

80-1000MHz/50Watt/Module

Model Number: OC-PA008-1K50W

The model OC-PA008-1K50W is a multi-octave high power amplifier operating between 80 MHz and 1000 MHz and offering a wide dynamic Range with 50 Watts typical saturated power. The employment of advanced high power devices in manufacturing ensures this module exceptional power performance, long term reliability and high efficiency. It is ideal for broadband high power RF, HF&VHF&UHF linear applications.

FEATURES:

- Broadband & High power;
- High Efficiency;
- Great Linearity;
- Small Size & Light Weight;
- Low Distortion

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

Parameter	Symbol	Min	Typ	Max	Units
Operating Frequency	BW	80		1000	MHz
RF Output Power	P _{out}		50		Watt
Power Gain	G _p		47		dB
Power Gain Flatness	Δ G _s		±2		dB
Input Return Loss	S ₁₁			-10	dB
Harmonics @50W	H		-10		dBc
Spurious Signals	Spur		-55		dBc
In/Output Impedance	Impedance		50		Ω
Operating Voltage	VDC	24	28	32	Volt
DC Current @50W	IDD		8		Amp

MECHANICAL SPECIFICATIONS

Parameter	Value	Units	Notes
Dimensions	150x90x25 [5.9x3.55x0.98]	mm [inch]	Maximum
Weight	1.2 [2.64]	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	+5 dBm (Max)
Load VSWR @ P _{OUT} =20W	∞ @ all load phase & amplitude for duration of 1 minutes; 3:1 @ all load phase & amplitude continuous
Over Temperature	85°C @ heatsink [restored @ 60°C]

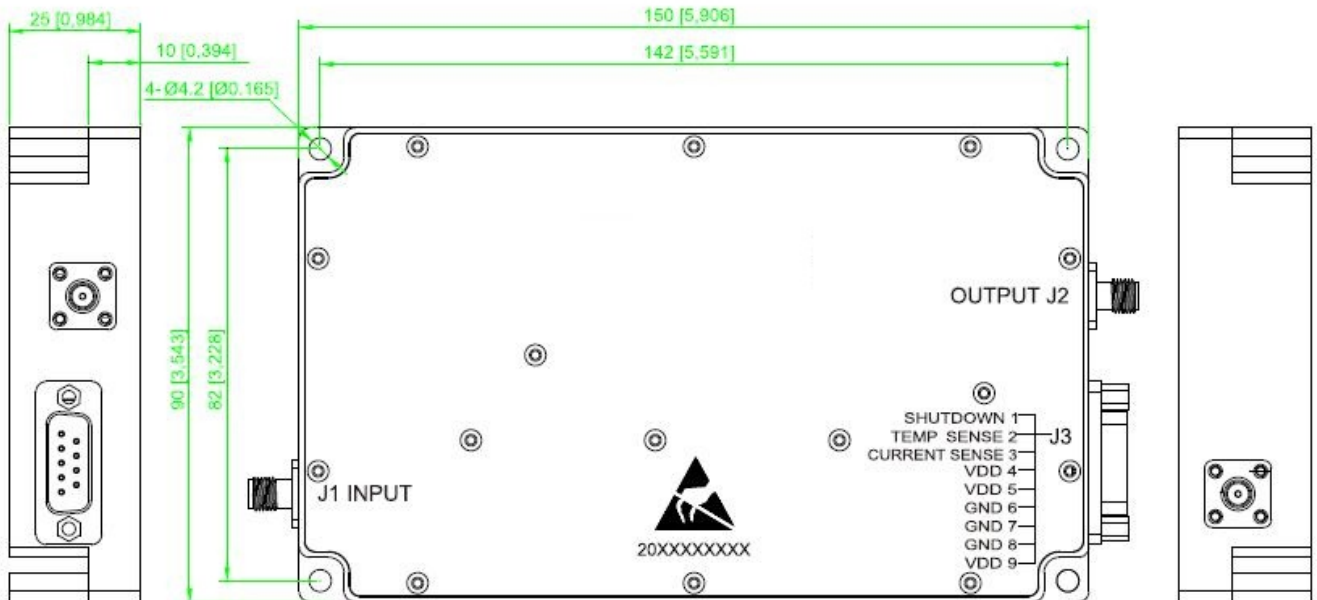
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DC INTERFACE CONNECTOR

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

OUTLINE DRAWING (All dimensions in mm [inch])

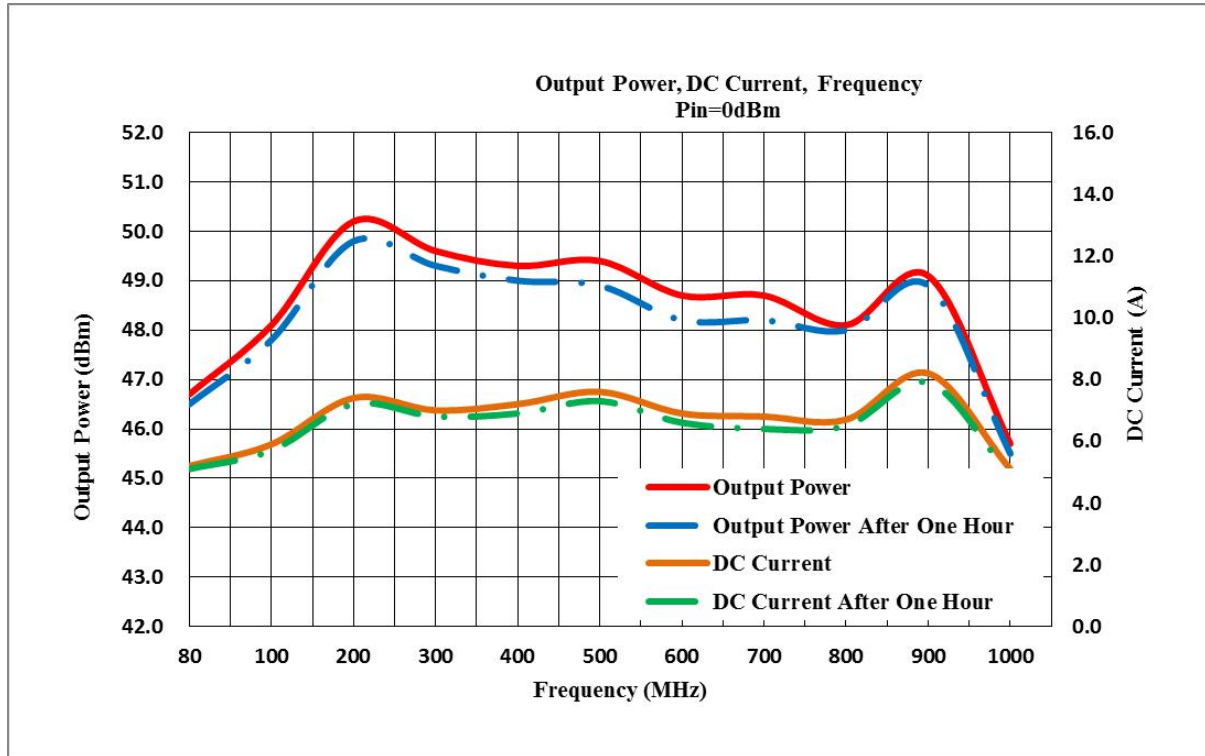


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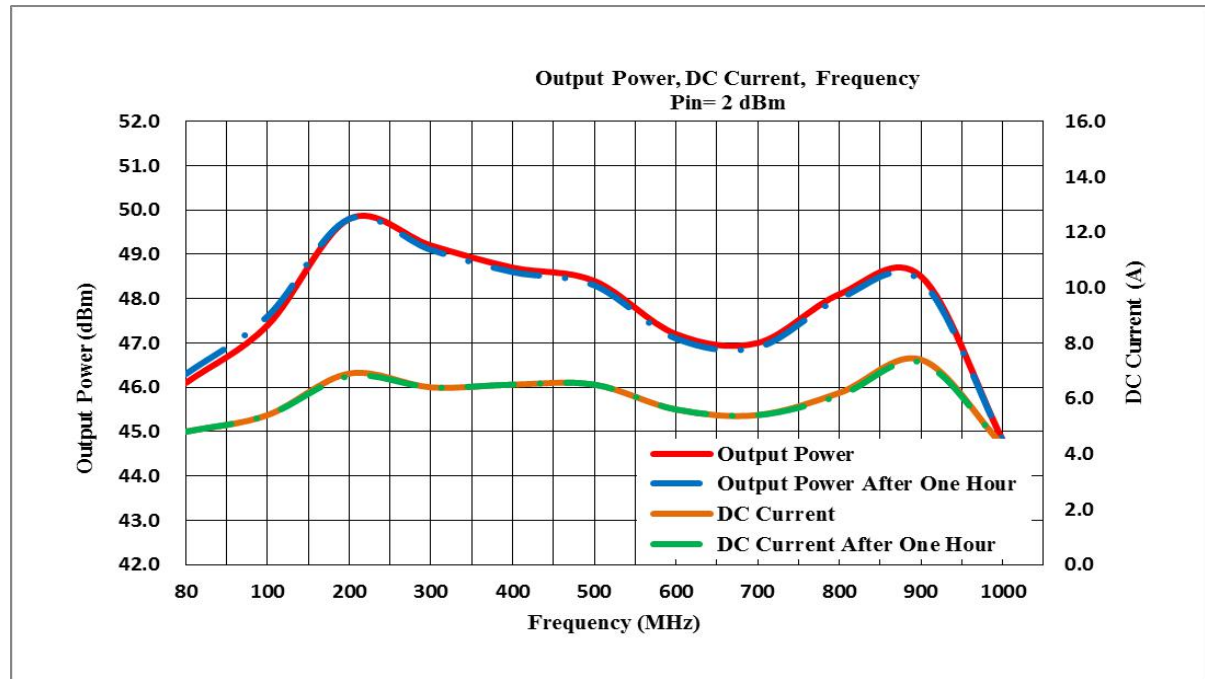
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TYPICAL PERFORMANCE PLOTS

Graph1: Output Power (Low temp. $-20\pm 3^{\circ}\text{C}$)



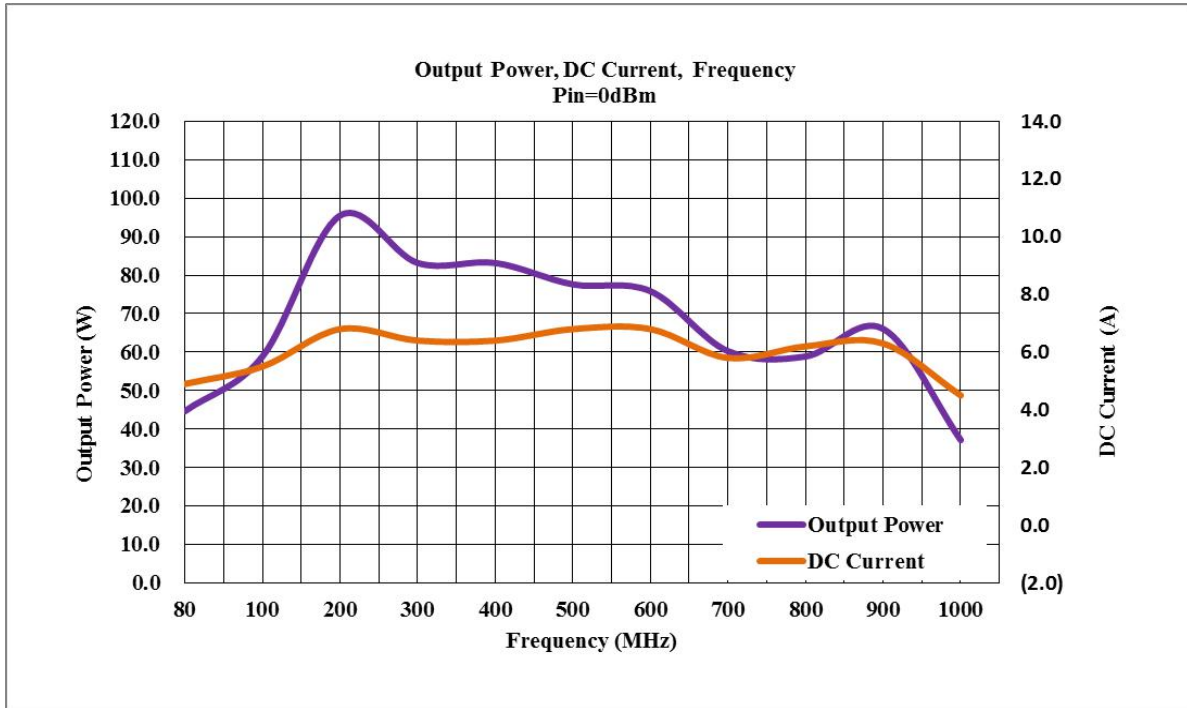
Graph2: Output Power(High temp. $+60\pm 3^{\circ}\text{C}$)



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



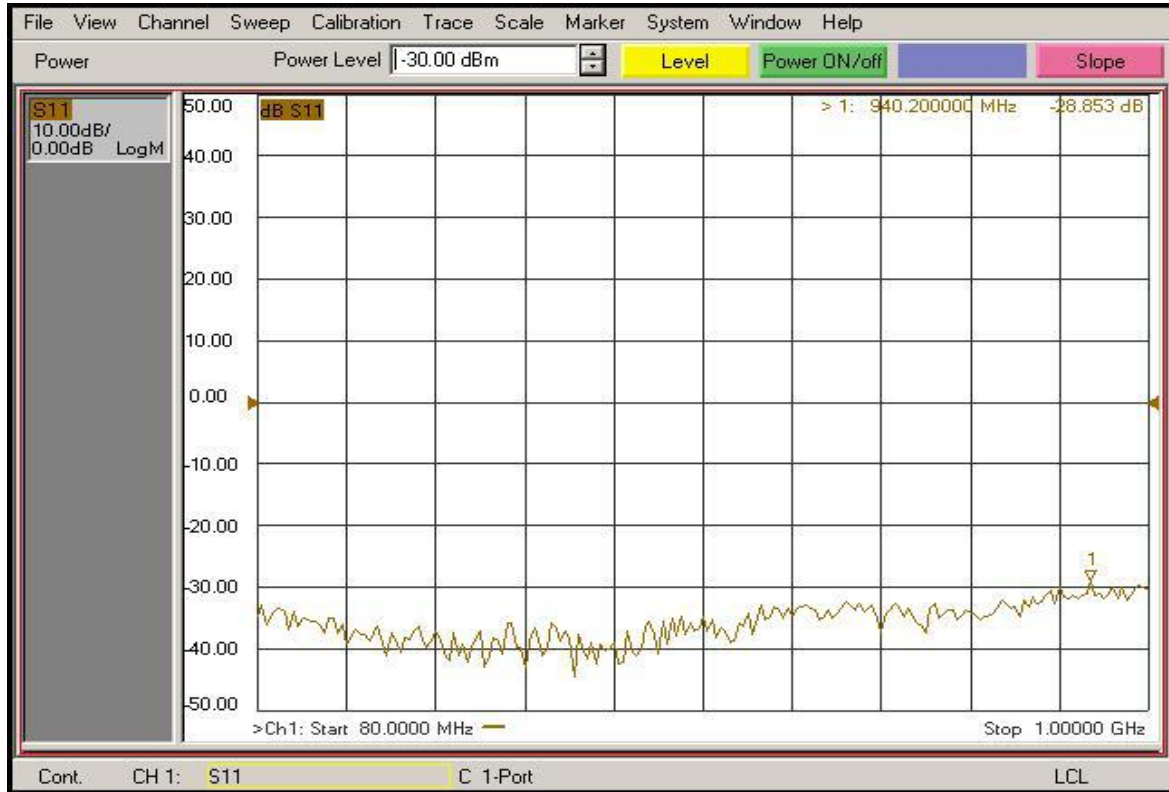
Power Gain:



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input Return Loss:



Note: Adequate heatsink required.