1200-1600MHz/50Watt/Module

Model Number: OC-PA1.2-1.6K50W

The model OC-PA1.2-1.6K50W is a multi-octave high power amplifier operating between 1200 MHz and 1600 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 broadband mobile Jamming and band specific high power linear applications in the P/L/S frequency bands.

FEATURES:

- Solid-state Class AB linear design
- Instantaneous ultra-broadband
- Small and lightweight
- Suitable for CW, AM, and FM, etc.
- 50 ohm input/output impedance
- High reliability and ruggedness

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

Parameter	Symbol	Min	Typ	Max	Units
Operating Frequency	BW	1200		1600	MHz
Output Power CW	P_{SAT}		50		Watt
Power Gain	G_P		48		dB
Gain Flatness	ΔG_P		±2.5		dB
Harmonics @ POUT =20W	H		-15		dBc
Spurious Signals	Spur		-60		dBc
Input Return Loss	S_{11}			-10	dB
Operating Voltage	V_{DC}	24	28	32	Volt
Current Consumption @ POUT = 50W	I_{DD}		8		Amp
Power add efficiency	Eff		30		%
Current Consumption @ Shutdown	I_{SD}		0.1		Amp
Switching Speed	TON/OFF		2		uS
RF Input to Output Isolation(During OFF State)	Isolation		85		dBc
In/Output Impedance	Impedance		50		Ω

MECHANICAL SPECIFICATIONS

Parameter	Value	Units	Notes
Dimensions	140×85×20.5 [5.51×3.35×0.81]	mm [inch]	Max
Weight	0.65 [1.4]	kg [lbs]	Max
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 Case Temperature	-20		60	°C	
Storage Temperature	-25		65	°C	Storage
Relative Humidity (non-condensing)			95	%	

Absolute Maximum Rating

Input RF drive level without damage	+10 dBm (Max)
Load VSWR @ POUT =20W	∞ @ all load phase & amplitude for duration of 1 minute; 3:1 @ all load phase & amplitude continuous

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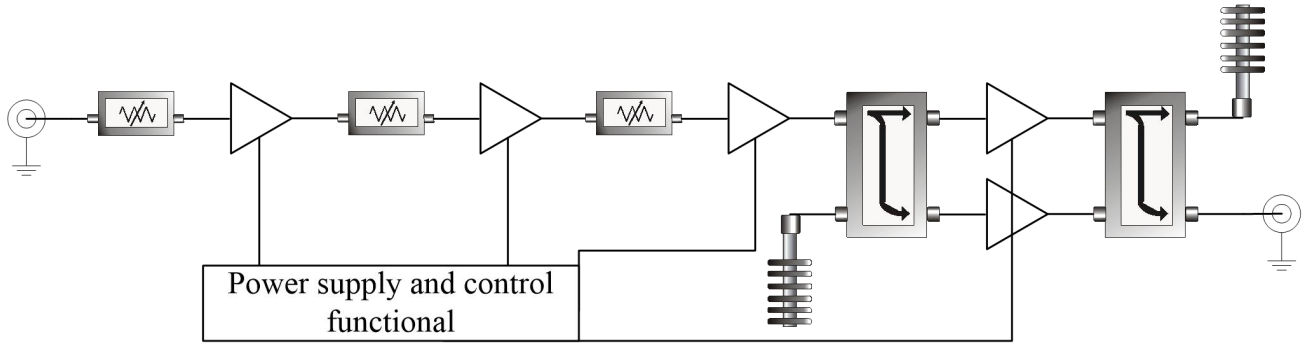
Over Temperature	105°C @ heatsink [restored @ 80°C]

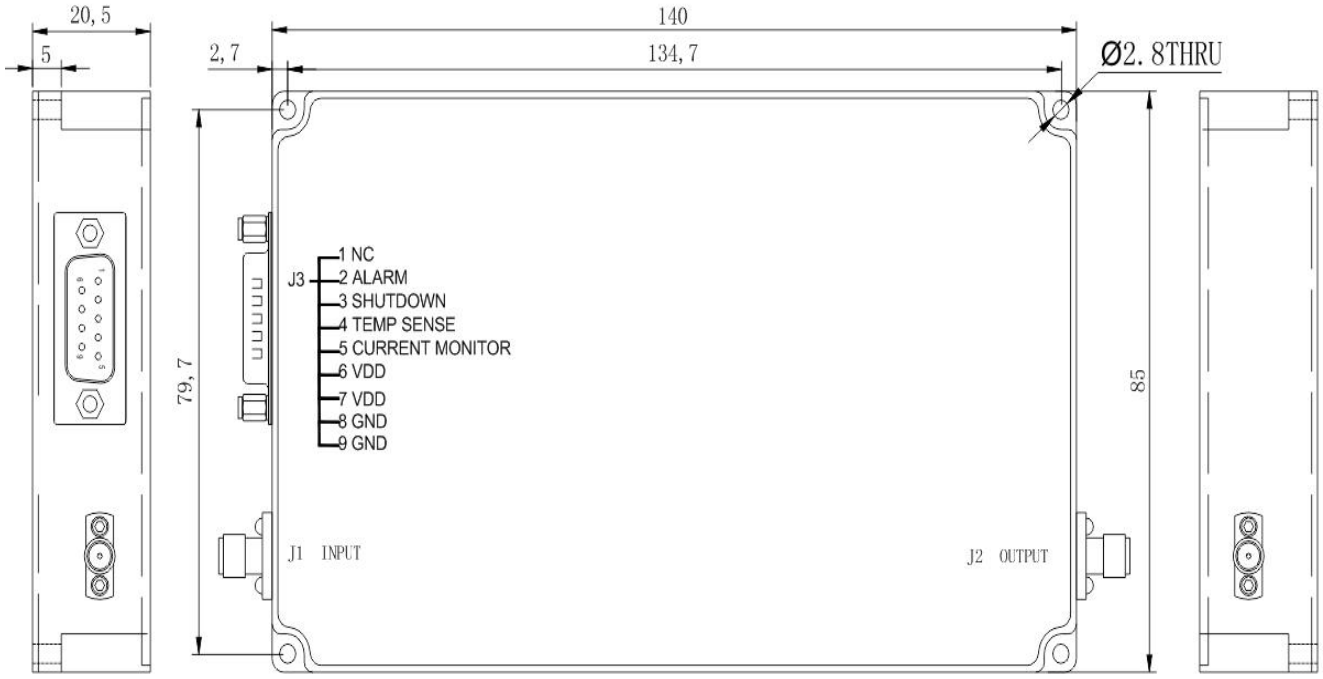
DC INTERFACE CONNECTOR

Pin #	Description	Specifications
1	N/C	No electrical connection
2	Alarm	Amplifier Alarm indicator: Normally TTL Low
3	Shutdown	Amplifier Disable: TTL Logic High (3.3V) (Internally Pulled-Low)
4	Temperature Sense	Analog voltage relative to Module's Temperature @ 10 mV/°C
5	Current Monitor	Analog voltage relative to IDD @ 100mV per Ampere
6	VDD	28VDC
7	VDD	28VDC
8	GND	Ground
9	GND	Ground

Functional Diagram



OUTLINE DRAWING (All dimensions in mm)



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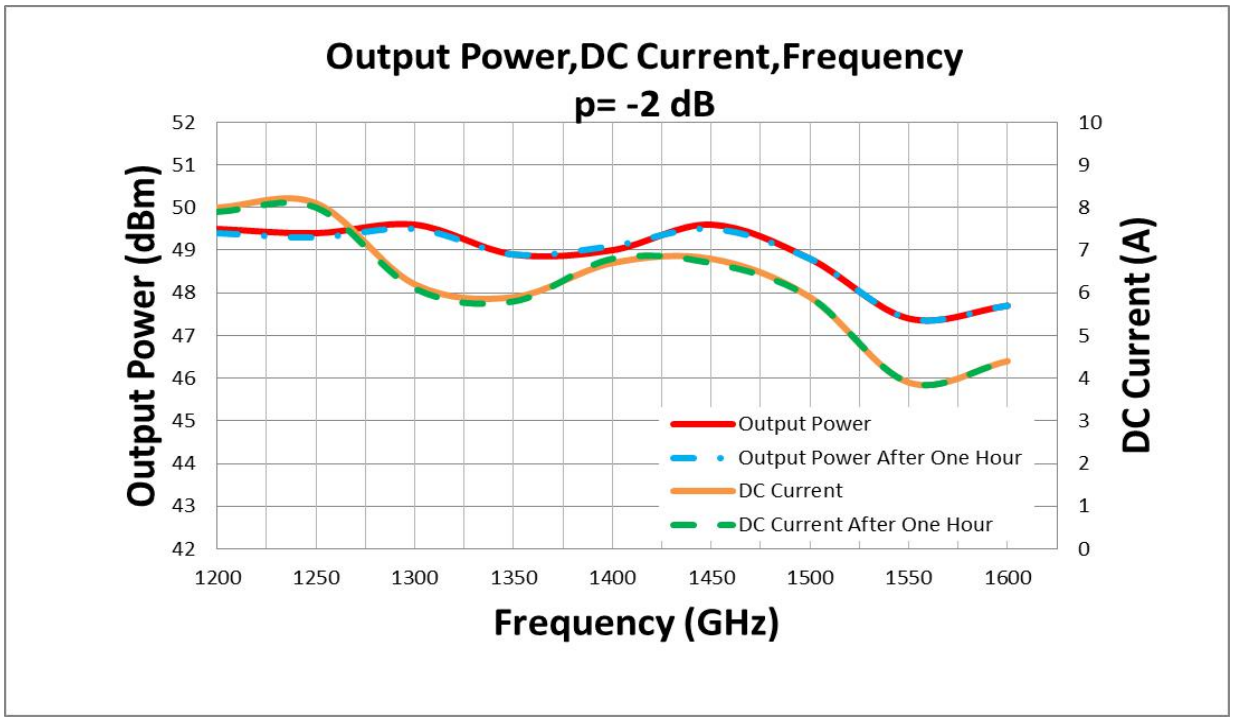
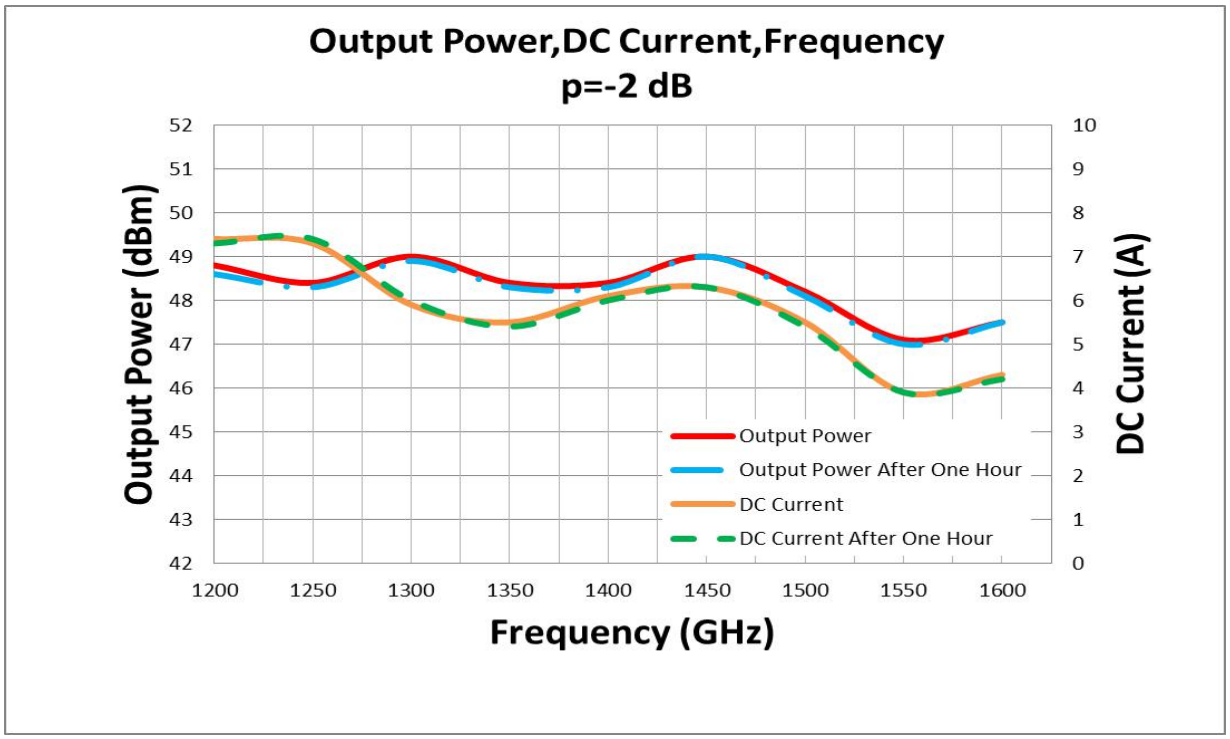
TYPICAL PERFORMANCE PLOTS (For Reference Only)

Graph1: Output Power(Low temp.-20±3℃)



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



1200-1600MHz/50Watt/Module

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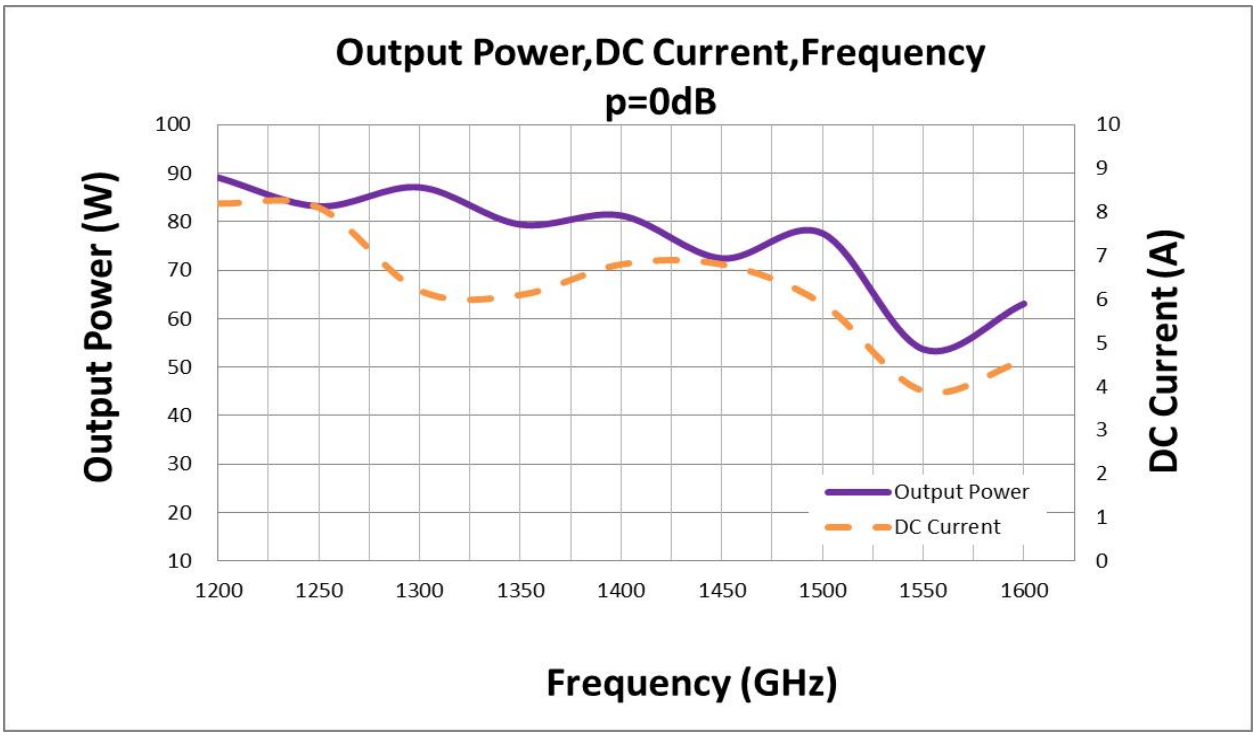
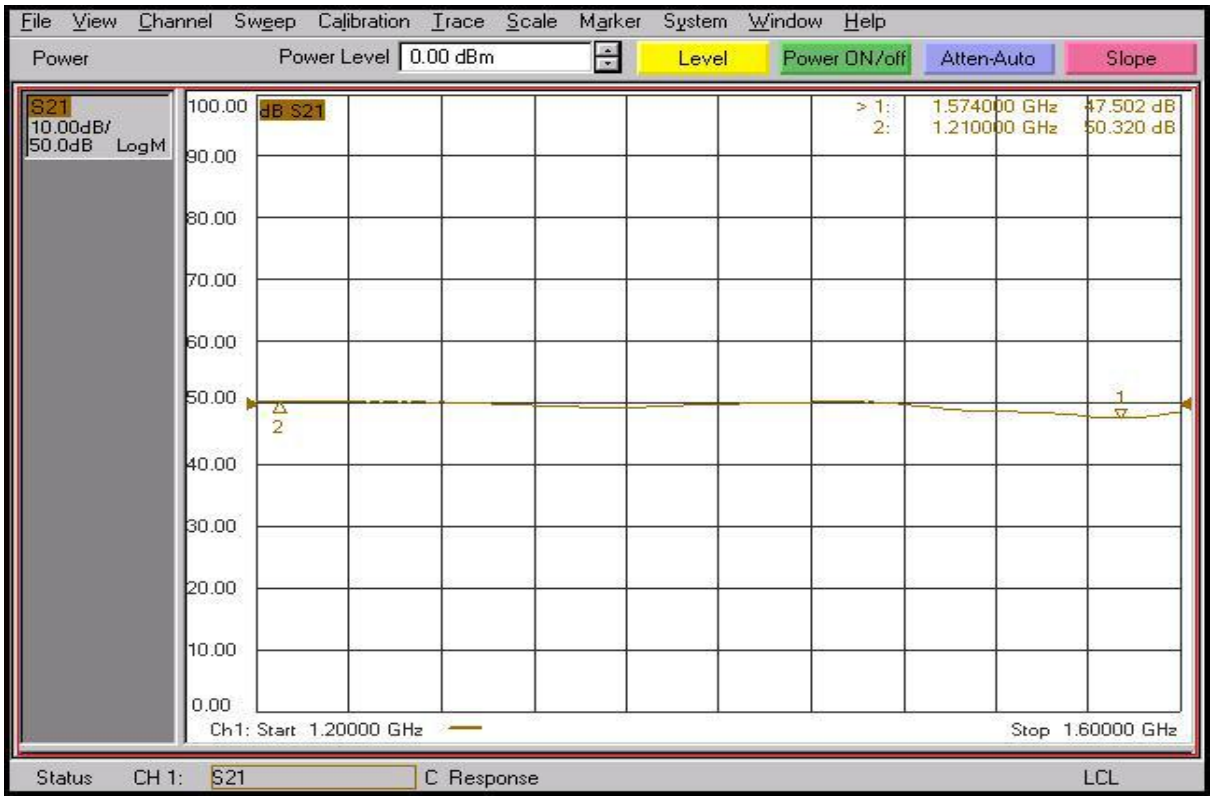
Graph3: Output Power(Normal temp.+25±3℃)



Power Gain:



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Input Return Loss：

Note: Adequate heatsink required.