

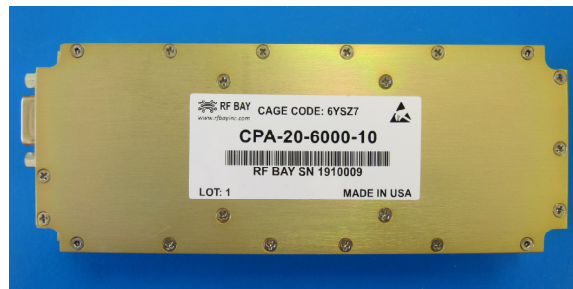
CPA Series

20-6000MHz 5W RF Power Amplifier

Features

- Frequency Range: 20-6000MHz
- Small Signal Gain: 50dB
- P_{SAT}: +37dBm (5W)
- Enable ON/OFF Control
- DC Power: +28V @ 3000mA
- RF Connector: SMA Female
- DC/Enable Connector: DB-9 Female
- GaN RF Power Amplifier

Picture



Electrical Specifications @+25°C, Z_{in}=Z_{out}=50 Ω, V_{supply} = +28VDC, Enable=+5VDC

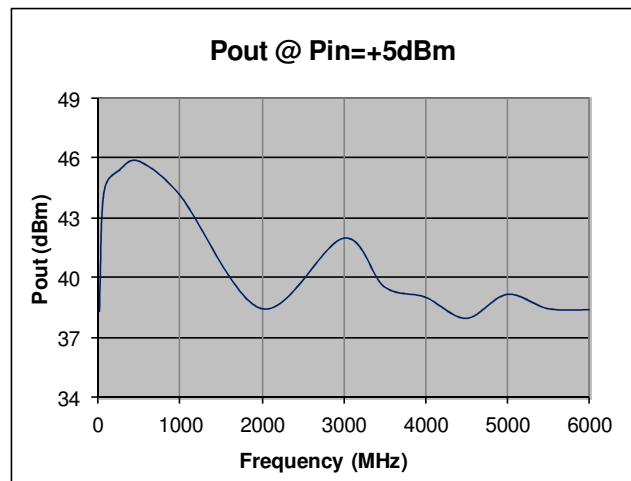
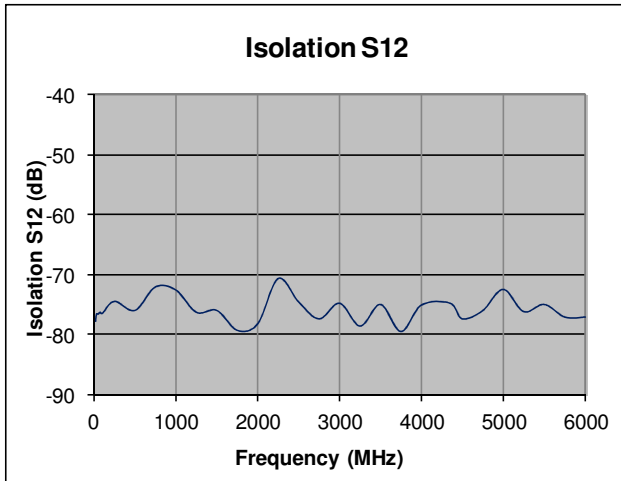
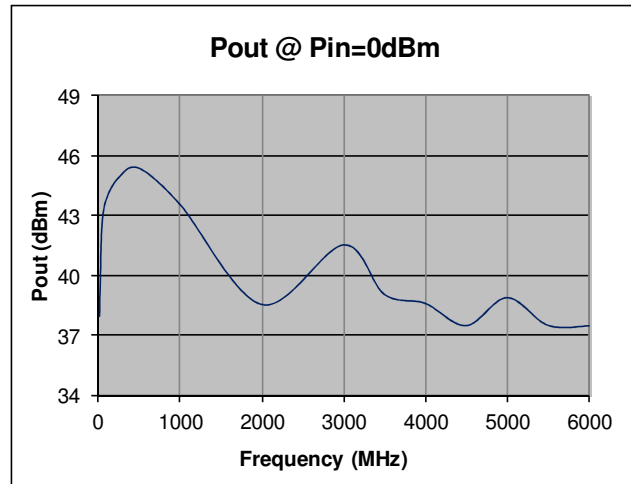
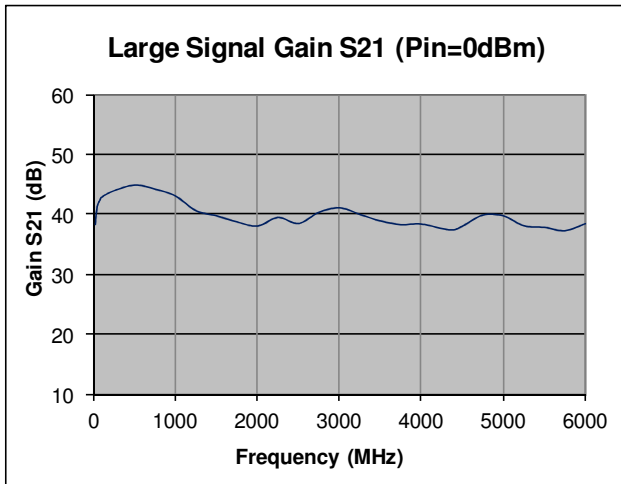
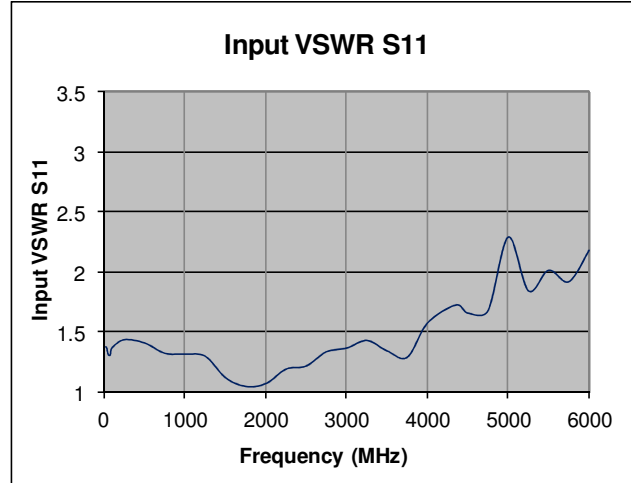
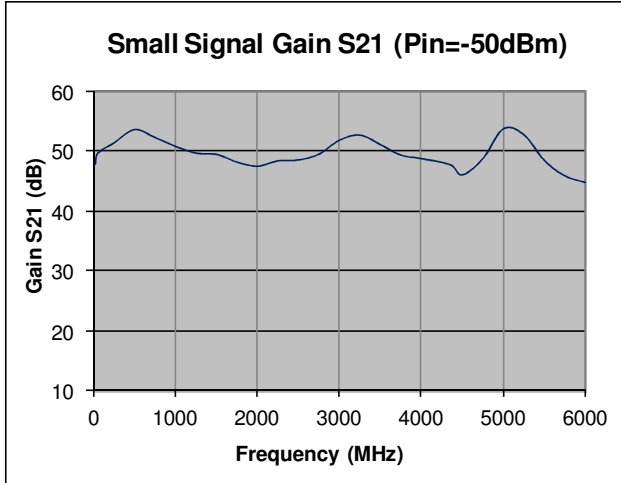
Parameter	Unit	Minimum	Typical	Maximum
Frequency Range	MHz	20		6000
Small Signal Gain (S ₂₁) P _{IN} =-50dBm	dB	40	50	
Large Signal Gain (S ₂₁) P _{IN} =0dBm	dB	32	45	
Gain Flatness P _{IN} =0dBm	dB		±4.0	±5.0
Output Power P _{OUT} @3000MHz, P _{IN} =0dBm	dBm	+40	+41	
Output Power P _{SAT} @ 20-6000MHz ^{Note}	dBm	+37		
Efficiency	%		20	
Noise Figure @3000MHz	dB		4.5	5.5
Isolation (S ₁₂)	dB		-70	
VSWR-Input (S ₁₁) @3000MHz	ratio:1		1.5:1	1.7:1
RF Turn On Control TTL/HCMOS (Logic=1)		Enable EN=+5V		
RF Turn Off Control TTL/HCMOS (Logic=0)		Disable EN=0V		
DC Power Supply - voltage	V	24	28	32
DC Power Supply - current	mA		3000	3500
Size (LxWxH)	Inch/mm	6.40"x2.50"x1.05"/162.56x63.53x26.67		
Weight	Oz/gram	15/425		

Note: Output Power P_{SAT} can be achieved to 20-35W range between 100 to 1000MHz.

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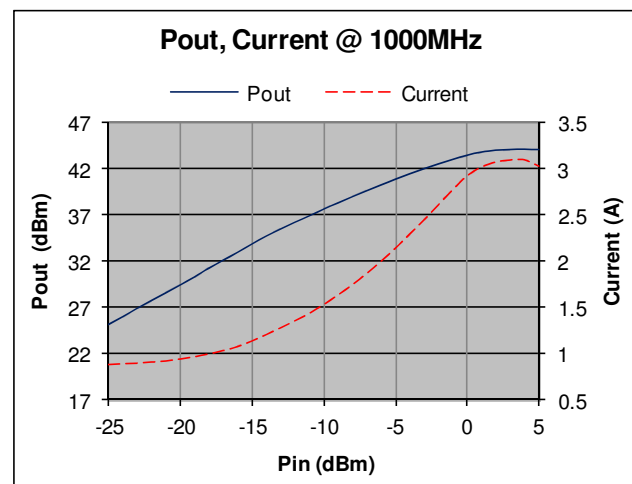
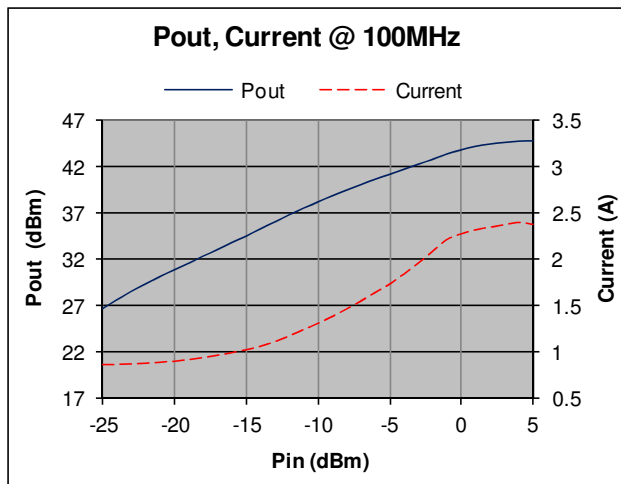
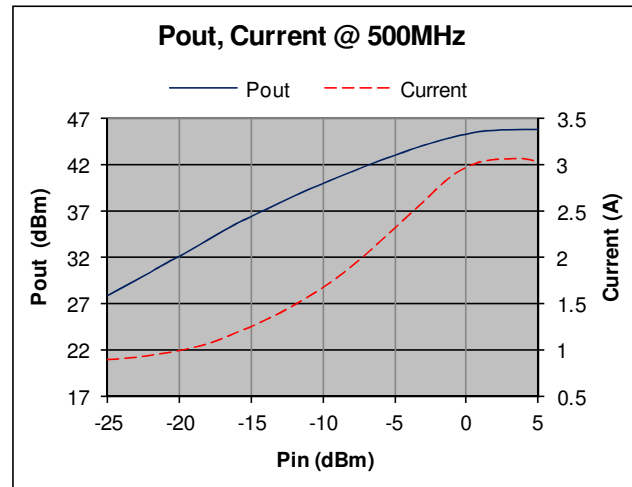
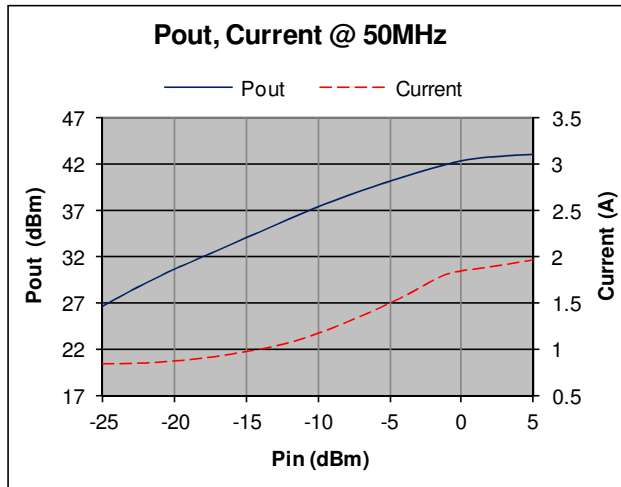
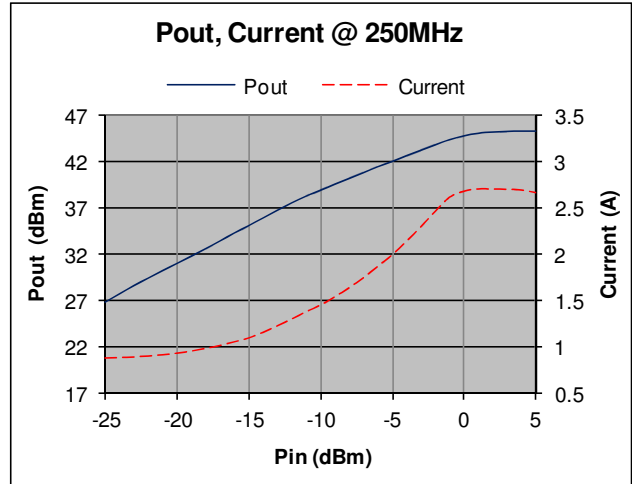
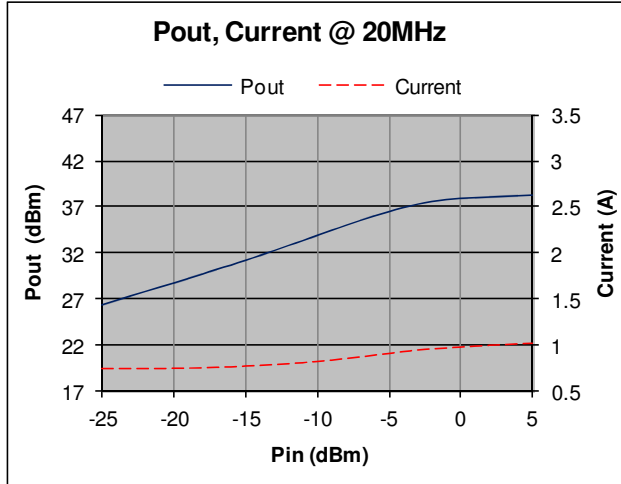
Typical Performance @ +25 °C



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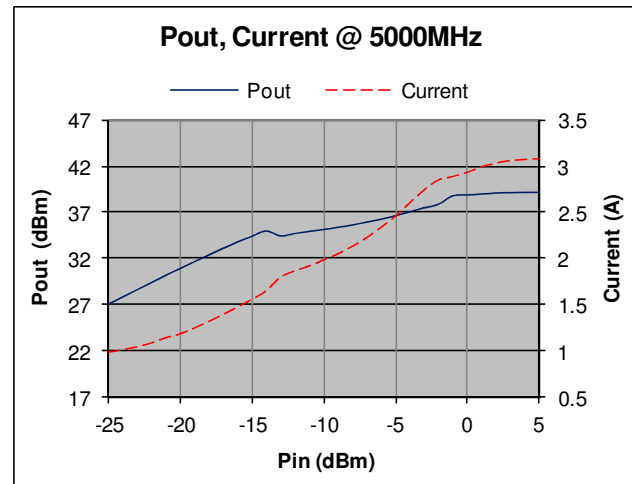
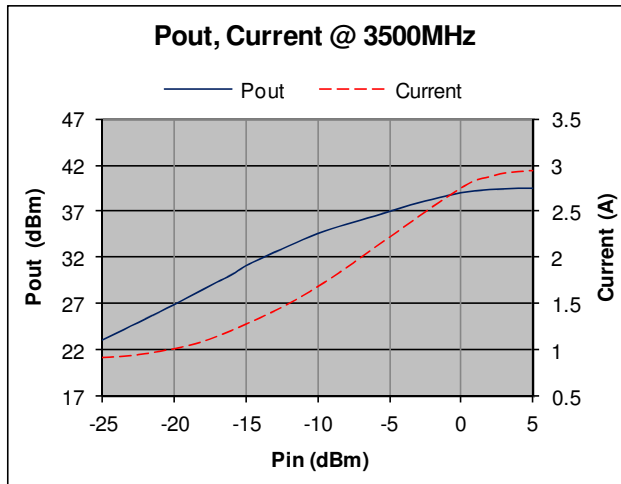
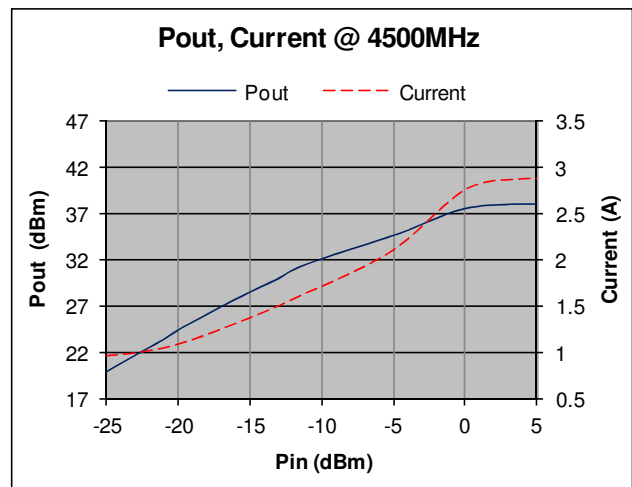
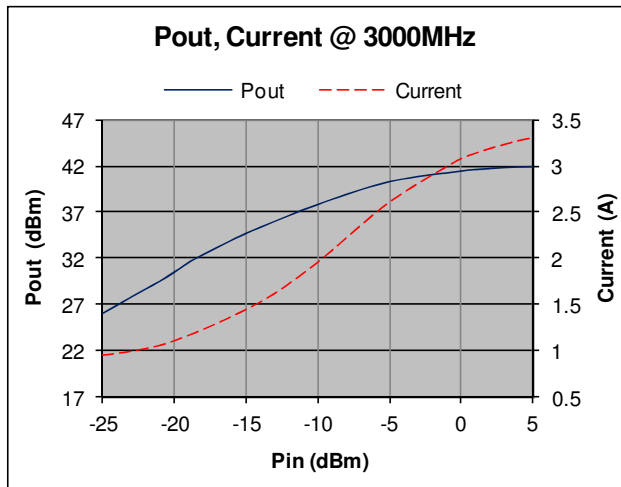
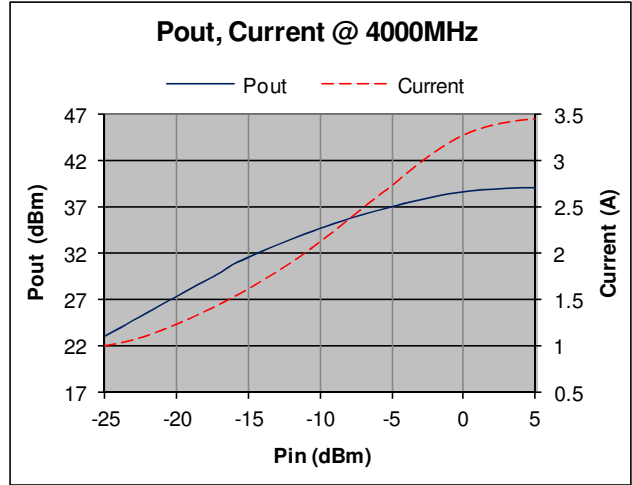
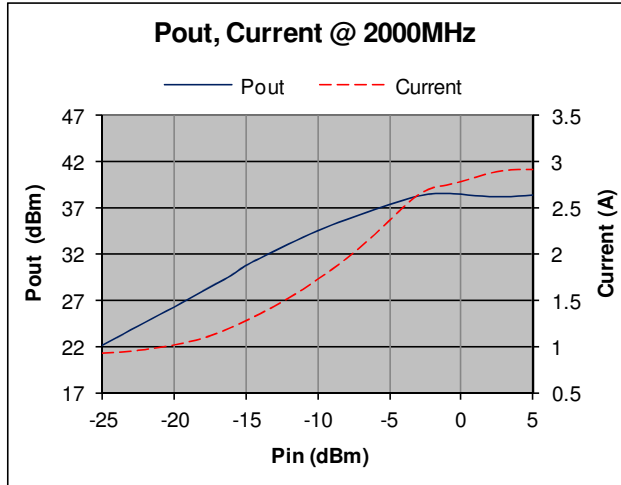
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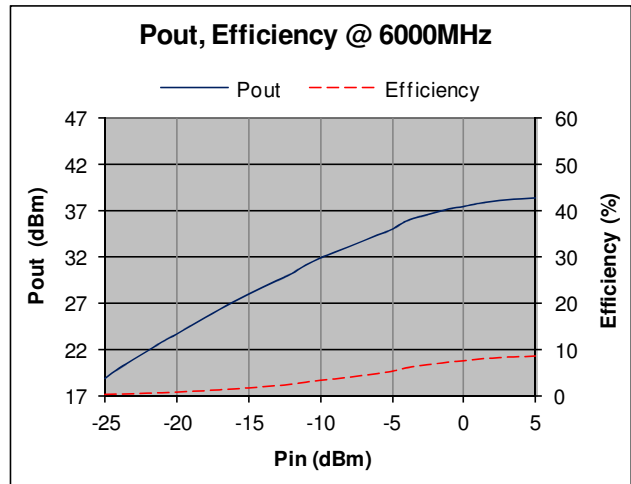
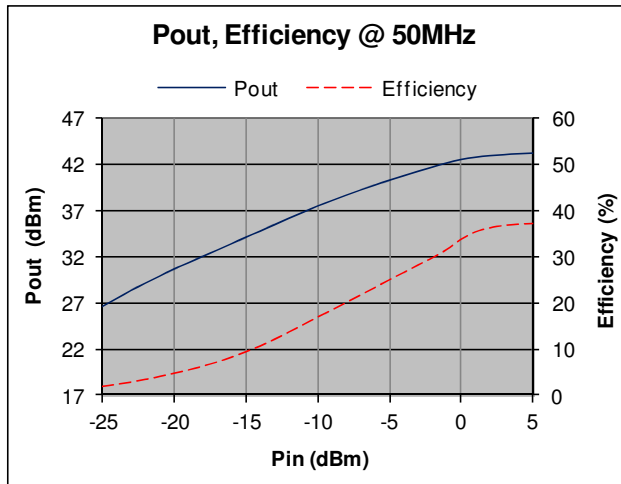
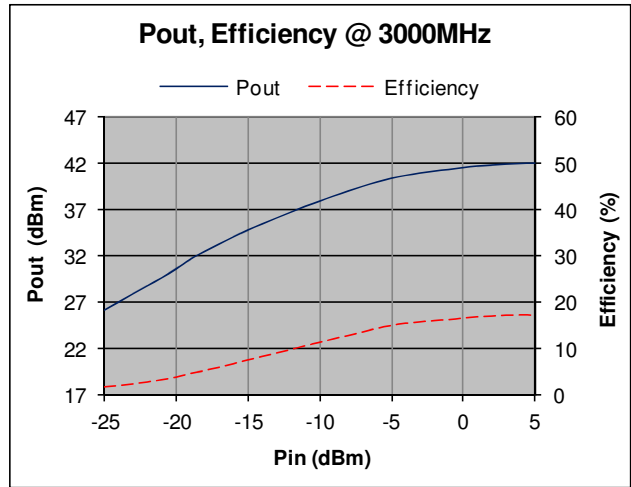
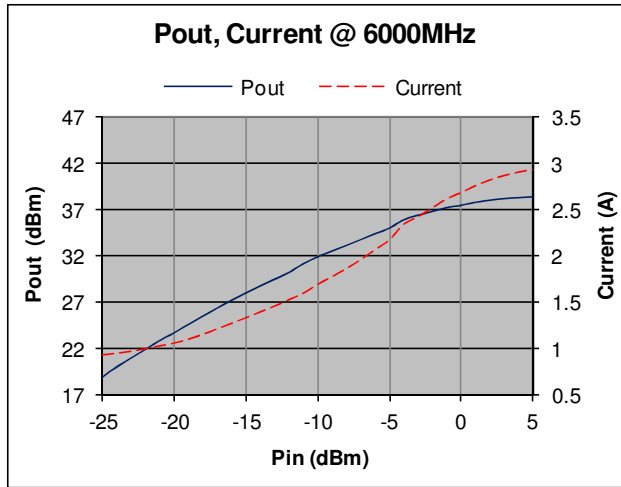
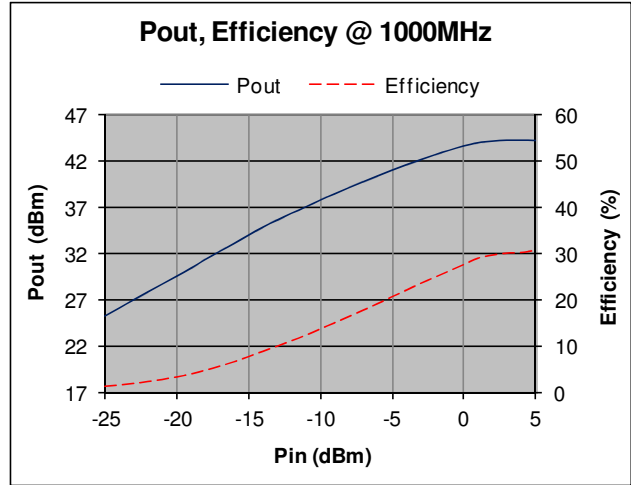
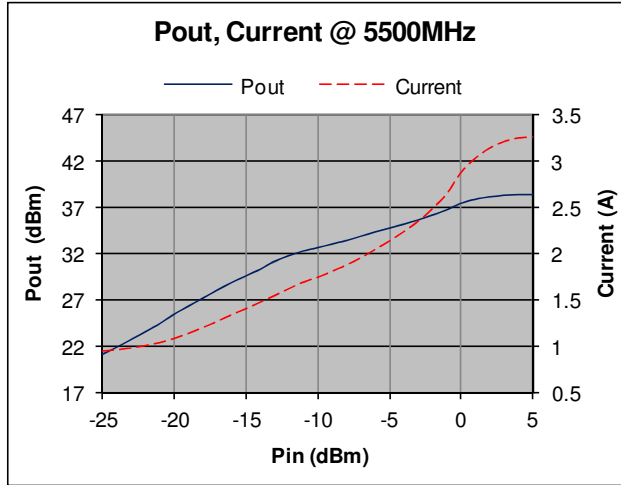
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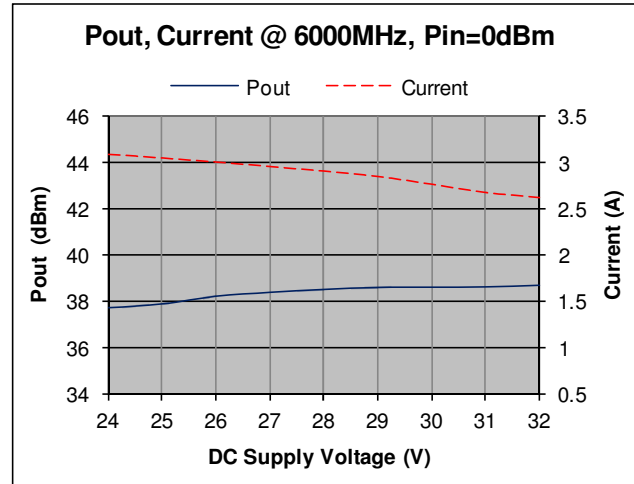
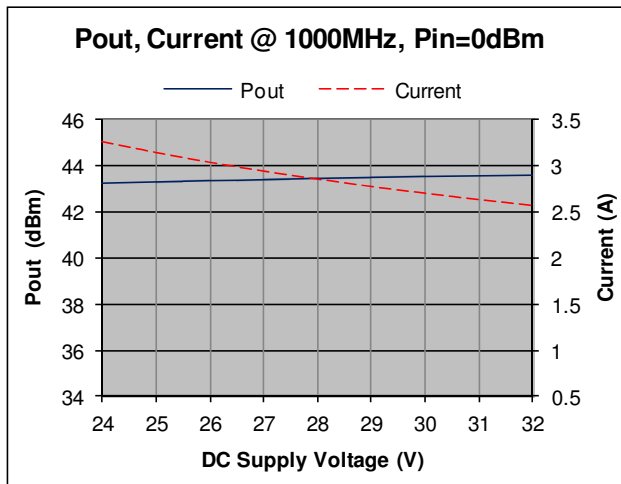
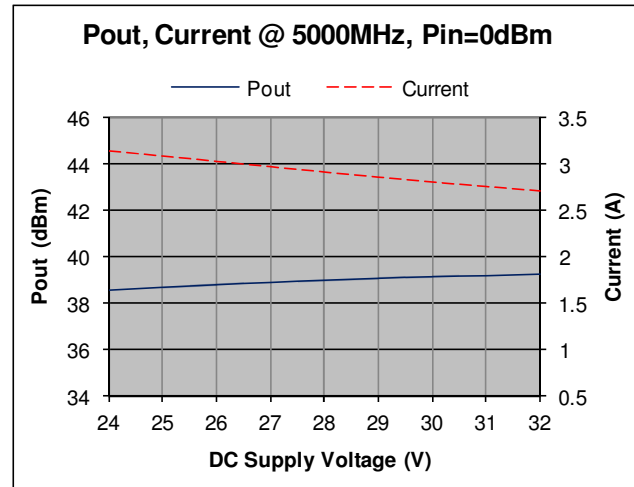
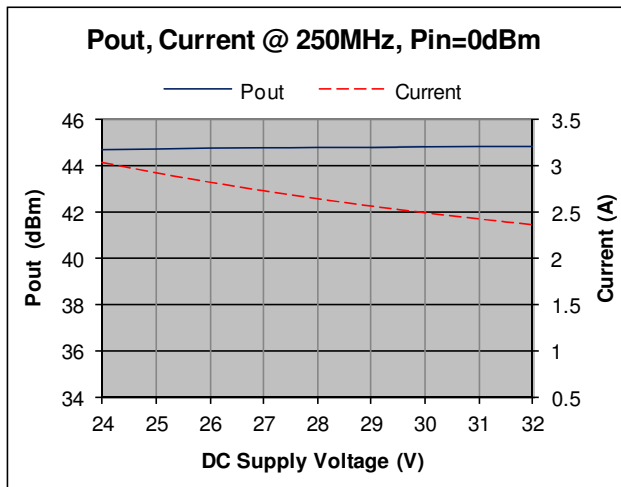
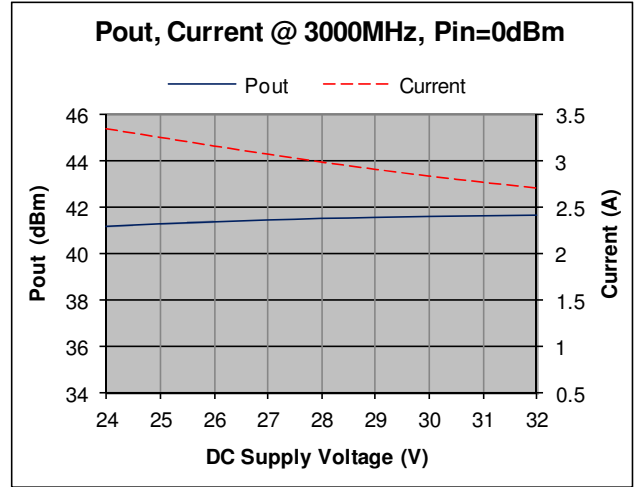
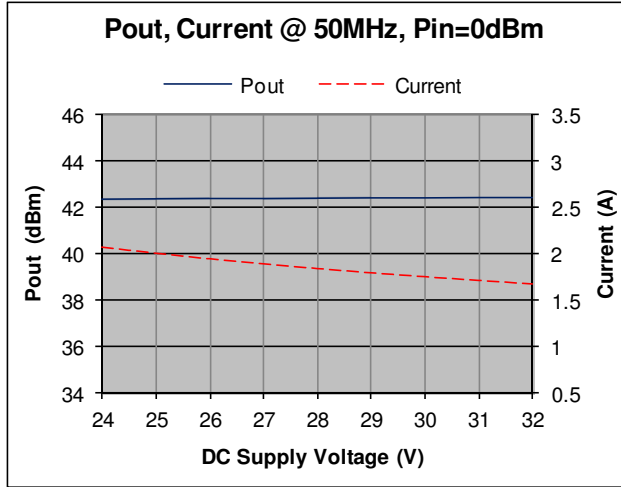
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Absolute Maximum Ratings

Parameter	Absolute Maximum
Supply Voltage	+36V
RF Input Power	+15dBm
Operating Temperature	-40 °C to +85 °C
Storage Temperature	-55 °C to +125 °C

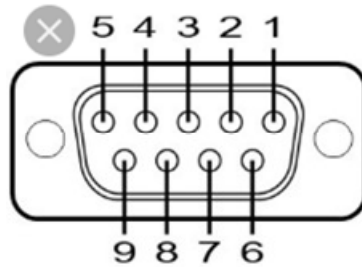
ESD Sensitive Material



WARNING: 1) MUST USE HEAT SINK. COOLING FAN RECOMMENDED.
 2) LOAD MUST BE CONNECTED TO AMPLIFIER OUTPUT AT ALL TIME IF DC POWER IS ON.

DC Power Input and Enable Connections

RF BAY Amplifier CPA-20-6000-10 PIN Connection



Looking towards connector

PINS: 1, 2, 3, 4 No Connection
PIN 5: Enable, TTL 5V – ON, 0V – OFF
PINS: 6, 7 +28 VDC
PINS: 8, 9 GND

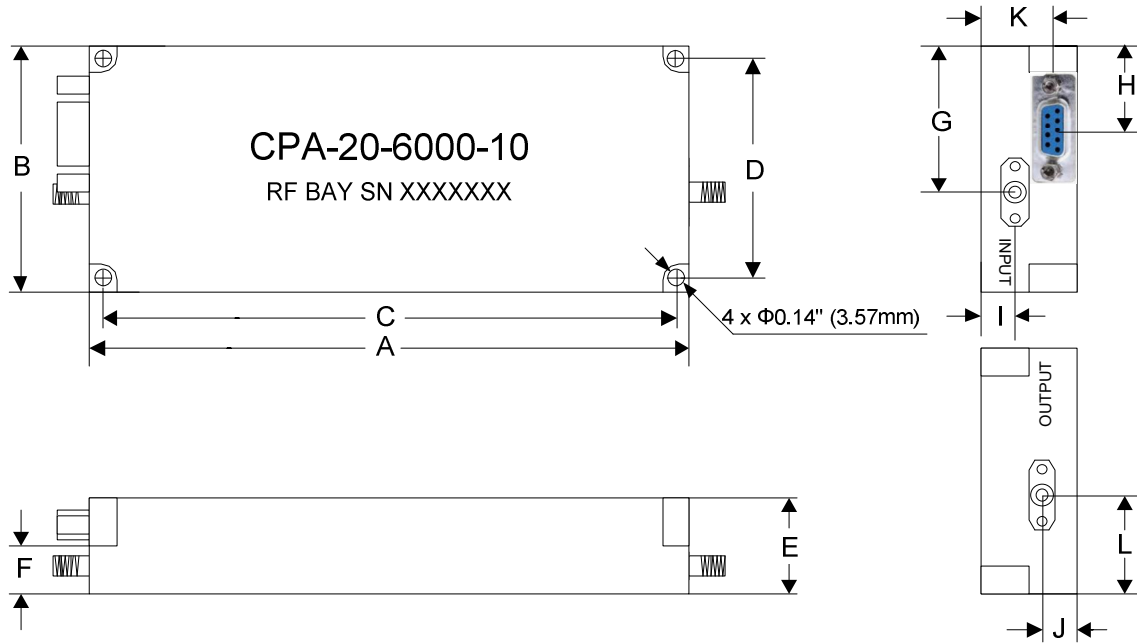


RF Amplifier has female connector

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Outline



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

	A	B	C	D	E	F	G	H	I
Inch	6.40	2.50	6.05	2.17	1.05	0.54	1.40	0.92	0.30
mm	162.56	63.50	153.67	55.12	26.67	13.72	35.56	23.37	7.62
	J	K	L						
Inch	0.30	0.75	1.10						
mm	7.62	19.05	27.94						

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Photos

