RF BAY
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JPA-2000-6000-15

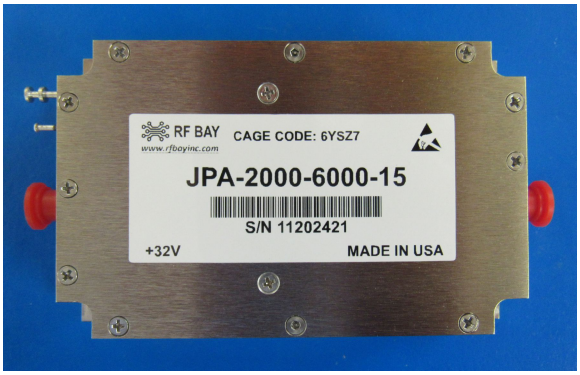
JPA Series

2-6GHz 15W RF Power Amplifier

Features

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

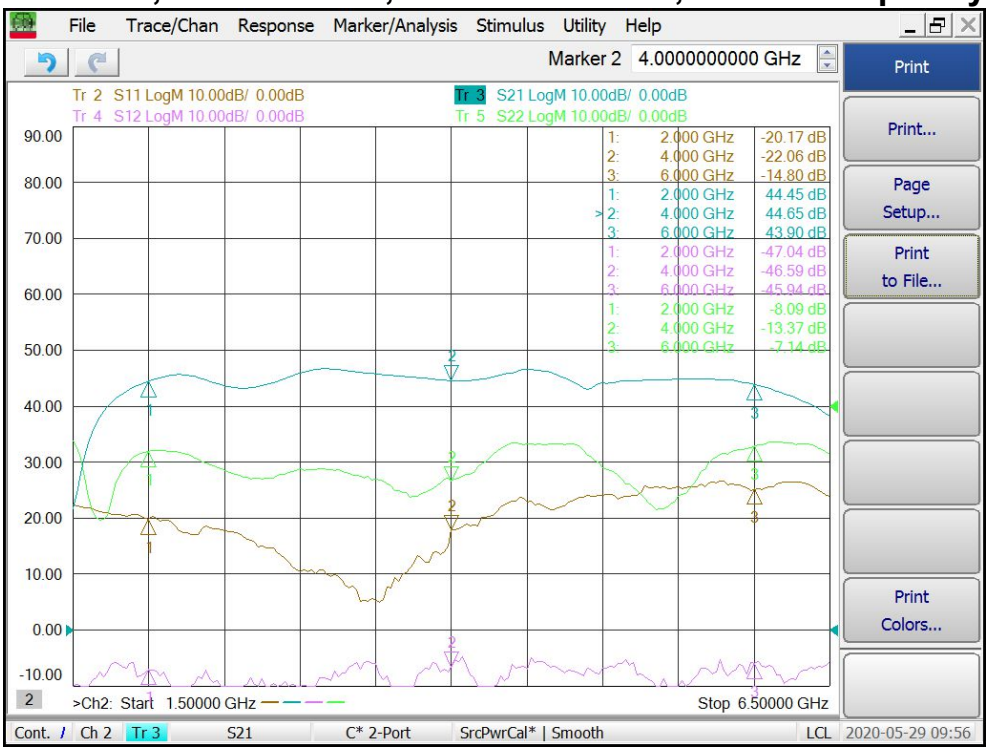
Picture



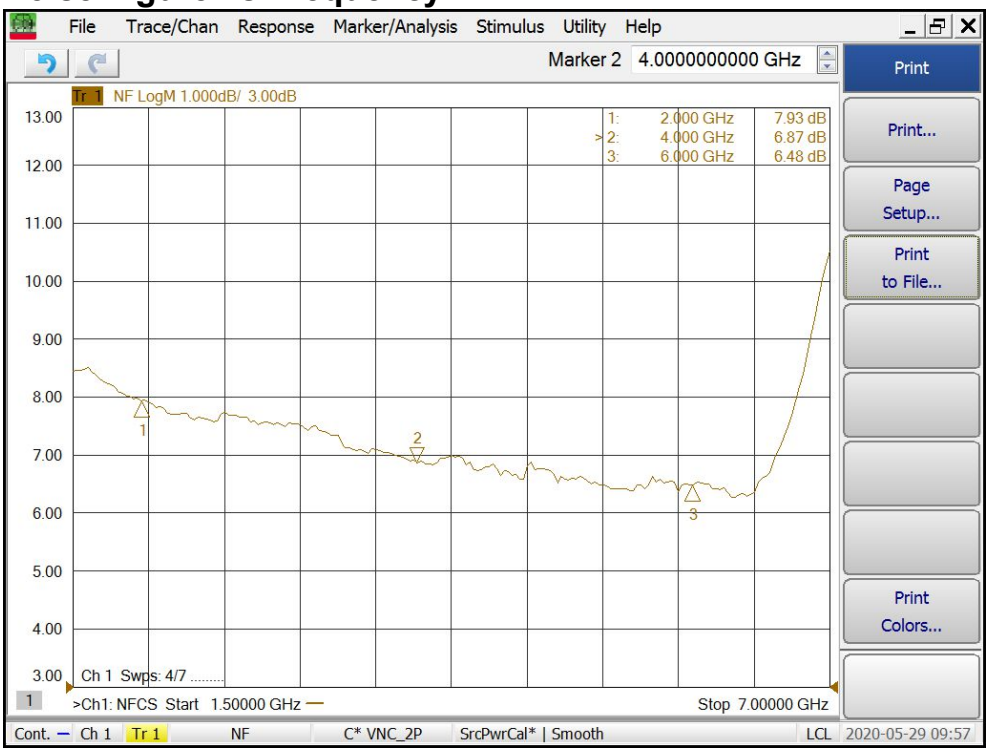
Electrical Specifications @+25°C, Z_{in}=Z_{out}=50 Ω, Vsupply = +32VDC

Parameter		Unit	Minimum	Typical	Maximum
Frequency Range		GHz	2		6
Small Signal Gain (S_{21})	f = 2GHz	dB	41	43	
(P_{IN} = -45dBm)	f = 4GHz	dB	41	43	
	f = 6GHz	dB	41	43	
Gain Flatness		dB		±1.5	±2.5
Output Power P_{3dB}	f = 2GHz	dBm		+38.5	
	f = 4GHz	dBm	+37.0	+38.5	
	f = 6GHz	dBm		+38.5	
Output Power P_{SAT}	f = 2GHz	dBm		+42.0	
	f = 4GHz	dBm	+41.0	+42.5	
	f = 6GHz	dBm		+42.0	
Output IP3	f = 4GHz	dBm		+46	
Efficiency	P_{IN} = +5dBm, f = 4GHz	%		28	
Noise Figure	f = 4GHz	dB		7.0	9.0
Reverse Isolation (S_{12})		dB	-40	-45	
VSWR-Input (S_{11})	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_{OUT} = +42dBm	mA		2300	2800

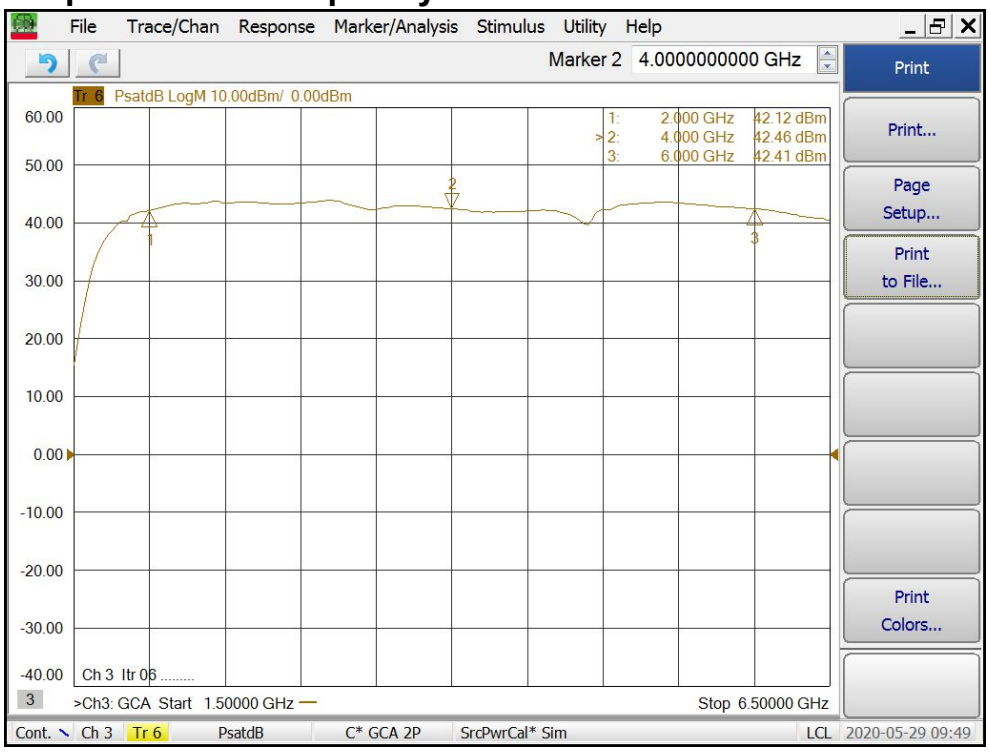
Gain S21, Isolation S12, Return Loss S11, S22 vs Frequency



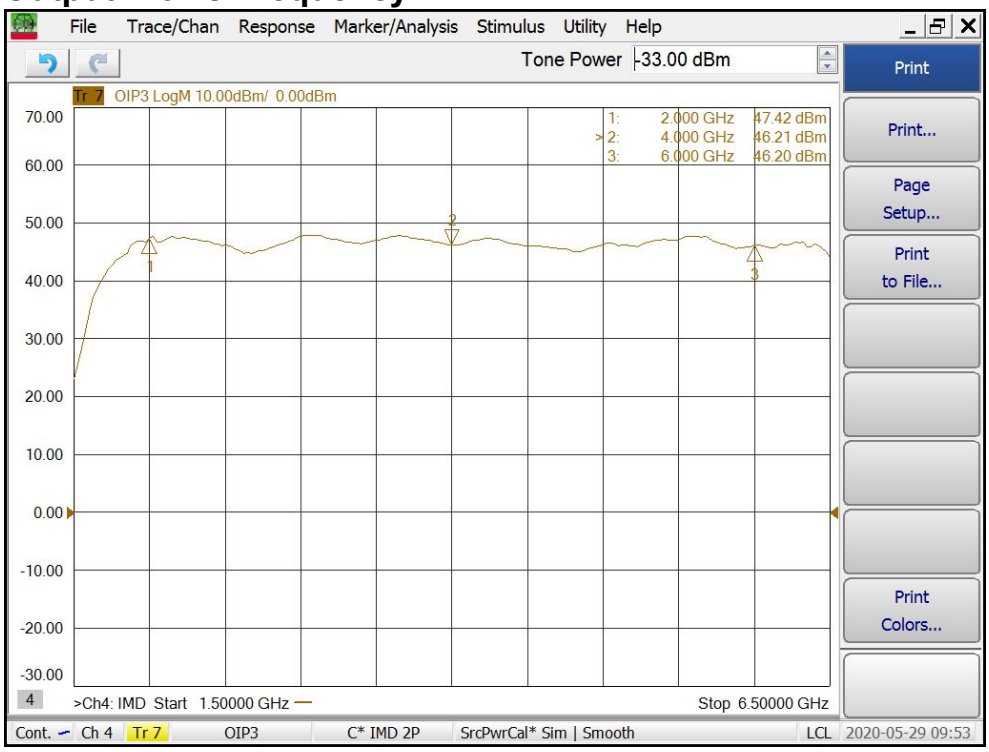
Noise Figure vs Frequency



Output Pout vs Frequency



Output IP3 vs Frequency



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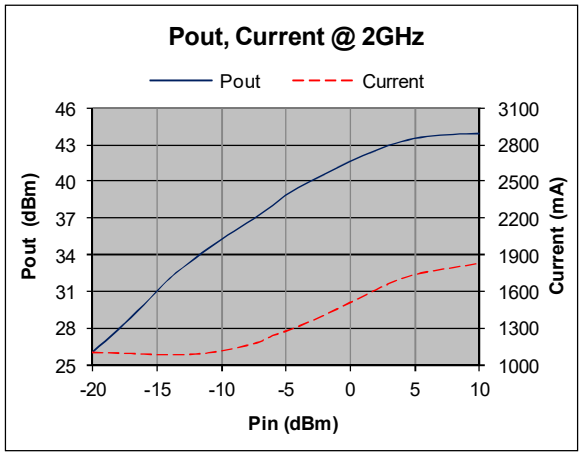
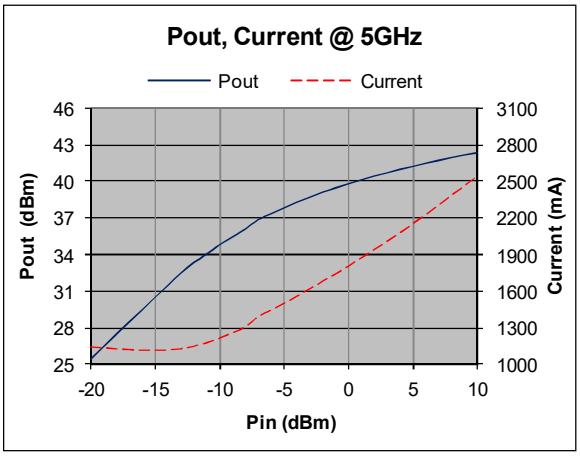
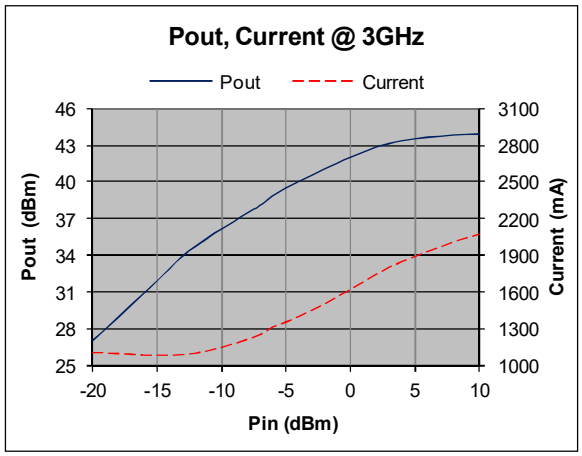
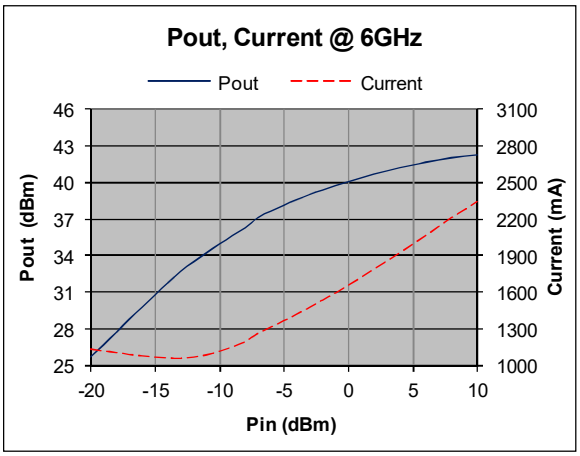
2-6GHz 15W RF Power Amplifier

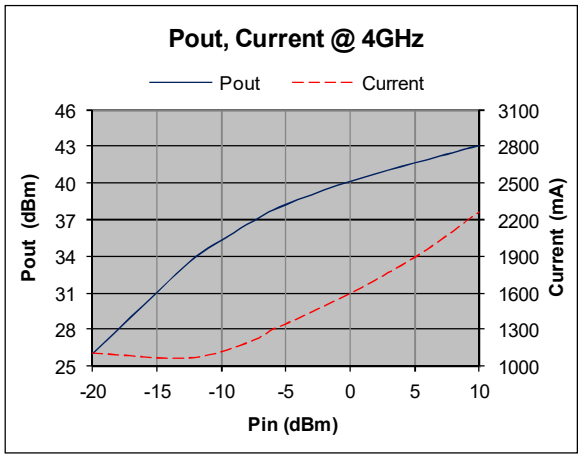
Typical Performance @ +25°C

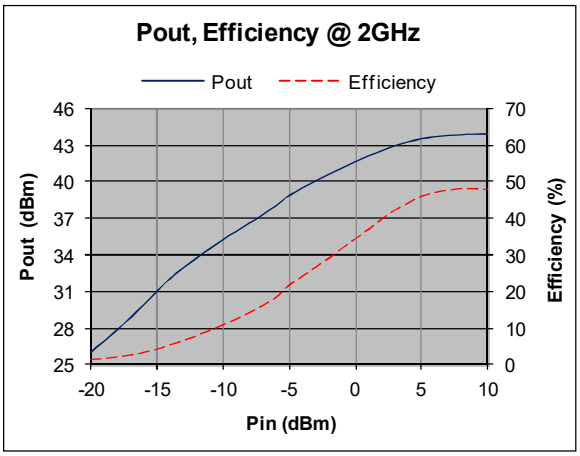












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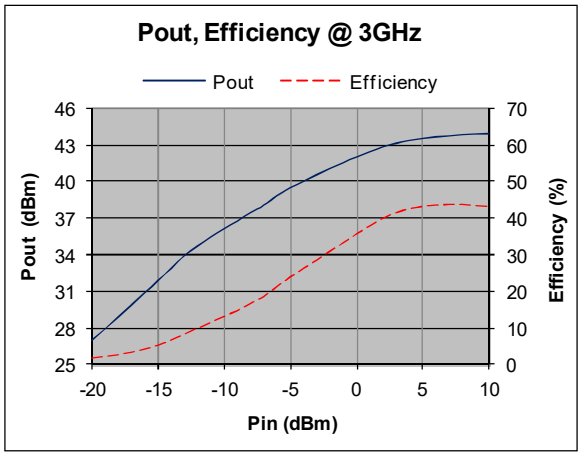
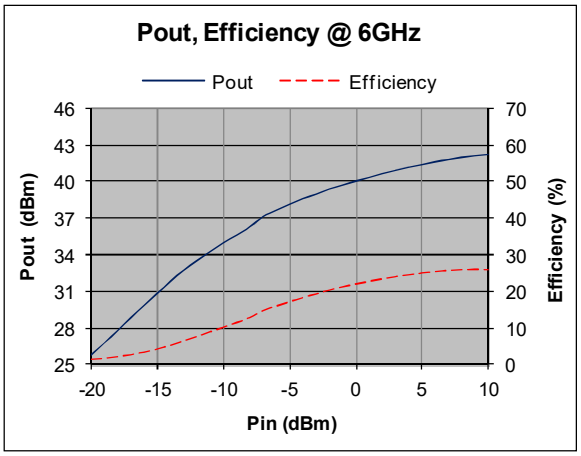
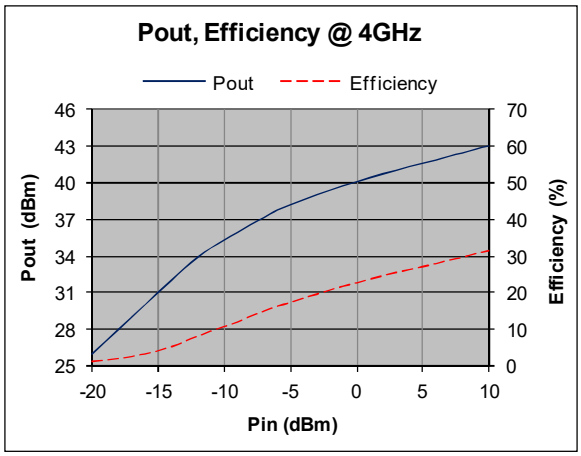
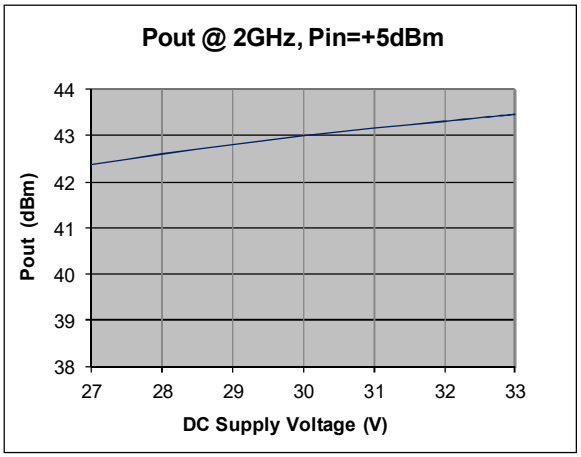
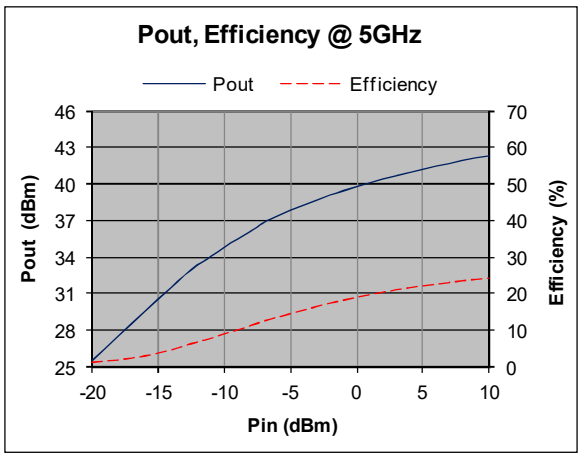
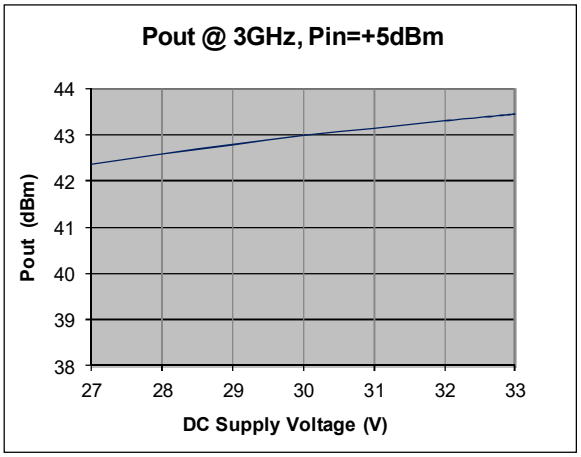




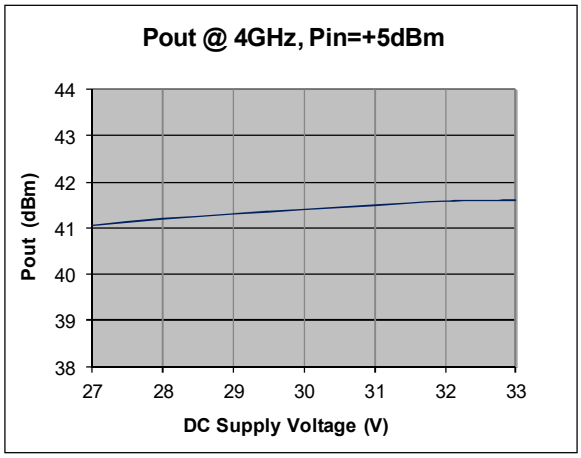


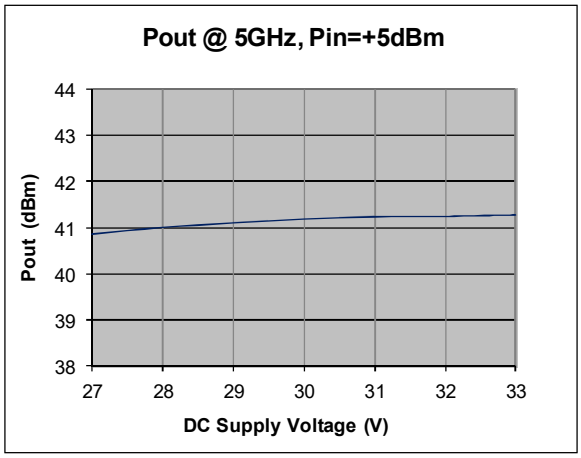


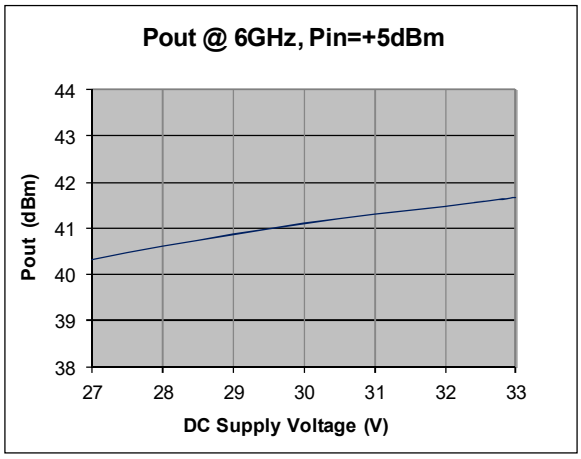




Typical Performance @ +25°C







JPA Series — 2-6GHz 15W RF Power Amplifier

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

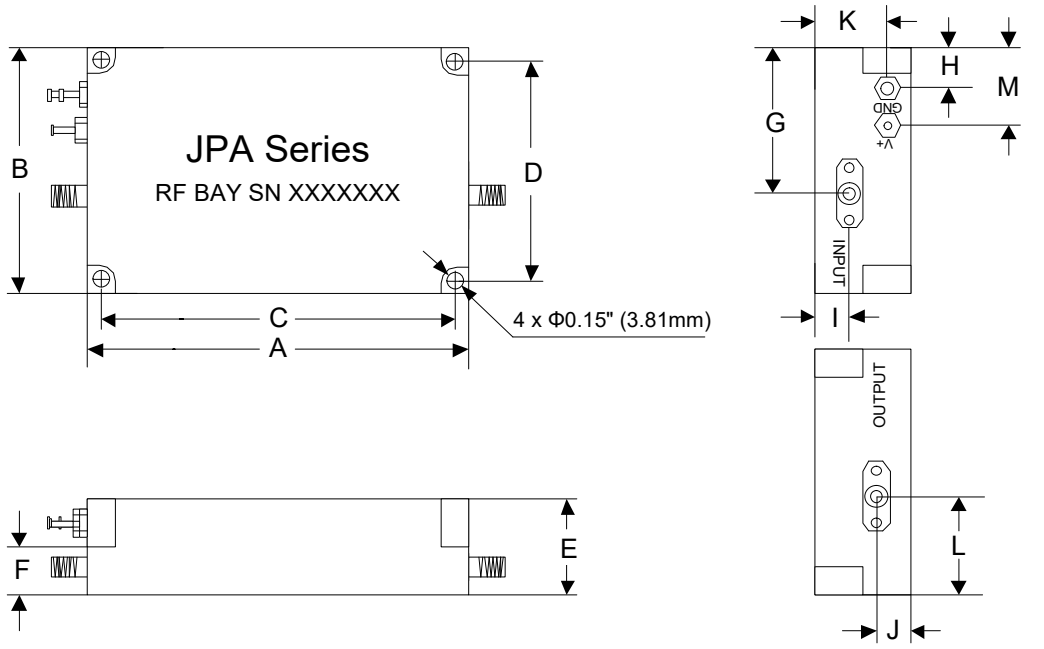
Warning and Caution:

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.**

Outline



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

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