximum
Frequency Range	GHz	2		6
Small Signal Gain (S <sub>21</sub> ) (P <sub>IN</sub> = -45dBm)	f = 2GHz	41	43	
	f = 4GHz	41	43	
	f = 6GHz	41	43	
Gain Flatness	dB		±1.5	±2.5
Output Power P <sub>3dB</sub>	f = 2GHz		+38.5	
	f = 4GHz	+37.0	+38.5	
	f = 6GHz		+38.5	
Output Power P <sub>SAT</sub>	f = 2GHz		+42.0	
	f = 4GHz	+41.0	+42.5	
	f = 6GHz		+42.0	
Output IP3	f = 4GHz		+46	
Efficiency P <sub>IN</sub> = +5dBm, f = 4GHz	%		28	
Noise Figure	f = 4GHz		7.0	9.0
Reverse Isolation (S <sub>12</sub> )	dB	-40	-45	
VSWR-Input (S <sub>11</sub> )	f = 4GHz	ratio:1	1.2:1	1.5:1
DC Supply Voltage	V	28	32	33
DC Supply Current	No RF Input	mA	1100	1500
	P <sub>OUT</sub> = +42dBm	mA	2300	2800

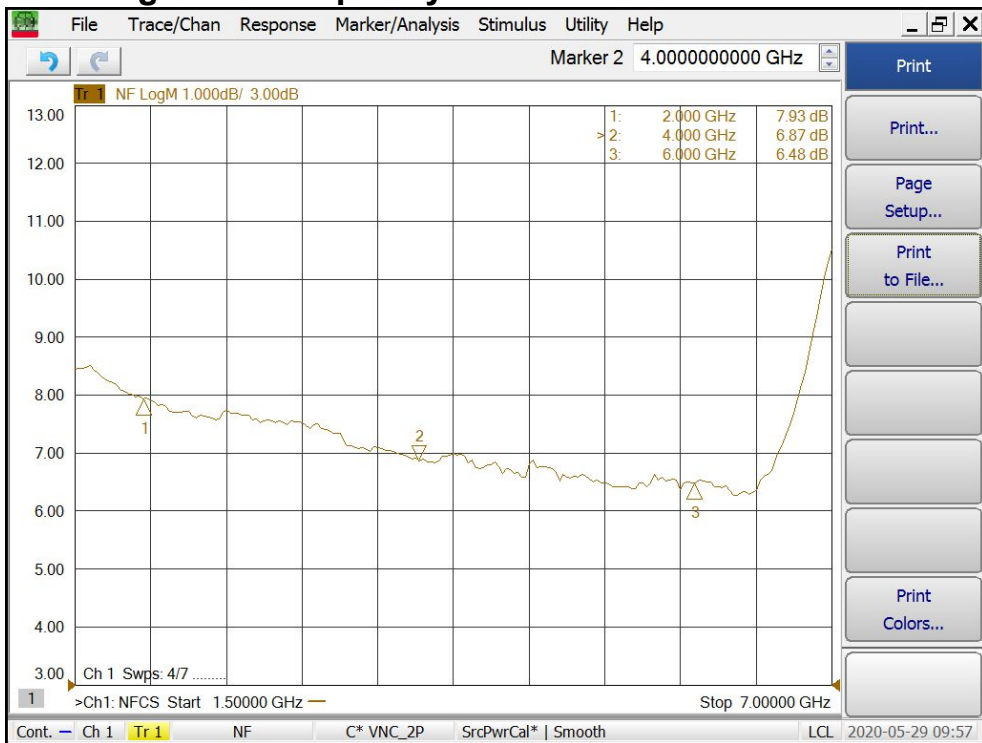
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**Gain S21, Isolation S12, Return Loss S11, S22 vs Frequency**



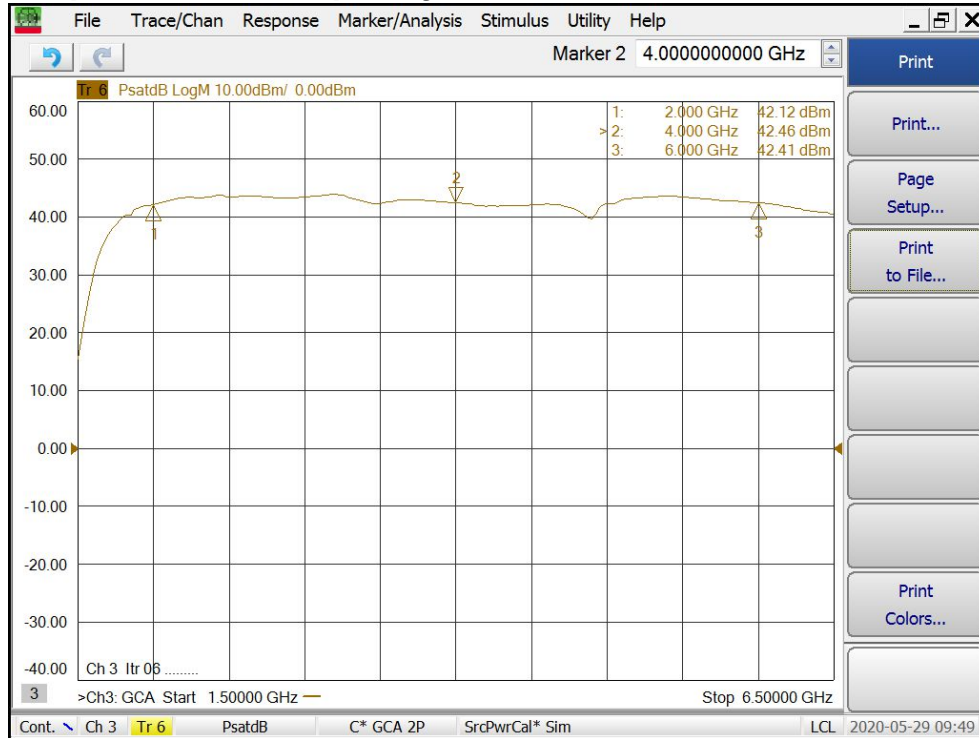
**Noise Figure vs Frequency**



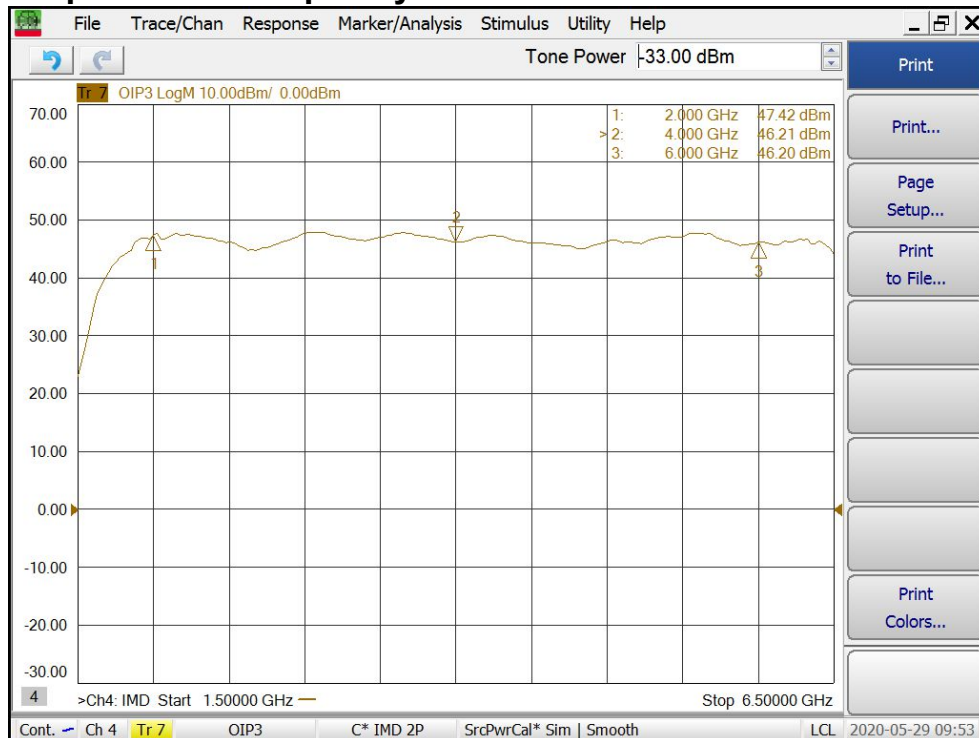
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**Output Pout vs Frequency**



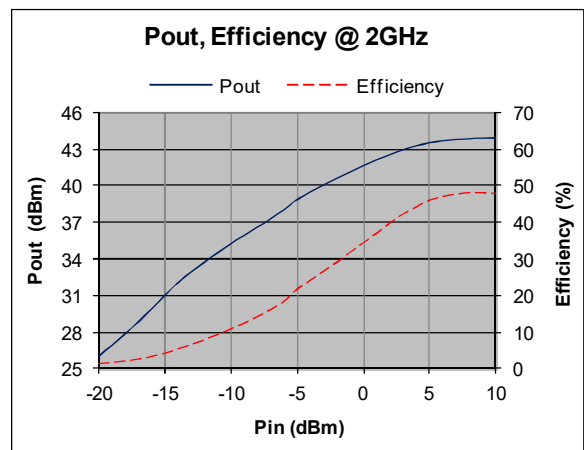
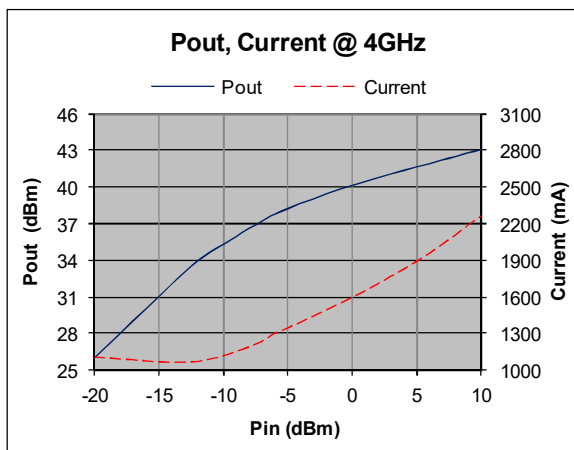
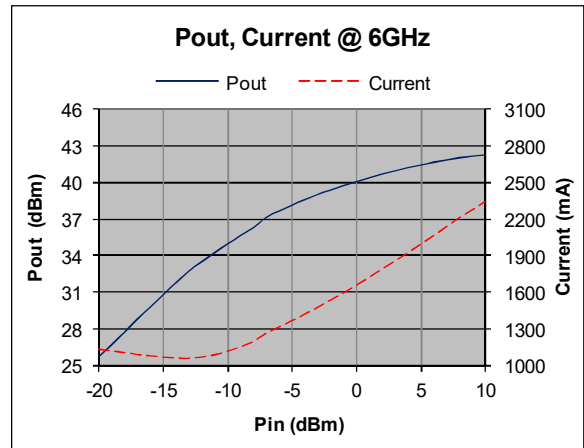
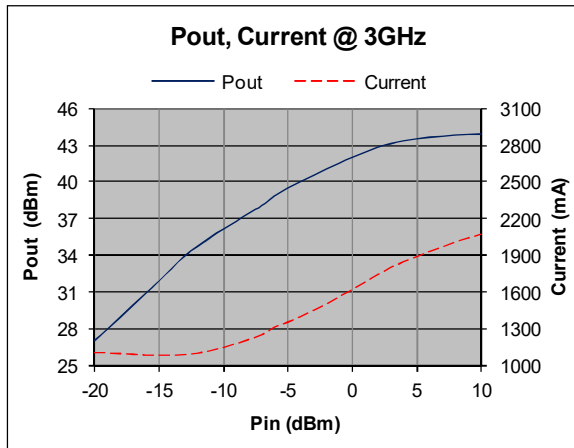
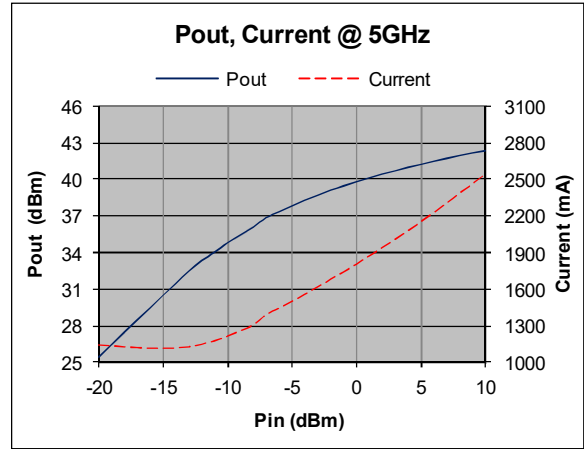
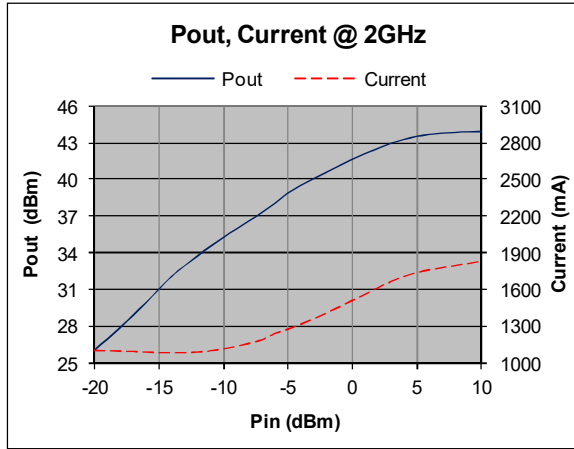
**Output IP3 vs Frequency**



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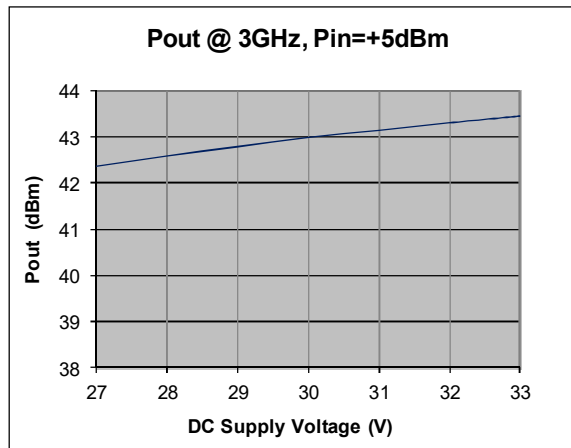
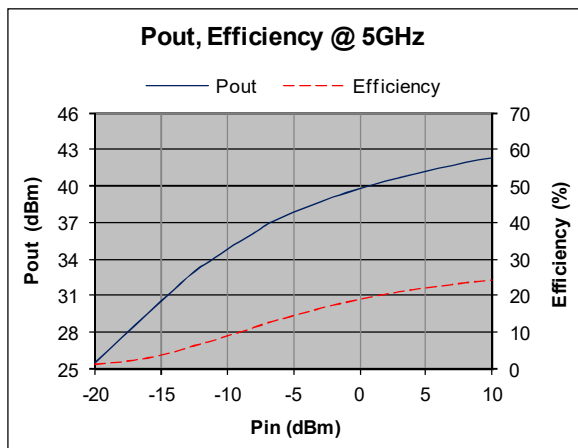
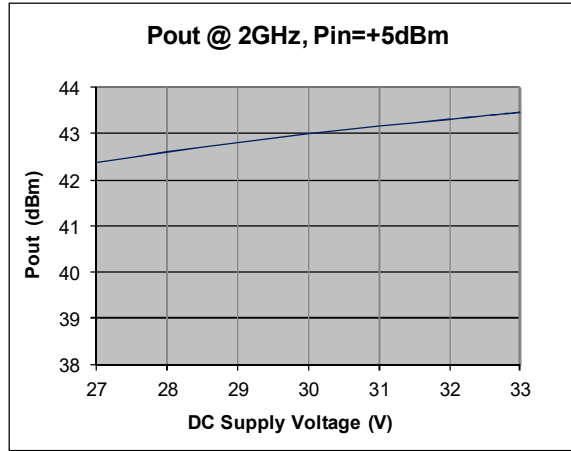
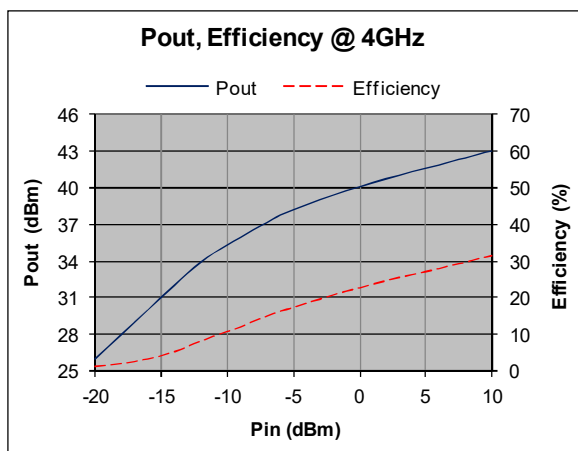
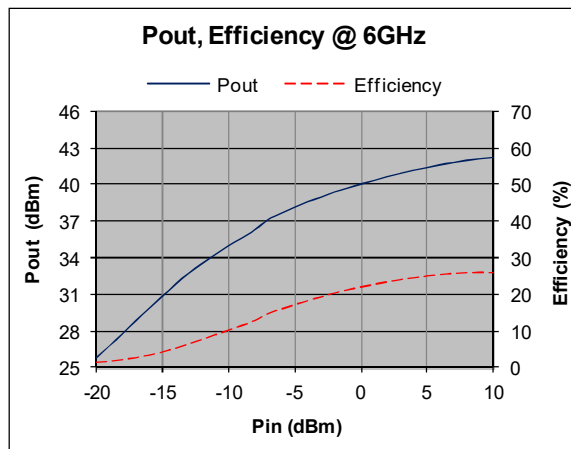
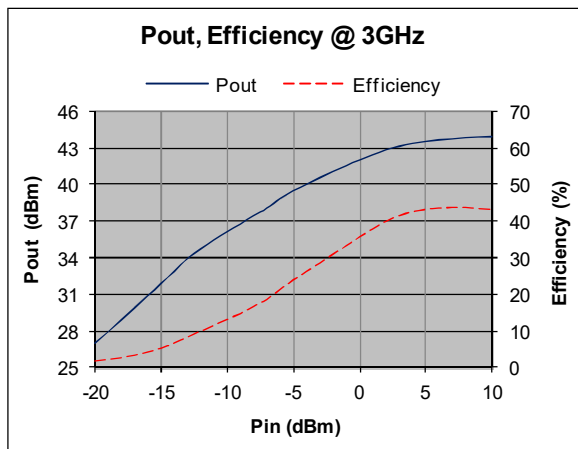
**Typical Performance @ +25°C**



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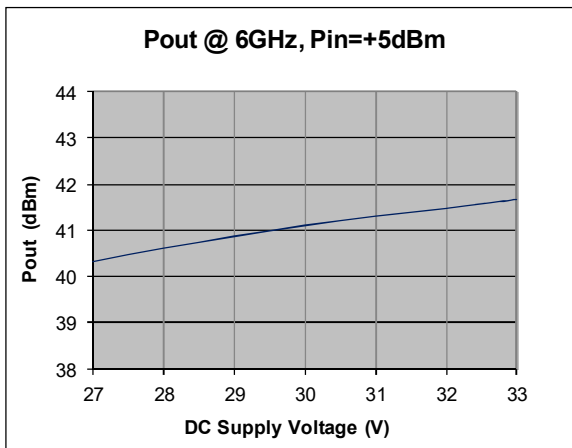
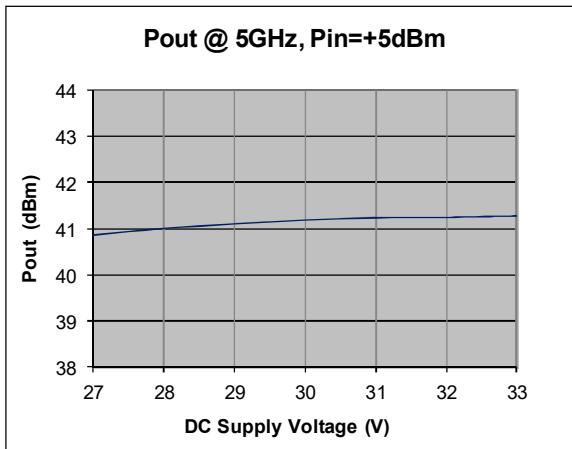
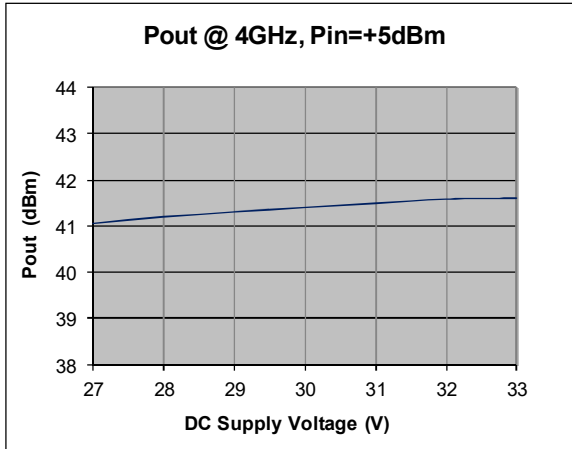
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**Absolute Maximum Ratings**

Parameter	Absolute Maximum
Supply Voltage	+33V
RF Input Power	+15dBm
Operating Temperature	-20 °C to +65 °C
Storage Temperature	-40 °C to +100 °C

**ESD Sensitive Material**



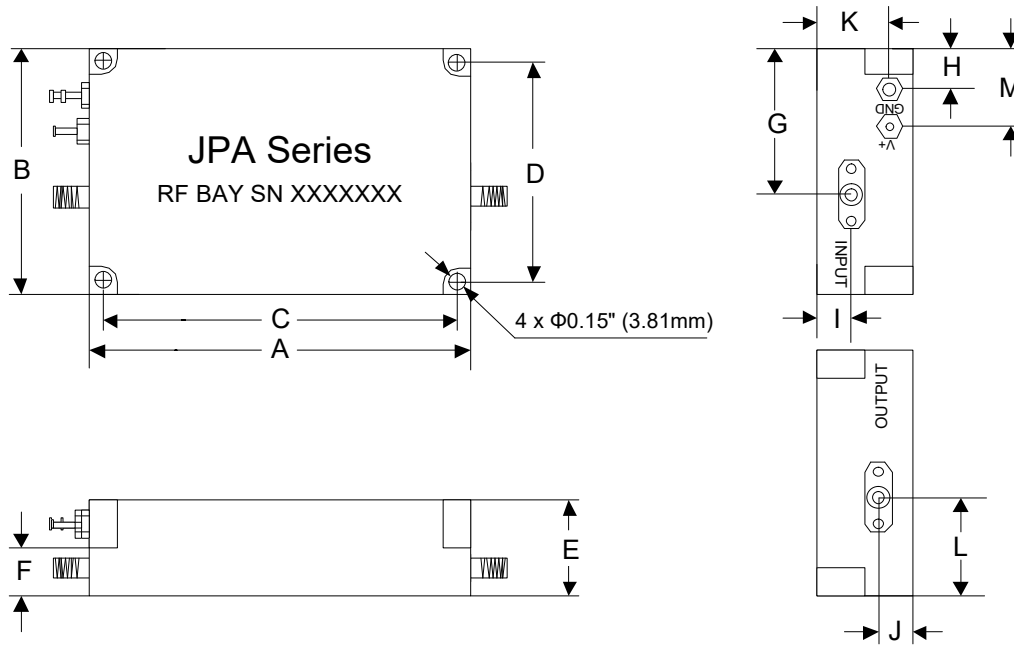
**Warning and Caution:**

- 1) Adequate heatsink must be used. Cooling Fan highly recommended. Amplifier operational baseplate temperature must be within datasheet operating temperature range.**
- 2) Load must be connected to amplifier output at all time if DC power is ON.**
- 3) If power amplifier connected to an antenna for signal transmission, it is strongly recommended to use a high power isolator or fixed attenuator between amplifier output and antenna input.**

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**Outline**



Mounting screws recommended to use hex socket head cap #6x3/4"

	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>	<b>H</b>	<b>I</b>
<b>Inch</b>	4.00	2.50	3.70	2.20	1.05	0.54	1.40	0.30	0.30
<b>mm</b>	101.60	63.50	93.98	55.88	26.67	13.72	35.56	7.62	7.62
	<b>J</b>	<b>K</b>	<b>L</b>	<b>M</b>					
<b>Inch</b>	0.30	0.75	1.10	0.70					
<b>mm</b>	7.62	19.05	27.94	17.78					