



1.4-1.9GHz/110Watt/Module

Model Number: OC-NPA1.4-1.9K110W

The model OC-NPA1.4-1.9K110W is a multi-octave high power amplifier operating between 1.4GHz and 1.9GHz and offering a wide dynamic Range with 110 Watts typical saturated power. The employment of gallium nitride 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:

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

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

Parameter	Symbol	Minimum	Typical	Maximum	Units
Operating Frequency	BW	1.4		1.9	GHz
RF Output Power P1	P1		110		Watt
Power Gain	Gp		51		dB
Power Gain Flatness	Δ Gp		± 1.5		dB
Input Return Loss	S ₁₁			-10	dB
Harmonics @80W	H		-10		dBc
Spurious Signals	Spur		-55		dBc
In/Output Impedance			50		Ω
Operating Voltage	V _{DC}	24	28	32	Volt
DC Current @100W	I _{DD}		13		Amp
Switching Time @1kHz TTL	T _{on/off}		2	5	uSec

MECHANICAL SPECIFICATIONS

Parameter	Value	Units	Limits
Dimensions	200x150x30 [7.87x5.9x1.18]	mm [inch]	Maximum
Weight	2.5 [5.5]	kg [lbs]	Maximum
RF Connectors Input	SMA, Female		
RF Connectors Output	Type-N, 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	+5 dBm (Max)
Load VSWR @ POUT =80W	∞ @ all load phase & amplitude for duration of 1 minute; 3:1 @ all load phase & amplitude continuous
Thermal Overload	85°C @ heatsink [restored @ 60°C]



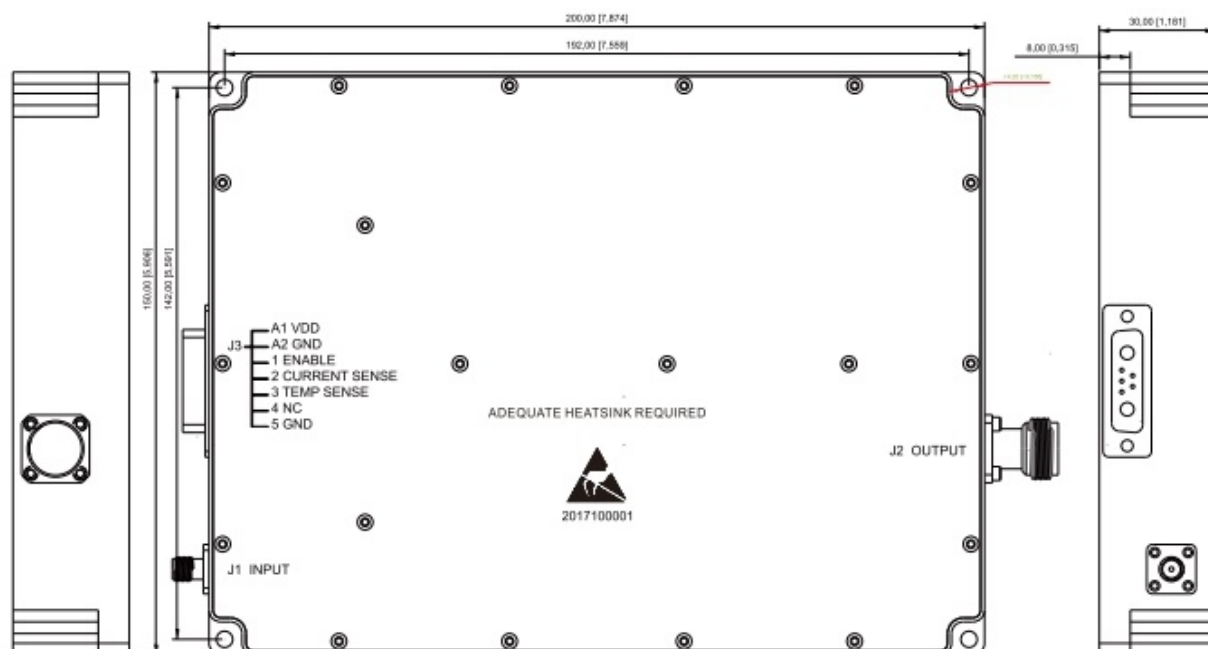
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DC INTERFACE CONNECTOR

Pin #	Description	Specifications
A1	VDD	28V _{DC}
A2	GND	Ground
1	ENABLE	Amplifier Enable: TTL Logic High (3.3V) (Internally Pulled-Low)
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	NC	Not Connect
5	GND	Ground

OUTLINE DRAWING (All dimensions in mm [inch])



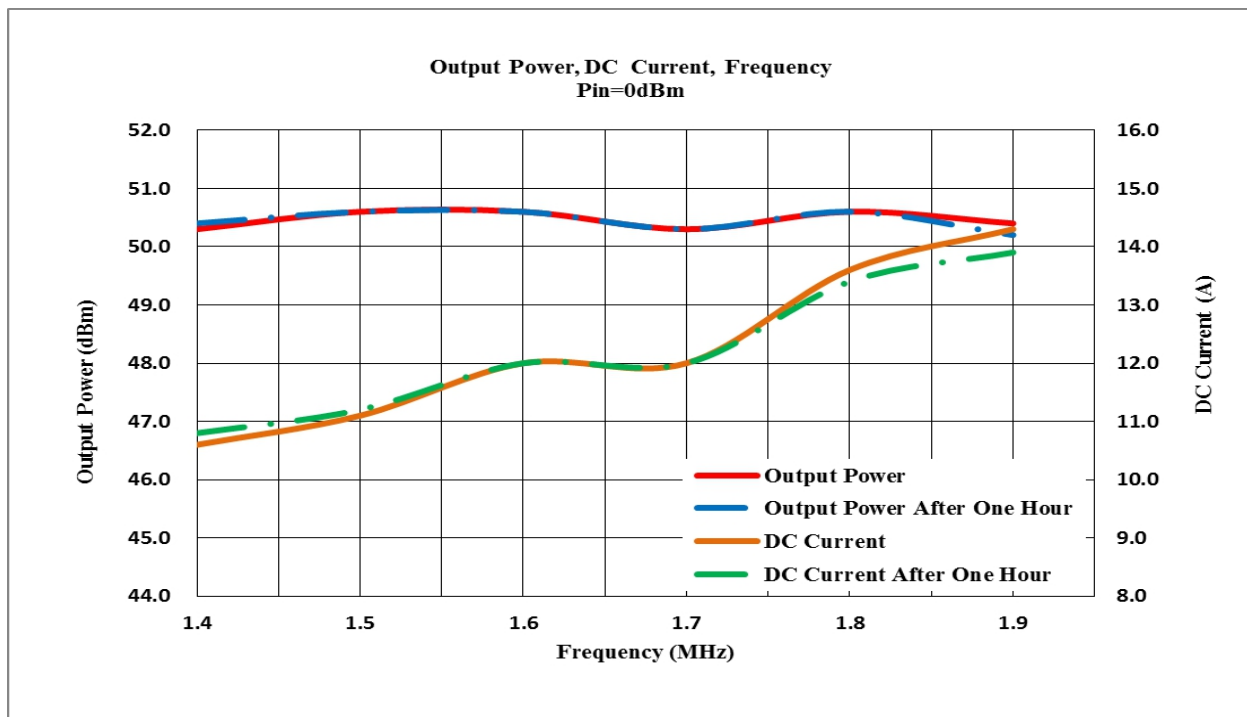


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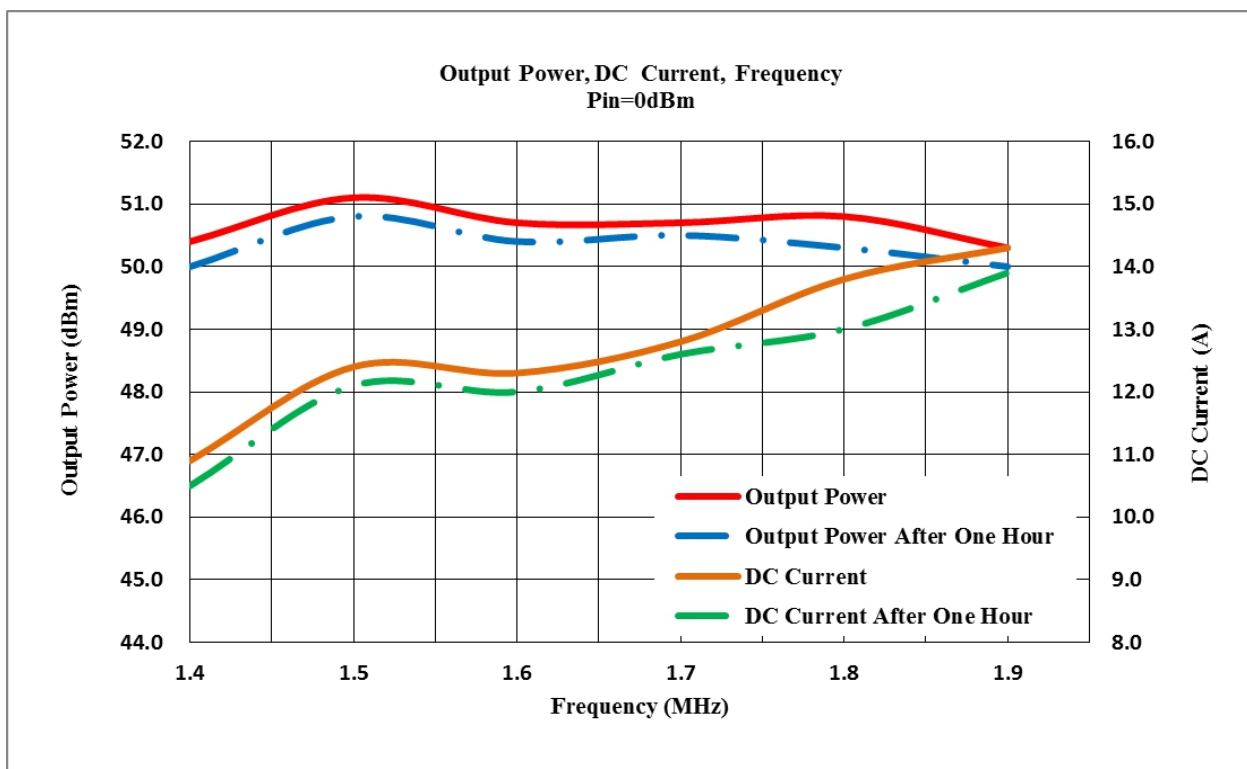
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TYPICAL PERFORMANCE PLOTS (For reference only)

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

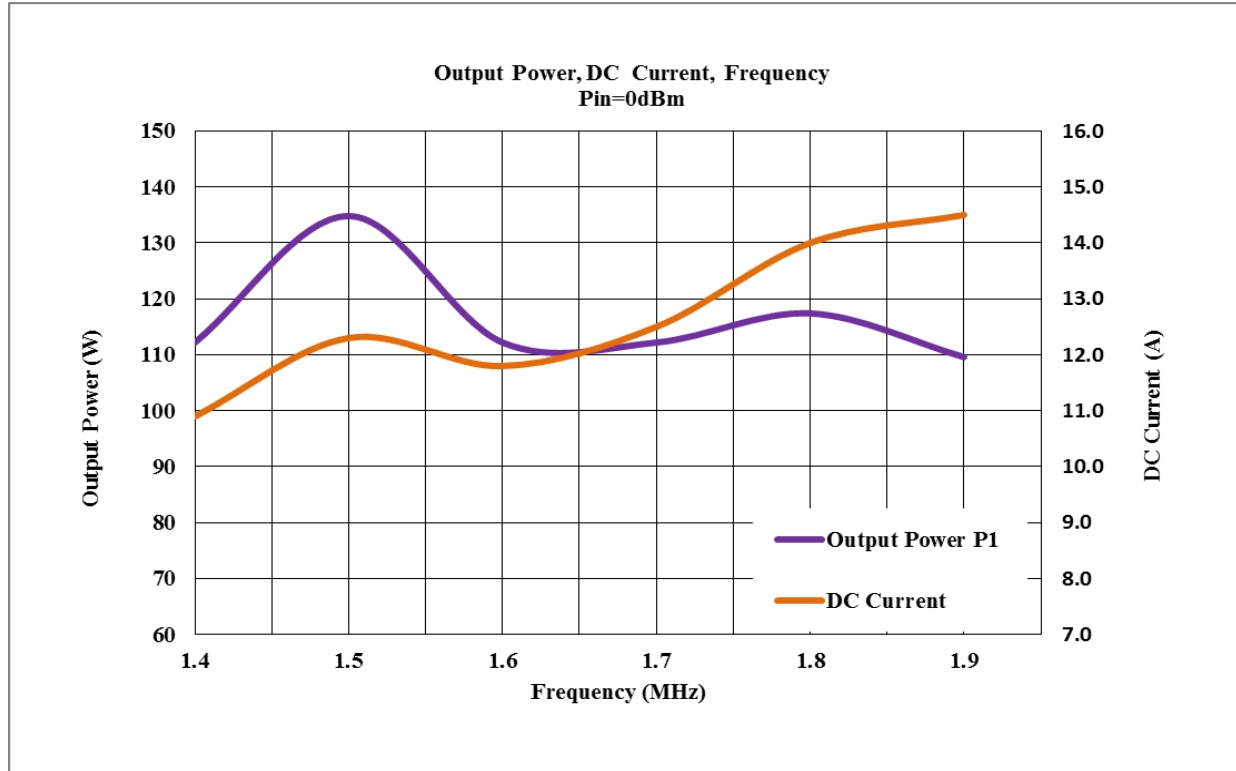


Graph2: Output Power (High temp. $+60\pm 3^{\circ}\text{C}$)

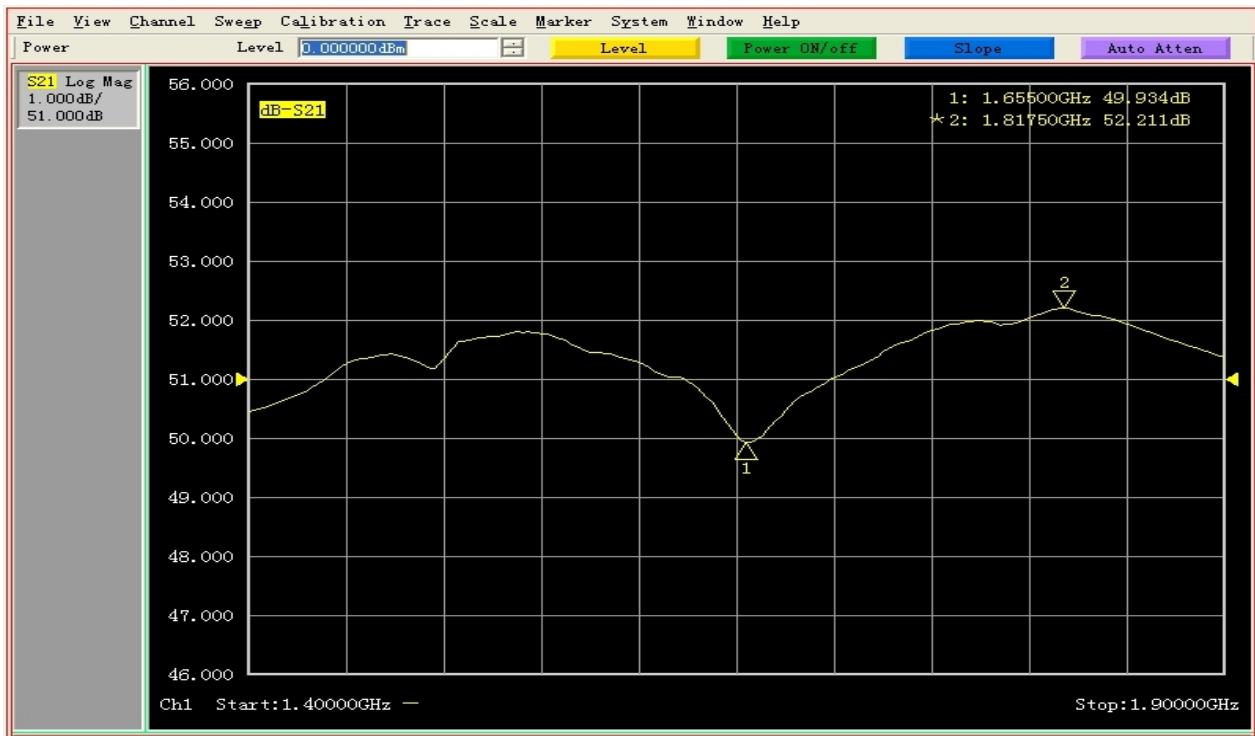


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Graph3: Output Power (Normal temp. +25±3°C)



Power Gain:

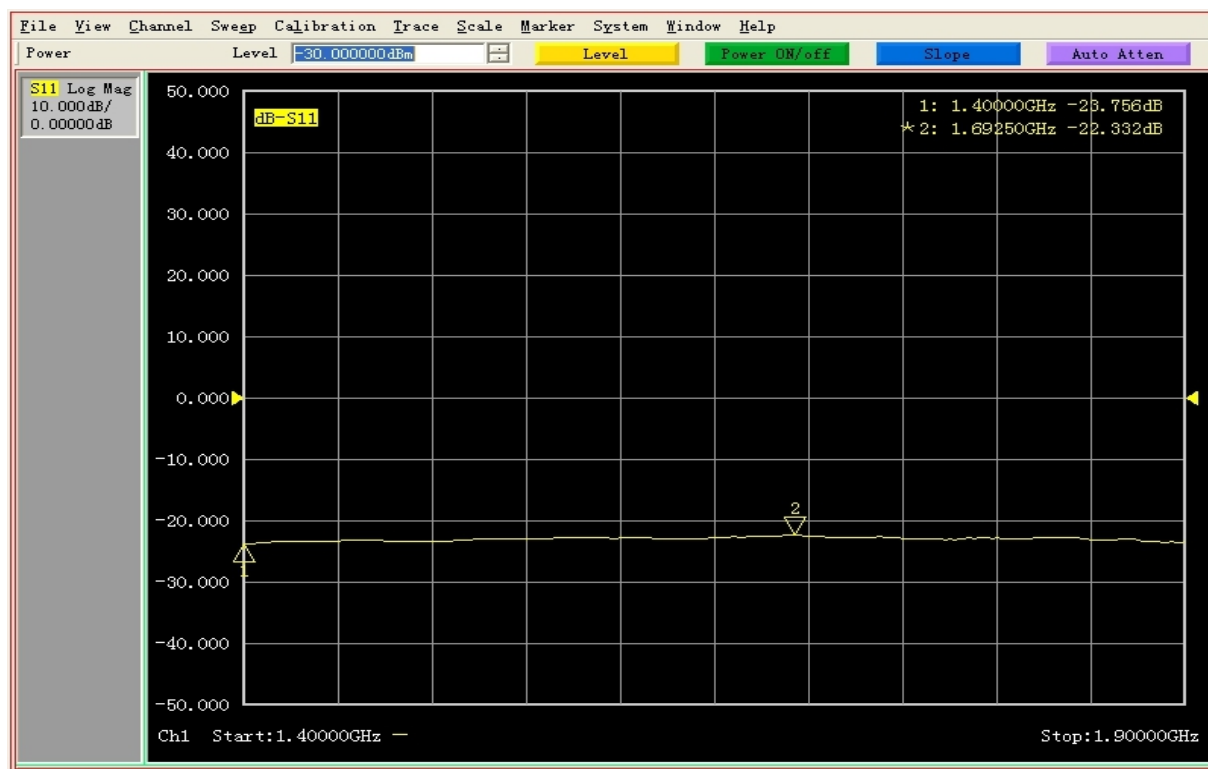




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Input Return Loss:

**Note:** Adequate heatsink required.