1000-3000MHz/50Watt/Module

Model Number: OC-PA1-3K50W

The model OC-PA1-3K50W is a multi-octave high power amplifier operating between 1000 MHz and 3000 MHz and offering a wide dynamic Range with 50 Watts typical saturated power. The employment of gallium nitride (GaN) and chip-and-wire technology in manufacturing ensures this module state-of-the-art power performance with excellent power-to-volume ratio. It is ideal for multi-octave broadband high power RF linear applications.

FEATURES:

- Suitable for RF, L&S linear applications
- Small size and light weight
- Unconditional stability and ruggedness
- Built-in control, and protection circuits

ELECTRICAL SPECIFICATIONS @ +28.0VDC, 25°C, 50Ω

Parameter	Symbol	Min	Typ	Max	Units
Operating Frequency	BW	1000		3000	MHz
RF Output Power	Pout	50			Watt
Power Gain	Gp		47		dB
Power Gain Flatness	Δ Gp		±1.5		dB
Input Return Loss	S_{11}			-10	dB
Harmonics @20W	H		-15		dBc
Spurious Signals	Spur		-60		dBc
Switching Speed	$T_{ON/OFF}$		2	5	μS
In/Output Impedance	Impedance		50		Ω
Operating Voltage	V_{DC}	24	28	32	Volt
Current Consumption @ P_{OUT} =50W	I_{DD}		8		Amp

MECHANICAL SPECIFICATIONS

Parameter	Value	Units	Notes
Dimensions	150x90x25 [5.9x3.55x0.98]	mm [inch]	Maximum
Weight	1.2 [2.6]	kg [lbs]	Maximum
RF Connectors Input	SMA, Female		
RF Connectors Output	SMA, Female		
DC Interface Connector	D-Sub 9-Pin, Male		
Cooling	External Heatsink Required (Not Supplied)		

ENVIRONMENTAL CHARACTERISTICS (Design to Meet)

Parameter	Minimum	Typical	Maximum	Units	Notes
Operating Temperature	-20		60	°C	
Non-operating Temperature	-25		65	°C	Storage
Relative Humidity (non-condensing)			95	%	

Absolute Maximum Rating

Input RF drive level without damage	+10 dBm (Max)
Load VSWR @ P_{OUT} =30W	∞ @ all load phase & amplitude for duration of 1 minutes; 3:1 @ all load phase & amplitude continuous

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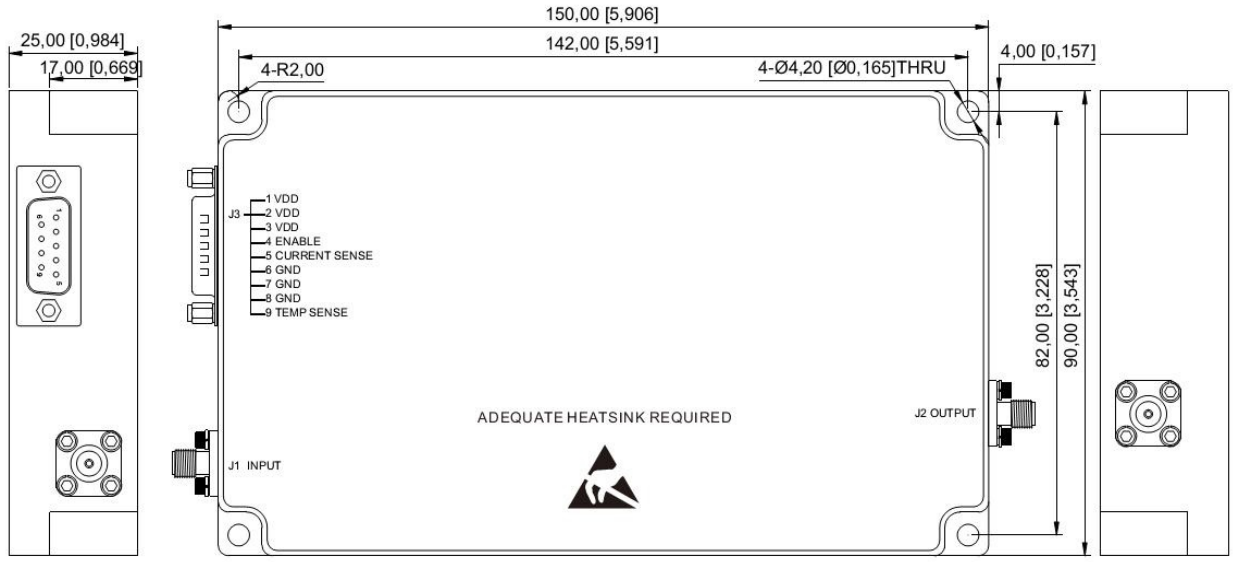
DC INTERFACE CONNECTOR

Pin #	Description	Specifications
1,2,3	VDD	28V_{DC}
4,	ENABLE	Amplifier Enable: TTL Logic High (3.3V) (Internally Pulled-Low)
5	CURRENT SENSE	Analog voltage relative to I_{DD} @ 100mV per Ampere
6,7,8	GND	Ground
9	TEMP SENSE	Analog voltage relative to Module's Temperature @ 10 mV/°C

OUTLINE DRAWING (All dimensions in mm[inch])



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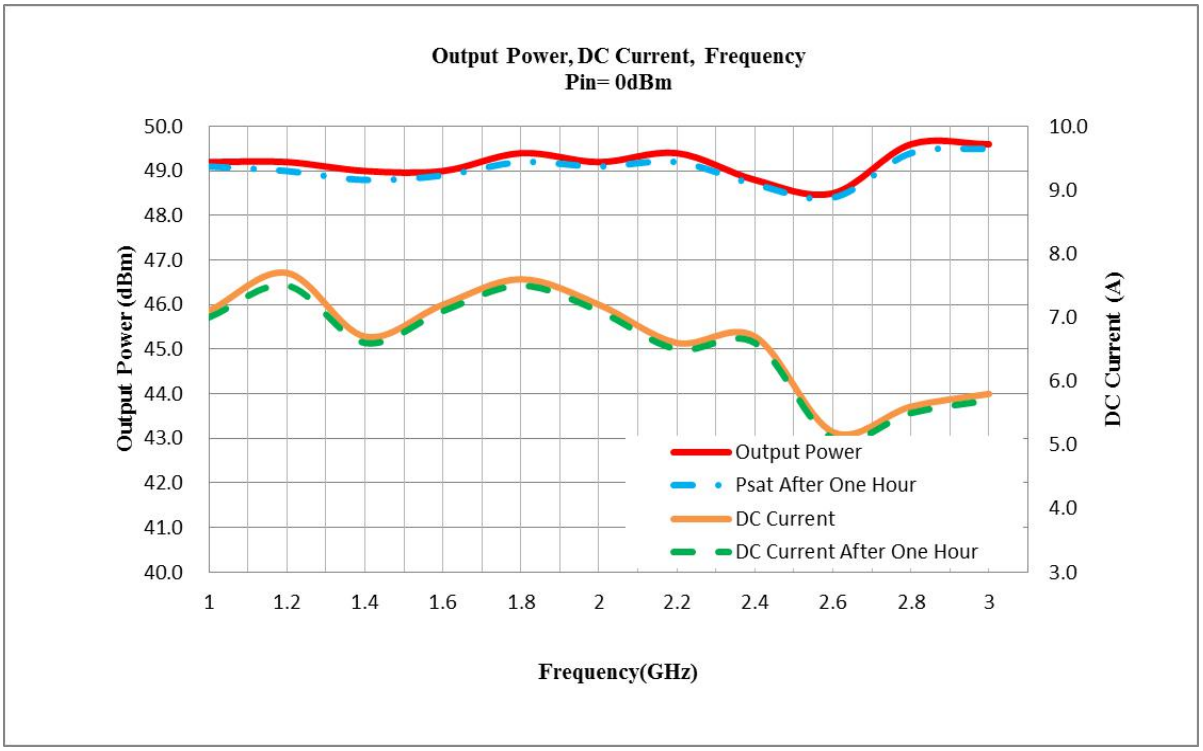
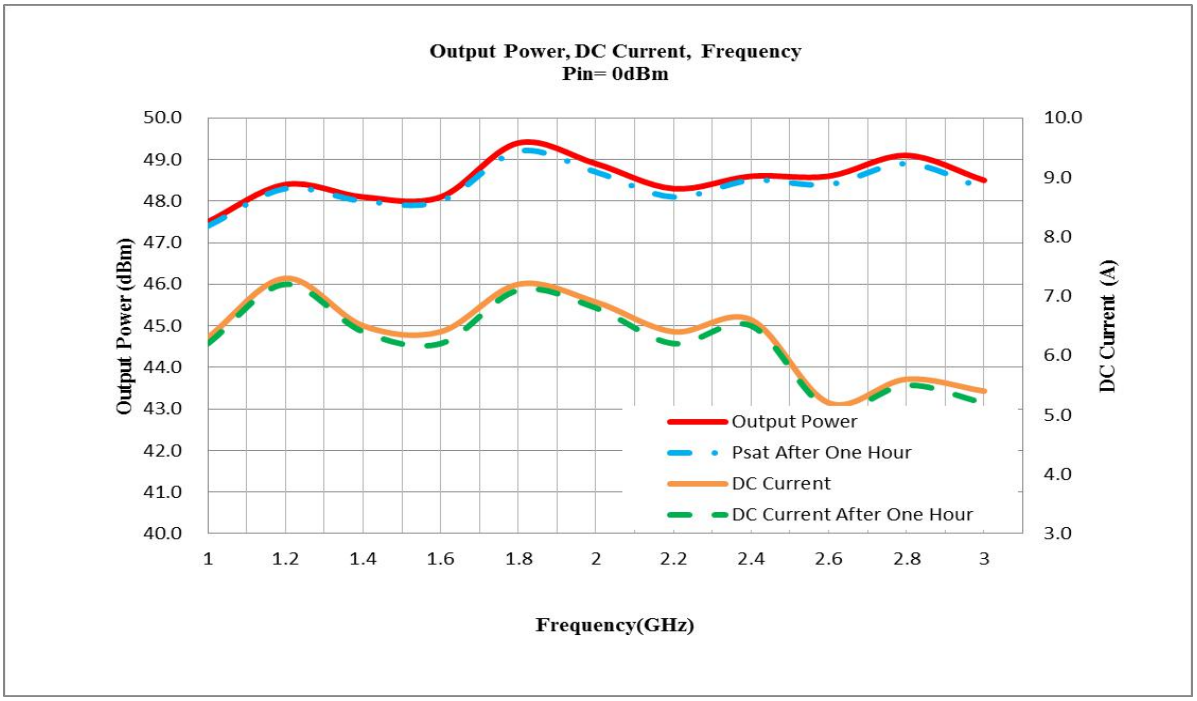
TYPICAL PERFORMANCE PLOTS （for reference only）

Graph1: Output Power (Low temp.-20±3℃)



Graph2: Output Power(High temp.+60±3℃)



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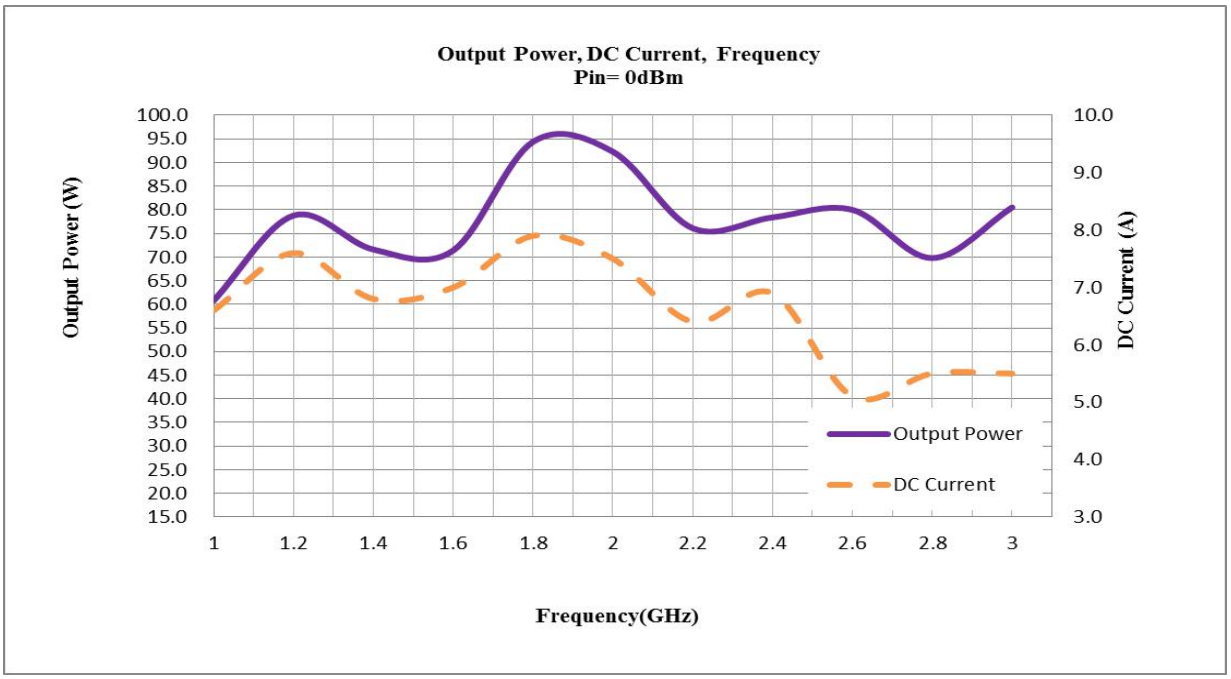
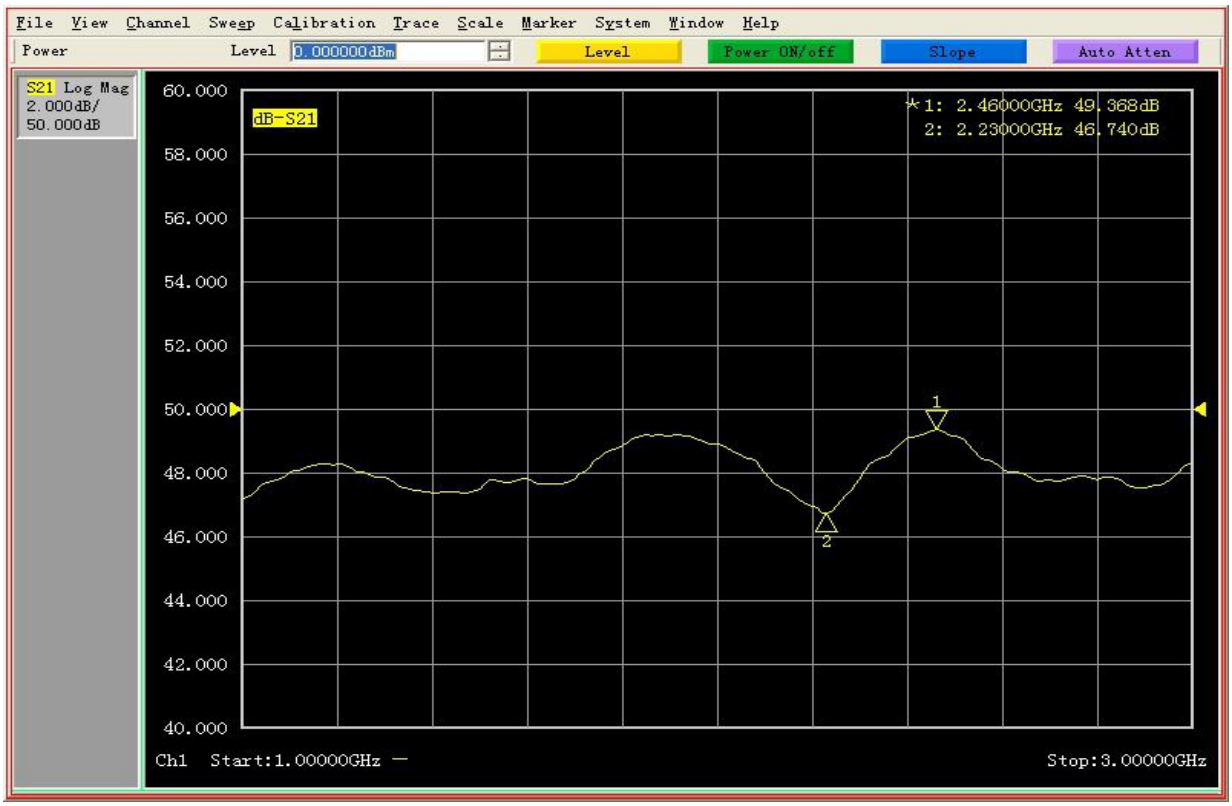
Graph3: Output Power (Normal temp.+25±3℃)



Power Gain:



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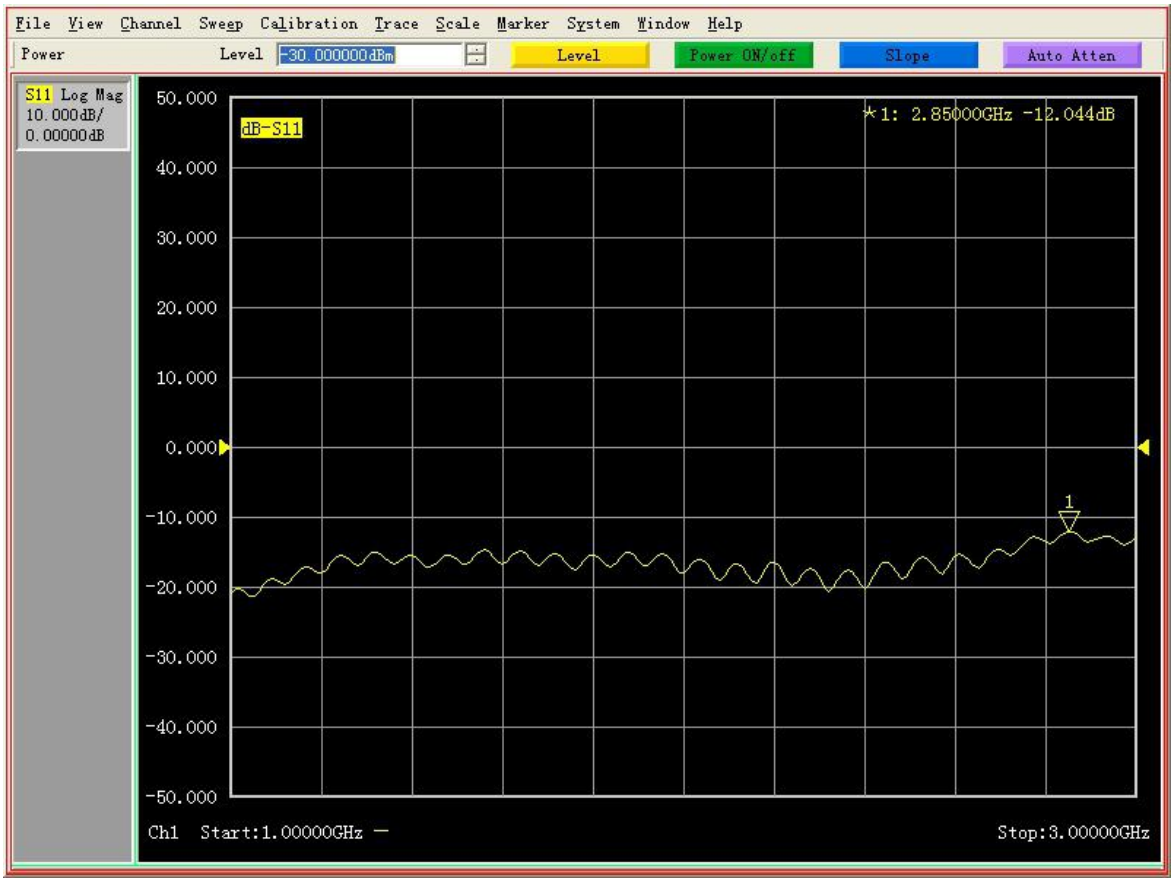
Input Return Loss：



Note: Adequate heatsink required.