

500-2500MHz/20Watt/Module

Model Number: OC-PA05-2.5K20W

The model OC-PA05-2.5K20W is a multi-octave high power amplifier operating between 500 MHz and 2500 MHz and offering a wide dynamic Range with 20 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 multi octave broadband high power RF linear applications.

FEATRUES:

- Suitable for RF, L&S linear applications
- Small size and light weight
- Unconditional stability and ruggedness
- Built-in control, and protection circuits

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

Parameter	Symbol	Min	Typ	Max	Units
Operating Frequency	BW	500		2500	MHz
RF Output Power	Pout		20		Watt
Power Gain	Gp		43		dB
Power Gain Flatness	Δ Gp		±2		dB
Input Return Loss	S ₁₁			-10	dB
Harmonics @10W	H		-15		dBc
Spurious Signals	Spur		-60		dBc
Switching Speed	T _{ON/OFF}		2		μS
In/Output Impedance	Impedance		50		Ω
Operating Voltage	V _{DC}	24	28	32	Volt
Current Consumption @ P _{OUT} = 20W	I _{DD}		3	5	Amp
RF Input to Output Isolation(During OFF State)	Isolation		85		dBc

MECHANICAL SPECIFICATIONS

Parameter	Value	Units	Notes
Dimensions	140x85x20.5 [5.5x3.3x0.8]	mm [inch]	Maximum
Weight	0.6 [1.32]	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	-40		85	°C	
Non-operating Temperature	-40		80	°C	Storage
Relative Humidity (non-condensing)			95	%	

Absolute Maximum Rating

Input RF drive level without damage	+5 dBm (Max)
Load VSWR @ P _{OUT} =15W	∞ @ all load phase & amplitude for duration of 1 minutes; 3:1 @ all load phase & amplitude continuous

DC INTERFACE CONNECTOR

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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

OUTLINE DRAWING (All dimensions in mm[inch])



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TYPICAL PERFORMANCE PLOTS (for reference only)

