

1000-3000 MHz/100Watts/Module

Model Number: OC-PA1-3K100W

The OC-PA1-3K100W is a multi-octave high power amplifier operating between 1000 MHz and 3000 MHz and offering a wide dynamic Range with 100 Watts saturated power. The employment of advanced high power GaN devices in manufacturing ensures this module exceptional power performance, long term reliability and high efficiency. It's suitable for multi-octave broadband high power RF, MF & HF & VHF linear applications.

FEATURES:

- Broadband & High power;
- High Efficiency;
- Extraordinary Harmonic Control;
- Low Distortion
- Smaller Size and Lighter Weight

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

Parameter	Symbol	Min	Typ	Max	Units
Operating Frequency	Bw	1000		3000	MHz
RF Output Power CW	P _{sat}		100		Watt
Power Gain	G _P		50		dB
Gain Flatness	ΔG _P		±2.5		dB
Harmonics @ POUT = 80W	H		-15		dBc
Spurious Signals	Spur		55		dBc
Input Return Loss	S ₁₁			-10	dB
Operating Voltage	V _{DC}	26	28	30	Volt
Current Consumption @ POUT = 100W	I _{DD}		18		Amp
Current Consumption @ Shutdown	I _{SD}				Amp
Switching Speed	TON/OFF		2		μS
In/Output Impedance	Impedance		50		Ω

MECHANICAL SPECIFICATIONS

Parameter	Value	Units	Notes
Dimensions	200x 120 x 25 [7.9x4.7x1]	mm [inch]	Max
Weight	2.5 [5.5]	kg [lbs]	Max
RF Connectors Input	Type-SMA, Female		
RF Connectors Output	Type-SMA, Female		
DC Interface Connector	Hybrid, D-Sub 7-Pin, Male		
Cooling	External Heatsink required (Not Supplied)		

ENVIRONMENTAL CHARACTERISTICS (Design to Meet)

Parameter	Minimum	Typical	Maximum	Units	Notes
Operating Temperature	-40		55	°C	
Non-operating Temperature	-45		60	°C	Storage
Relative Humidity (non-condensing)			95	%	

ABSOLUTE MAXIMUM RATING

Input RF drive level without damage	+5 dB _m (Max)
Load VSWR @ POUT =100W	∞@all load phase & amplitude for duration of 1 minute; 3:1 @all load phase & amplitude continuous
Over Temperature	85°C @heatsink [restored @55°C]

DC INTERFACE CONNECTOR

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Pin #	Description	Specifications
A1	VDD	28VDC
A2	GND	Ground
1	Shutdown	Amplifier Disable: TTL Logic High (5V) (Internally Pulled-Low)
2	Current sense	Analog voltage relative to IDD @ 100mV per Ampere
3	Temperature Sense	Analog voltage relative to Module's Temperature @ 10 mV/°C
4	GND	Ground
5	N/C	No electrical connection

OUTLINE DRAWING (All dimensions in mm)



TYPICAL PERFORMANCE PLOTS (For reference only)



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