

1-6GHz/50Watt/Module

Model Number: OC-PA1-6K50W

The model OC-PA1-6K50W is a multi-octave high power amplifier operating between 1 GHz and 6 GHz 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 jamming, EMC, test and measurement applications.

FEATURES:

- Small Size and light weight
- Instantaneous ultra broadband
- 50 Ohms input and Output matched
- Built-in control and protection circuits

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

Parameter	Symbol	Minimum	Typical	Maximum	Units
Operating Frequency	BW	1000		6000	MHz
RF Output Power @PSAT	PSAT		50		Watt
Power Gain @PSAT	Gp		47		dB
Power Gain Flatness	Δ G		±3		dB
Input Return Loss	S ₁₁			-10	dB
Harmonics @30W	H		-10	-7	dBc
Spurious Signals	Spur		-55		dBc
In/Output Impedance			50		Ω
Operating Voltage	V _{DC}	24	28	32	Volt
DC Current @50W	I _{DD}		17		Amp
Switching Time @1kHz TTL	T _{on/off}		2	5	uSec

MECHANICAL SPECIFICATIONS

Parameter	Value	Units	Limits
Dimensions	200x150x25 [7.87x5.9x0.0.98]	mm [inch]	Maximum
Weight	2 [4.4]	kg [lbs]	Maximum
RF Connectors Input	SMA, Female		
RF Connectors Output	N-Type, Female		
DC Interface Connector	Hybrid,D-Sub 7-Pin,Male		
Cooling	External Heatsink (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	+10 dBm	Maximum
Load VSWR @ P _{OUT} =30W	∞ @ all load phase & amplitude for duration of 1 minute; 3:1 @ all load phase & amplitude continuous	
Thermal Overload	85°C ± 10°C shutdown	Typical

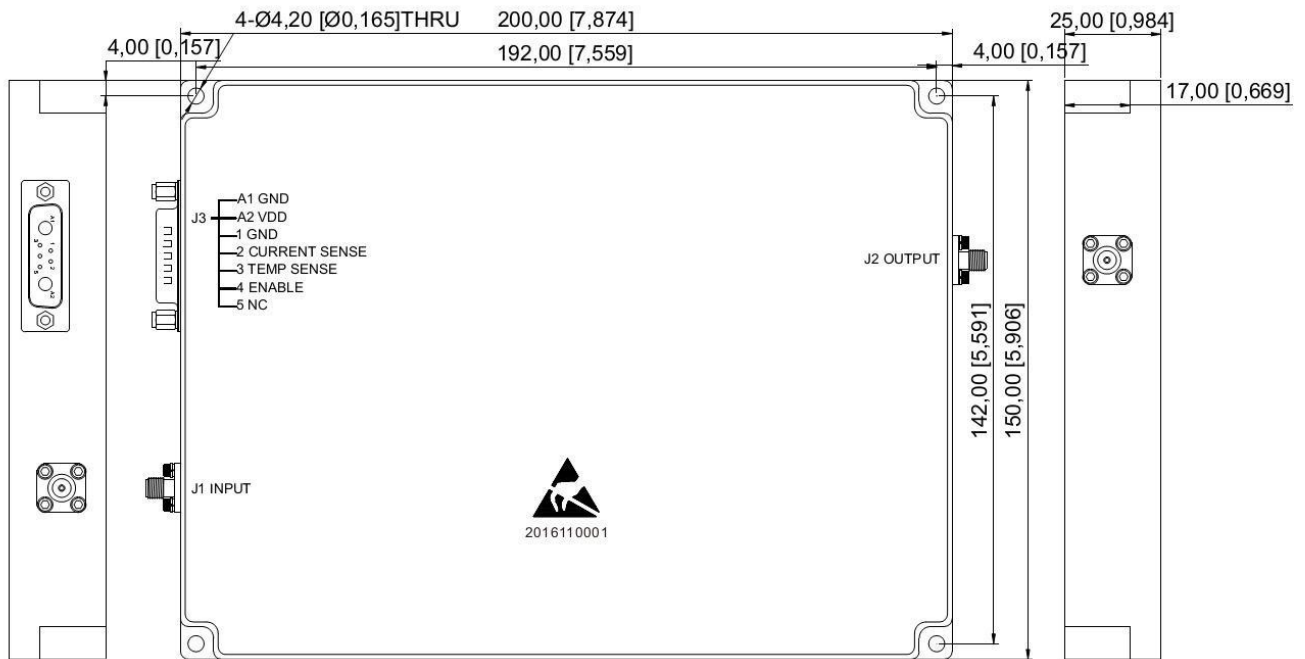
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DC INTERFACE CONNECTOR

Pin #	Description	Specifications
A1	GND	Ground
A2	VDD	50Vdc
1	GND	Ground
2	CURRENT SENSE	Analog voltage relative to I _{DD} @ 100mV per Ampere
3	TEMP SENSE	Analog voltage relative to Module's Temperature @ 10 mV/°C
4	ENABLE	Amplifier Enable: TTL Logic High (3.3V) (Internally Pulled-Low)
5	NC	NC

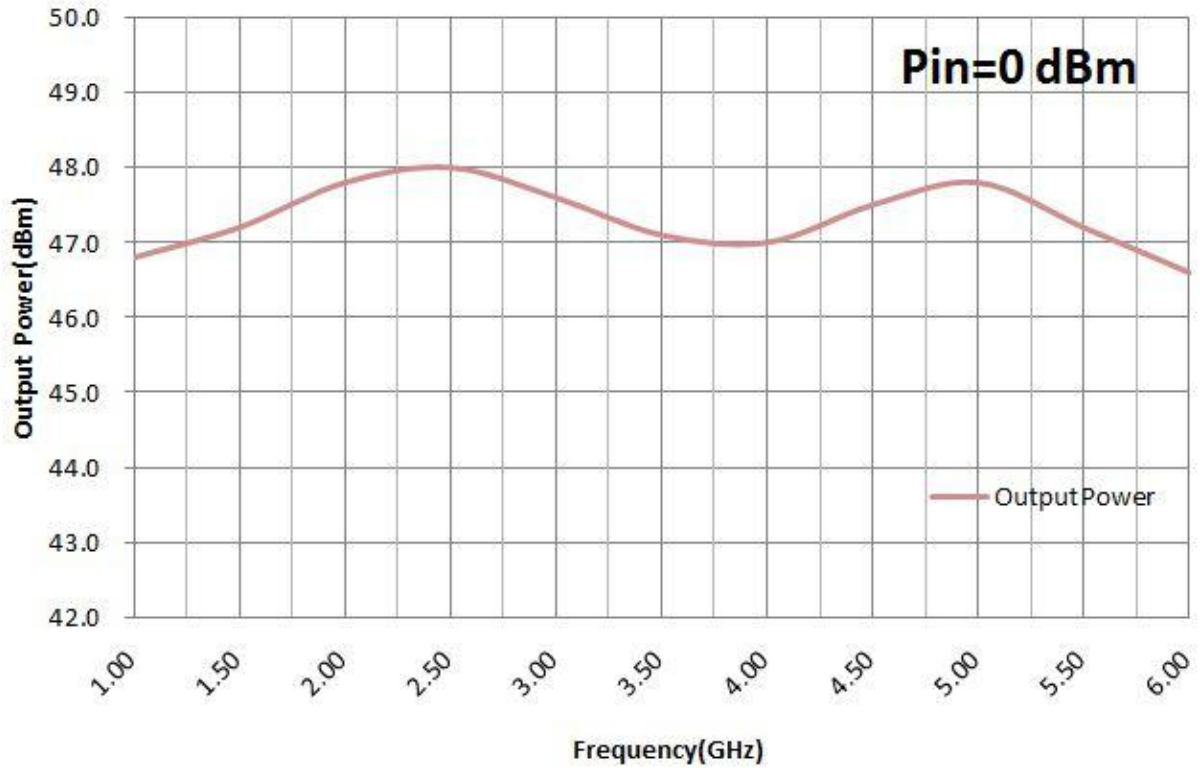
OUTLINE DRAWING All dimensions in mm [inch]



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TYPICAL PERFORMANCE PLOTS (For reference only)



Note: Adequate heatsink required.