

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

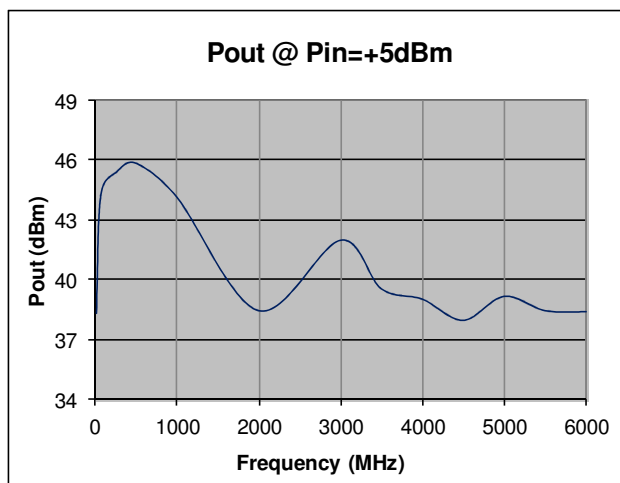
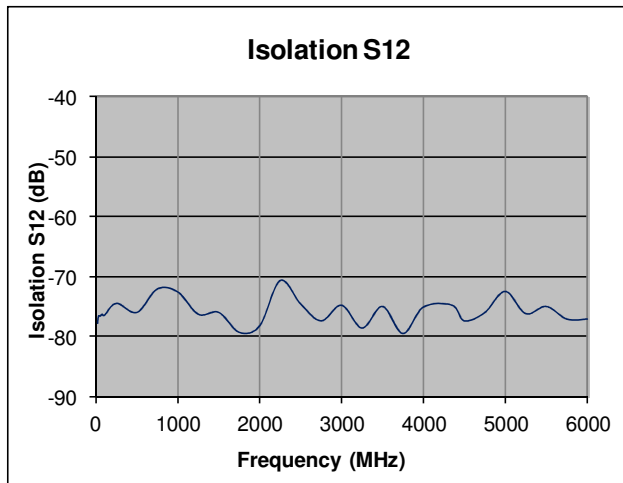
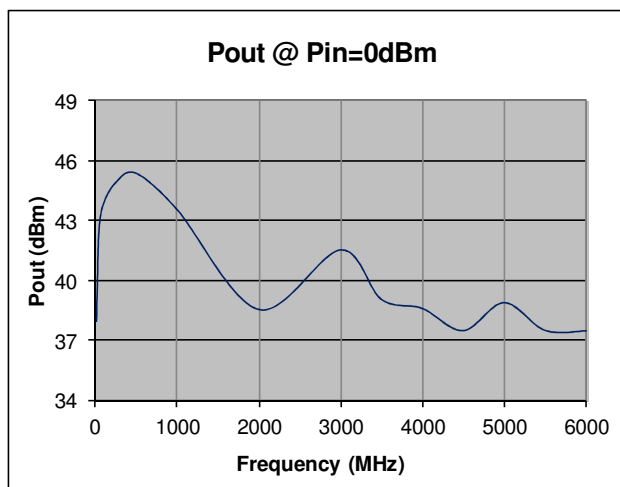
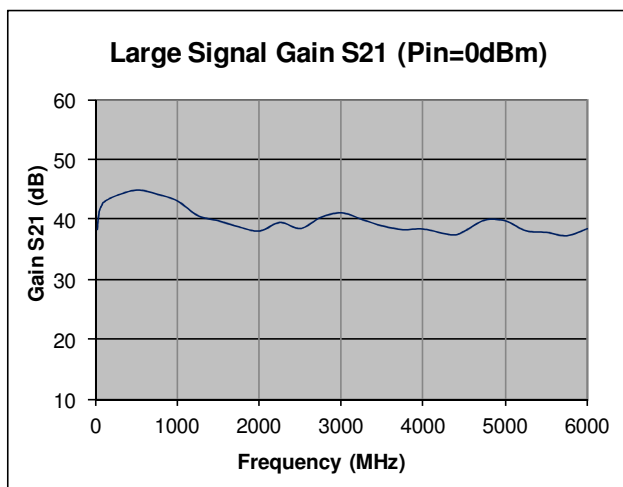
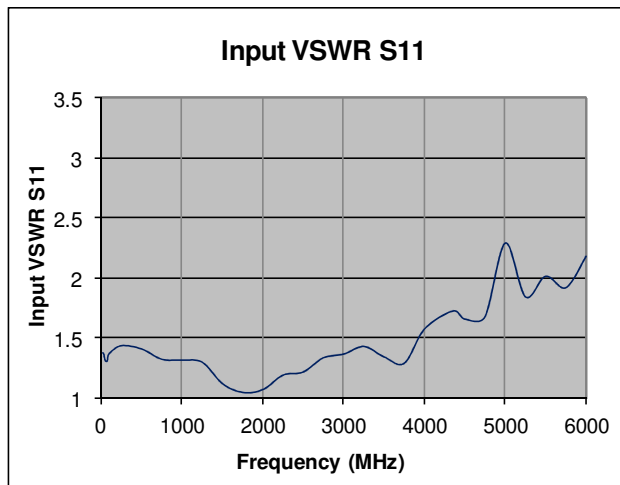
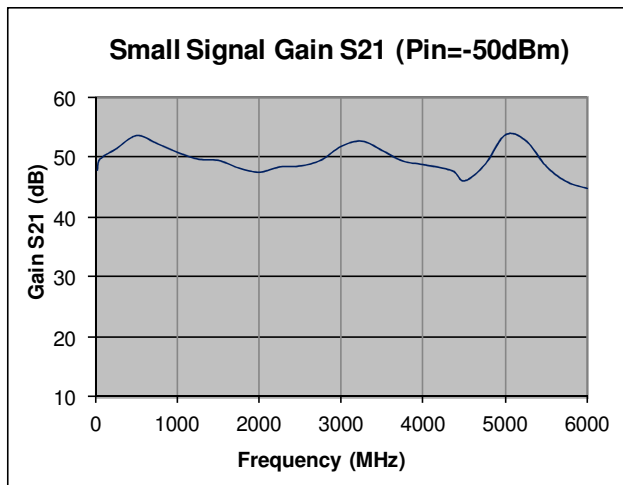
Electrical Specifications @+25°C, $Z_{in}=Z_{out}=50\ \Omega$, $V_{supply} = +28VDC$, $Enable=+5VDC$

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) RF Turn Off Control TTL/HCMOS (Logic=0)		Enable $EN = +5V$ 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.

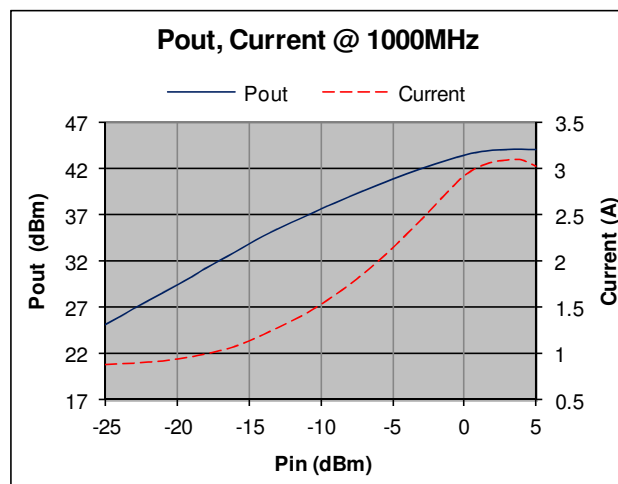
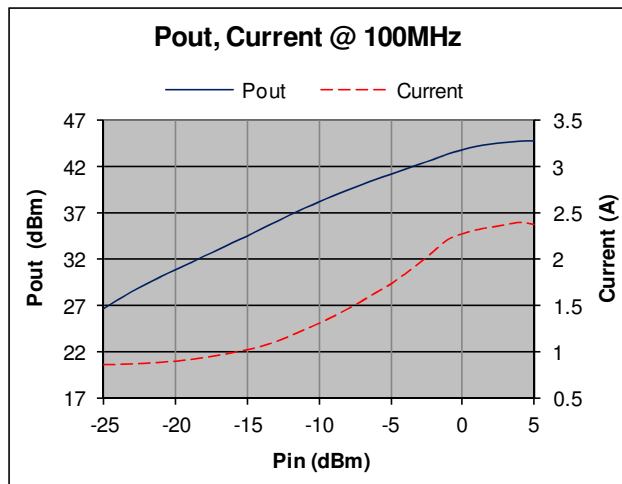
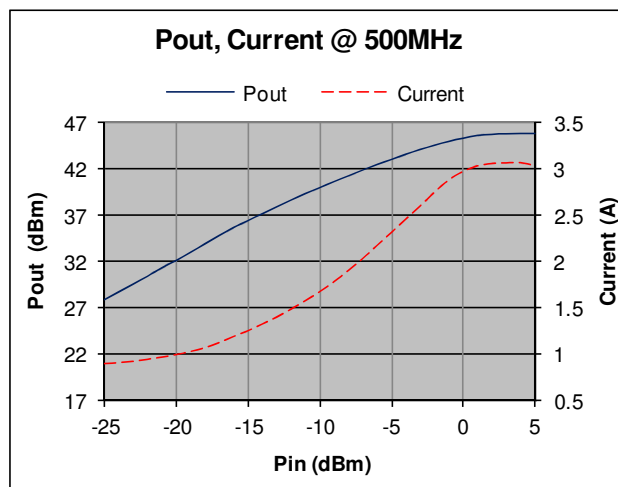
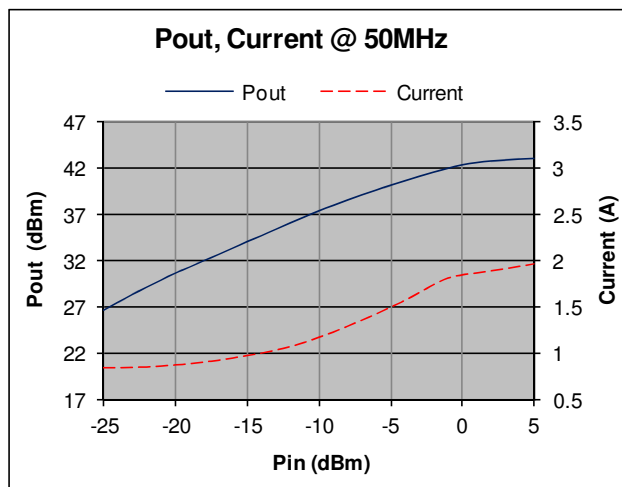
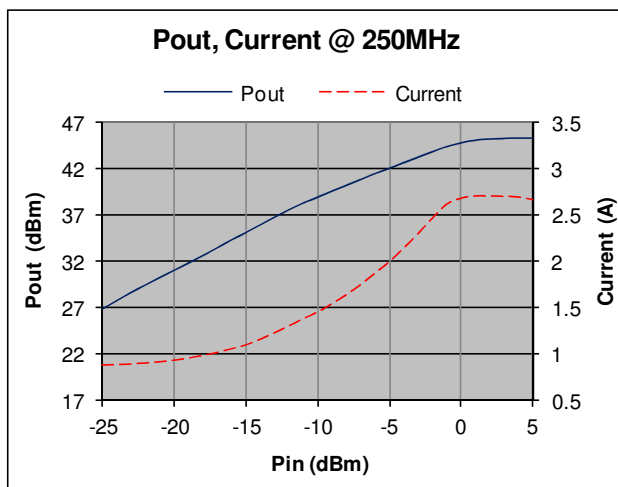
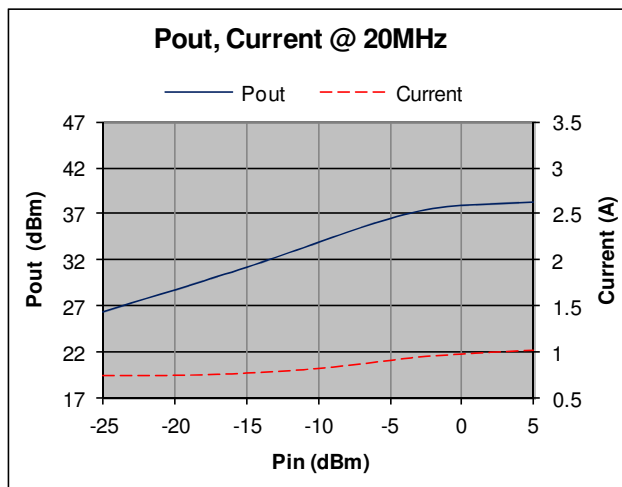
20-6000MHz 5W RF Power Amplifier

Typical Performance @ +25 °C



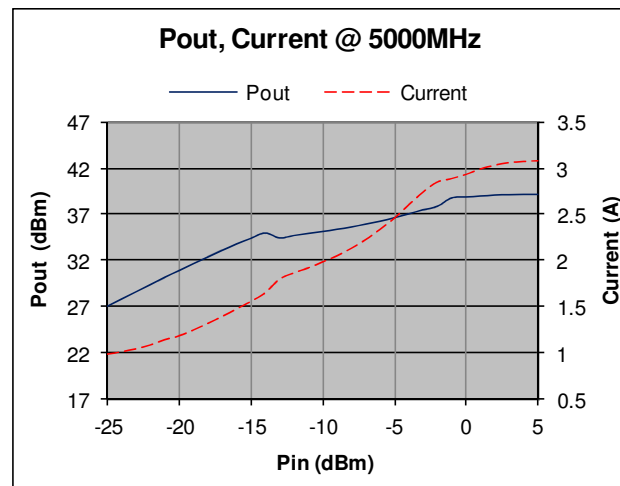
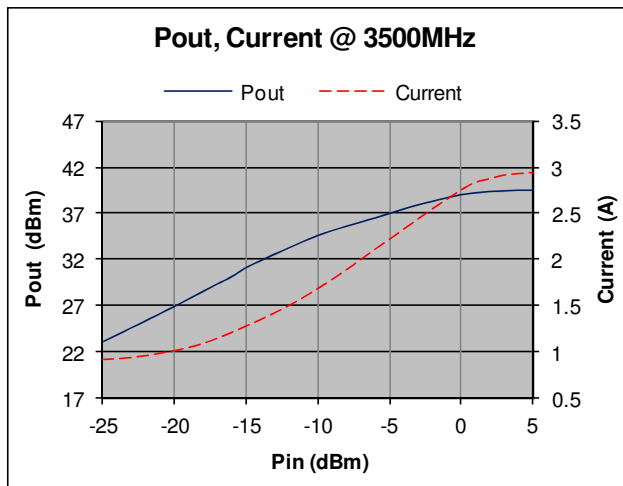
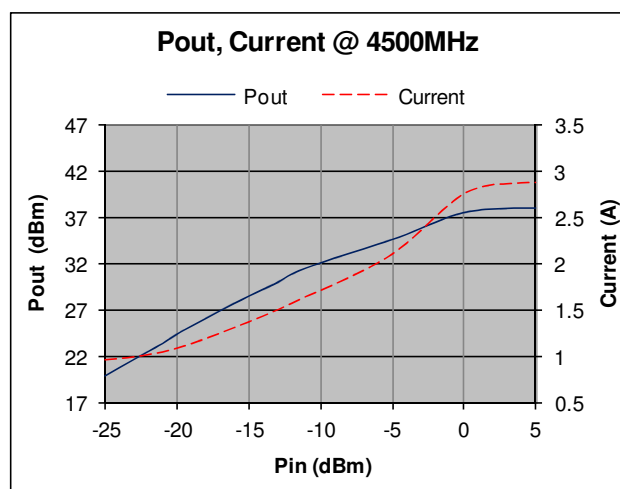
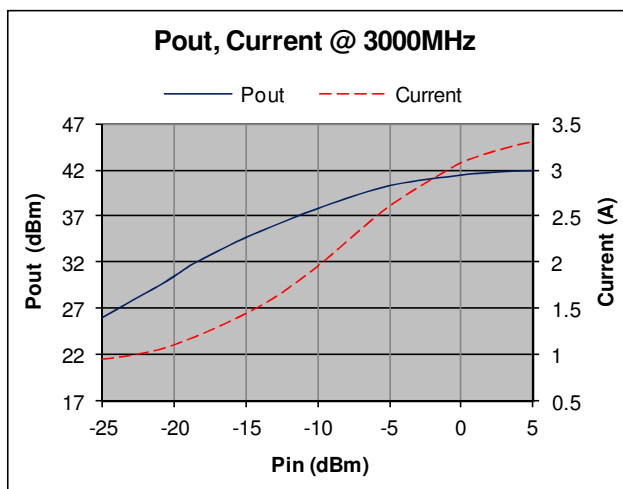
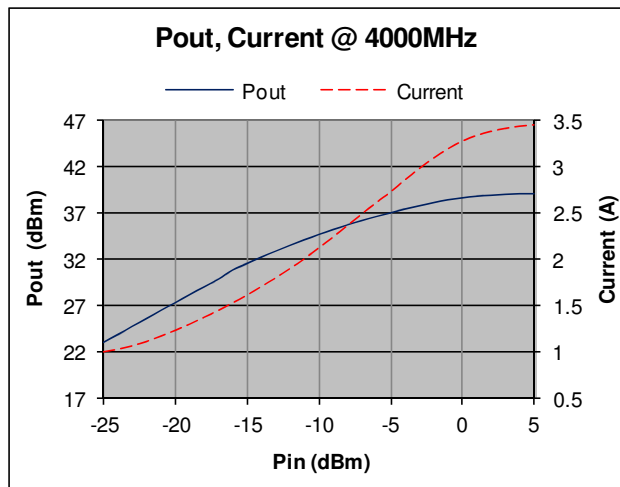
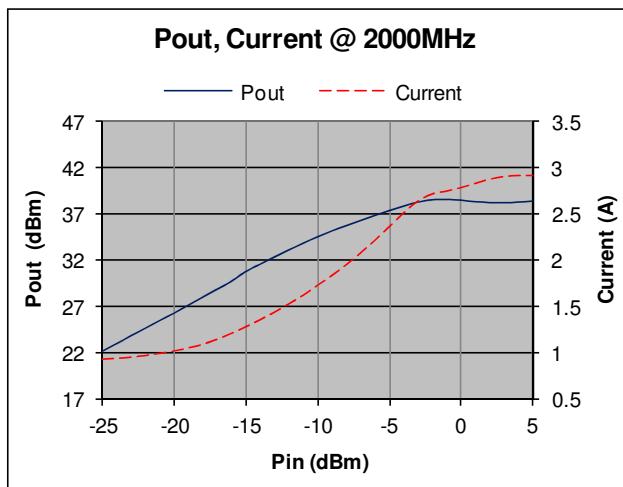
20-6000MHz 5W RF Power Amplifier

Typical Performance @ +25 °C



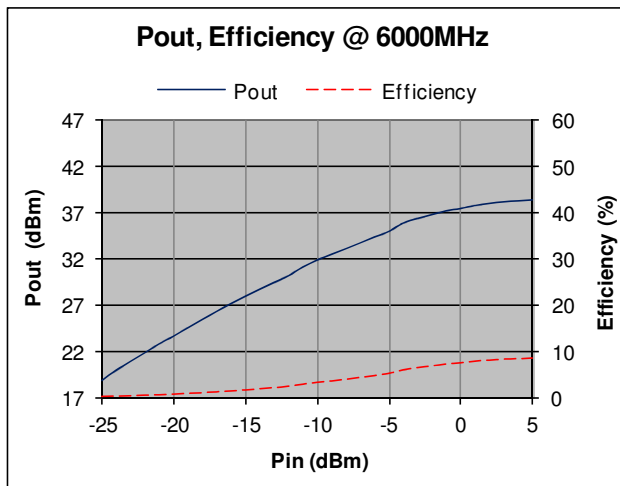
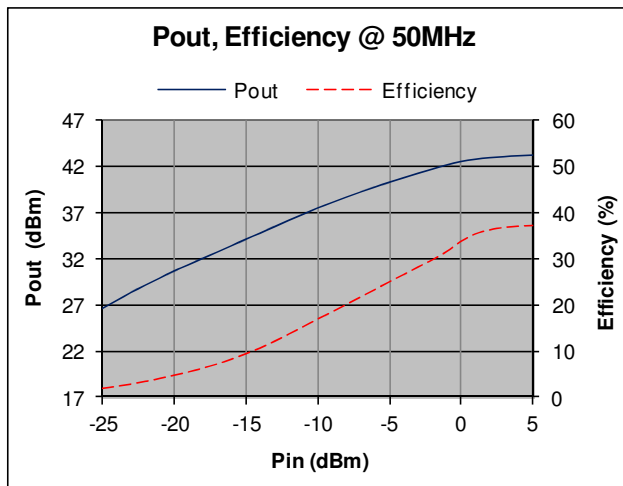
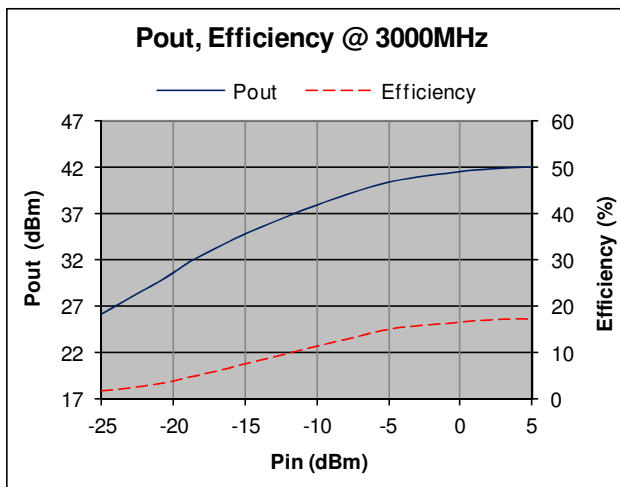
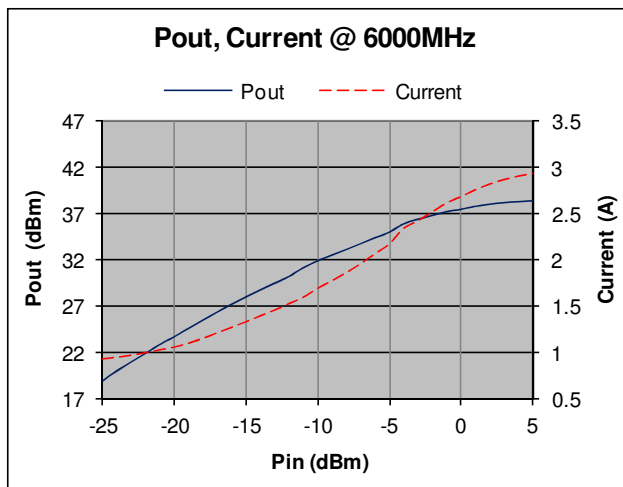
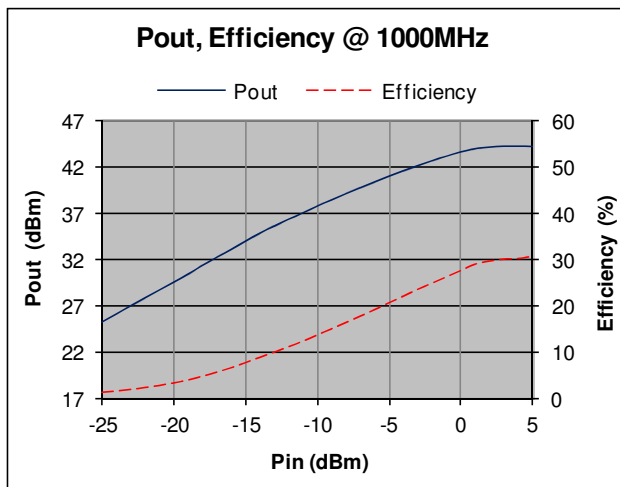
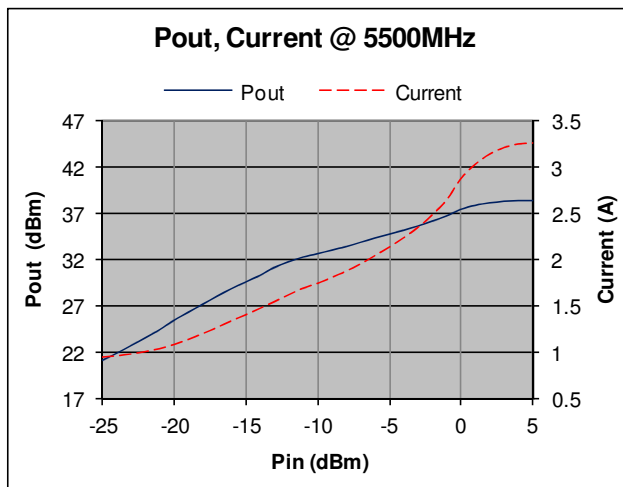
20-6000MHz 5W RF Power Amplifier

Typical Performance @ +25 °C



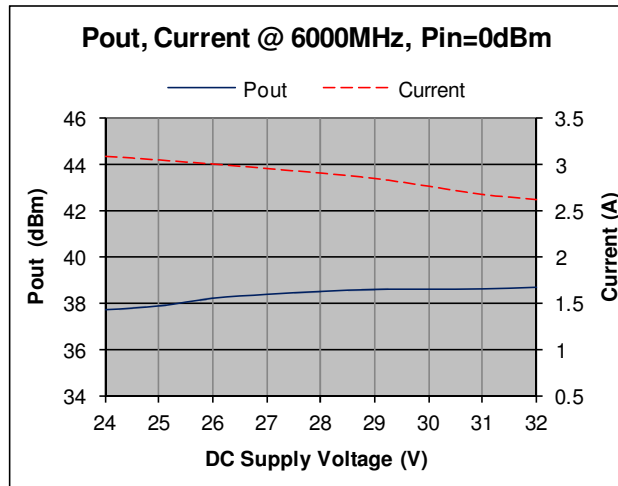
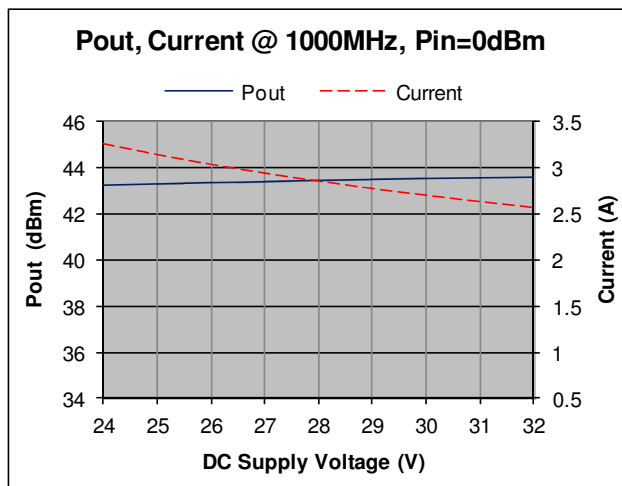
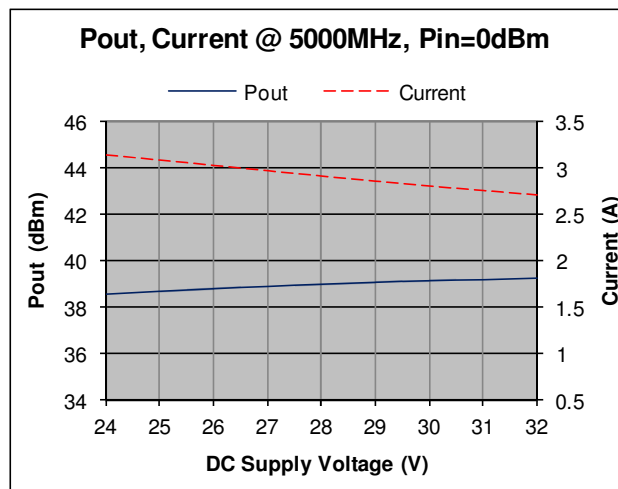
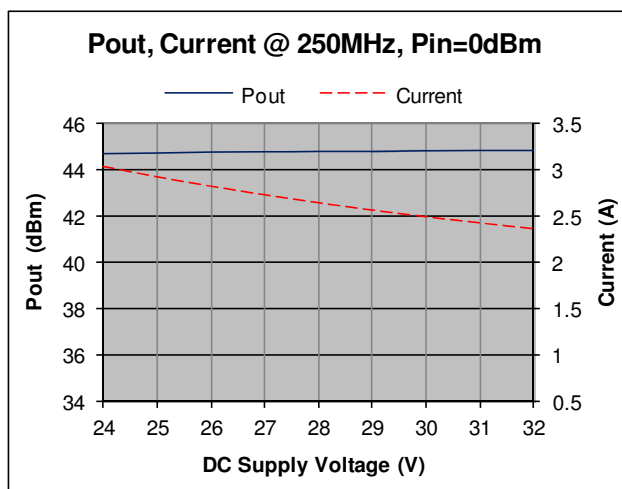
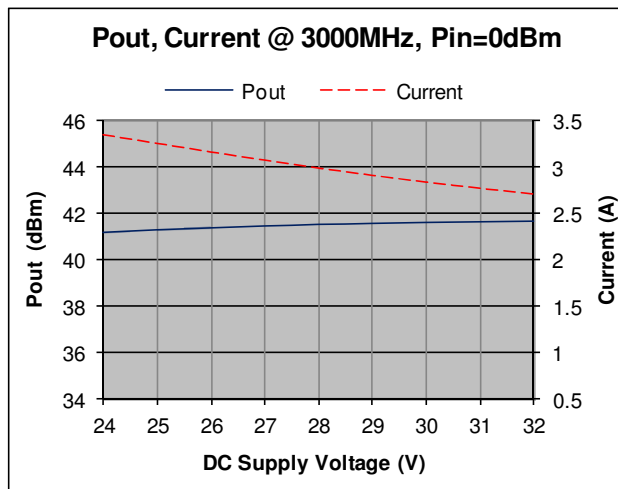
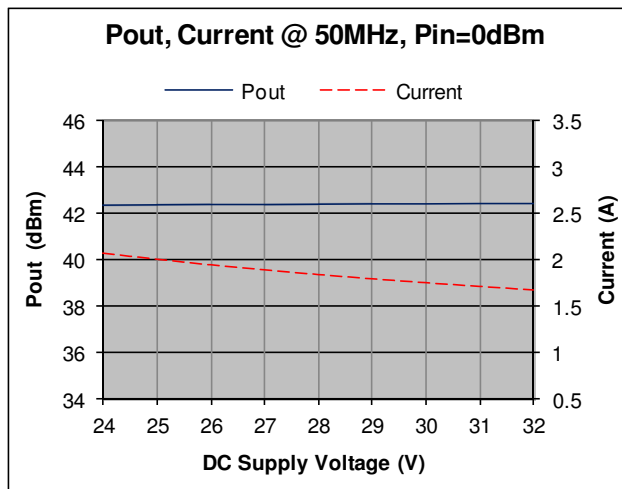
20-6000MHz 5W RF Power Amplifier

Typical Performance @ +25 °C



20-6000MHz 5W RF Power Amplifier

Typical Performance @ +25 °C



20-6000MHz 5W RF Power Amplifier

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

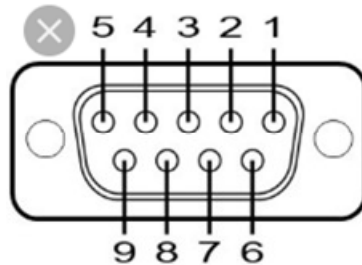
ESD Sensitive Material



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

HD33528 PIN Connection



Looking towards connector

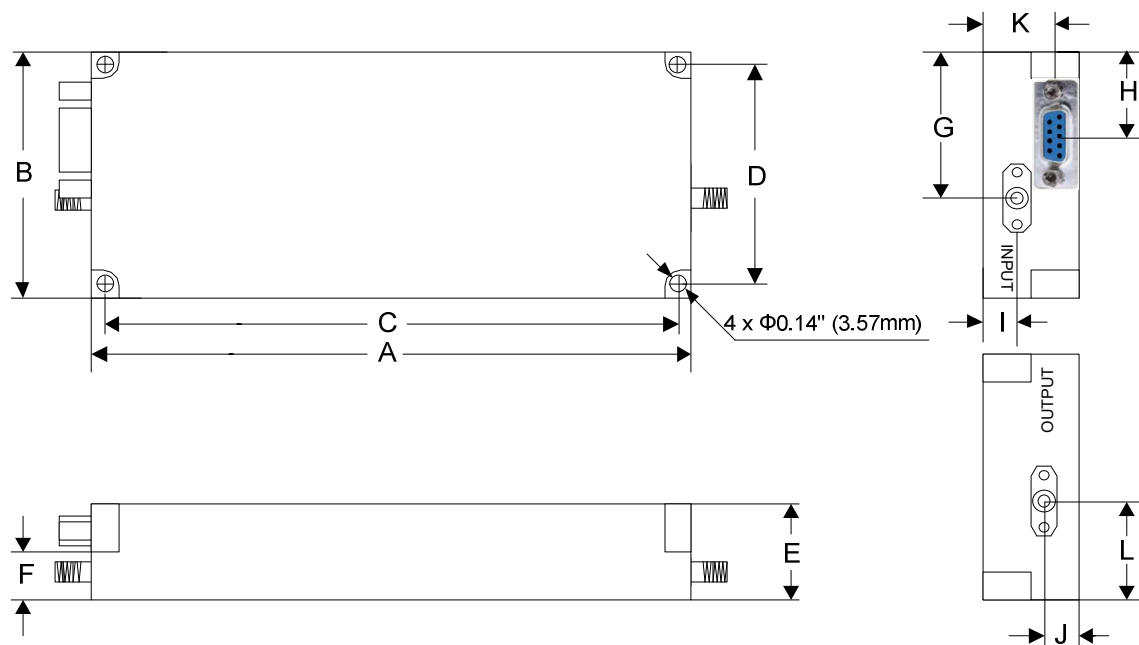
PINS: 1, 2, 3, 4 No Connection
PIN 5: Enable, TTL 5V – ON, 0V – OFF
PINS: 6, 7 +28 VDC
PINS: 8, 9 GND



RF Amplifier has female connector

20-6000MHz 5W RF Power Amplifier

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						

20-6000MHz 5W RF Power Amplifier

Photos

