

1200-1800MHz/500Watt/Module

Model: OC-PPA1.2-1.8K500W

Model OC-PPA1.2-1.8K500W is an L-band high power pulsed amplifier operating in the 1200 to 1800MHz frequency range and offering pulsed width up to 10 μ S with duty cycle up to 10%. The amplifier provides in excess of 500Watts peak output power into a 50 Ohm load. 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 high power pulse applications or Radar system.

FEATURES:

- Small Size and light weight
- Power added efficiency > 15
- Digital interface option
- pulse width/duty cycle protection
- Over voltage, and over current protection

ELECTRICAL SPECIFICATIONS @ +50.0VDC, 25°C, 10 μ S, 10%, 50 Ω System

Parameter	Symbol	Min	Typ	Max	Units
Operating Frequency	BW	1200		1800	MHz
RF Output Power	PPK		500		Watt
Duty Cycle	Duty Cycle			10	%
Pulse Width	PWIDTH	2		500	μ S
PRI	PRI	200		1000	μ S
Harmonics @ Pout = 300W	H		-15		dBc
Spurious Signals	Spur		-55		dBc
RF Input Power @ Pout = 500W	PIN		0		dBm
Input Return Loss	S11		-10		dB
Rise /Fall time (Pulse Performance)	TRISE/FALL/OFF(10-90)		50		nS
Switching Speed	TON/OFF		2	5	μ S
Power droop	Droop		1		dB
In/Output Impedance	Impedance		50		Ω
Operating Voltage	VDC	48	50	52	Volt
Peak Current Consumption @ Pout = 300W	IDD			20	Amp
Average Current Consumption @ Pout = 300W	IDD		6		Amp

MECHANICAL SPECIFICATIONS

Parameter	Value	Units	Notes
Dimensions	230x 150 x35 [9.05x5.9x1.38]	mm [inch]	Max
Weight	3 [6.6]	kg [lb]	Max
RF Connectors Input	Type-SMA, Female		
RF Connectors Output	Type-N, Female		
DC Interface Connector	Hybrid, D-Sub 7-Pin, Male		
Cooling	External Heatsink Required (Optional supplying)		

ENVIRONMENTAL CHARACTERISTICS (Design to Meet)

Parameter	Minimum	Typical	Maximum	Units	Notes
Operating Temperature	-10		60	°C	
Non-operating Temperature	-20		65	°C	Storage
Relative Humidity (non-condensing)			95	%	

1200-1800MHz/500Watt/Module

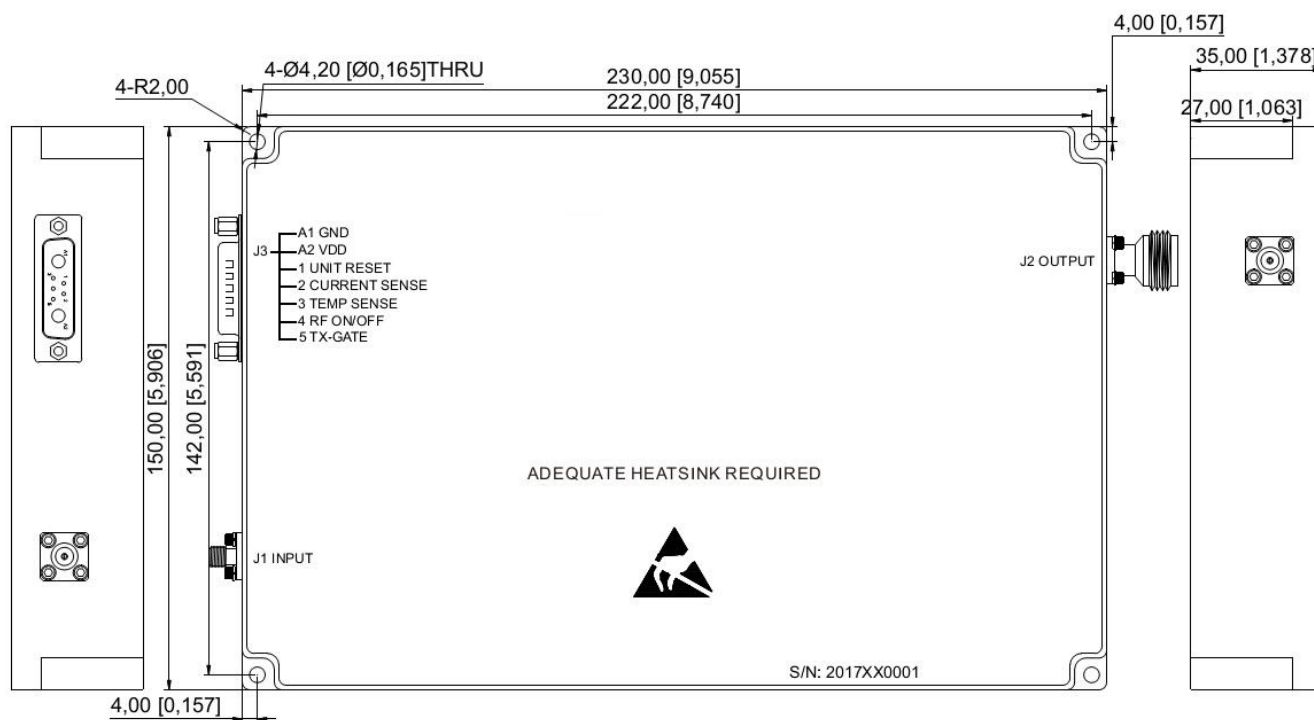
Model: OC-PPA1.2-1.8K500W

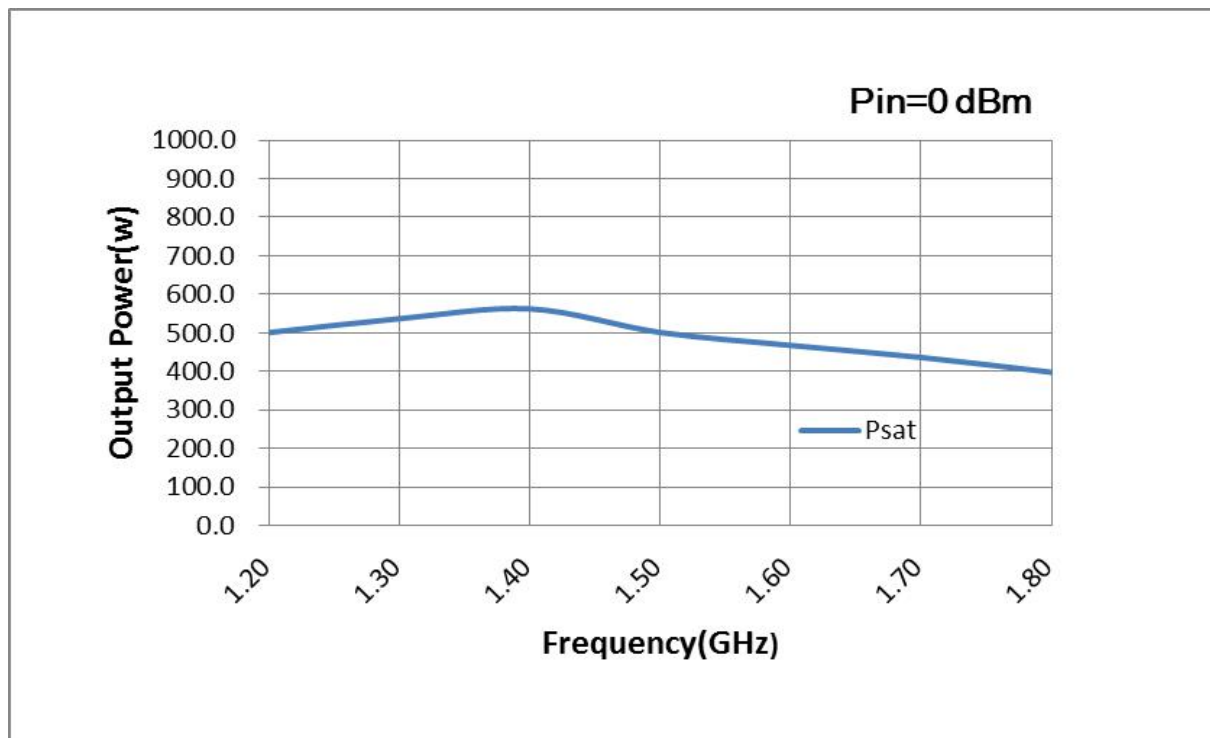
ABSOLUTE MAXIMUM RATING

Input RF drive level without damage	+5dBm@ Pout Pulse (Max)
Load VSWR @ POUT =300W	5:1 @ all load phase & amplitude for duration of 1 minute; 3:1 @ all load phase & amplitude continuous
Over Temperature	85°C @ heatsink [restored @ 60°C]

DC INTERFACE CONNECTOR

Pin #	Description	Specifications
A1	GND	Ground
A2	VDD	50VDC
1	UNIT RESET	Amplifier Reset: TTL Logic High (3.3-5V)
2	CURRENT SENSE	Analog voltage relative to IDD @ 100mV per Ampere
3	TEMP SENSE	Analog voltage relative to Module's Temperature @ 10 mV/°C
4	RF ON/OFF	RF On: TTL Logic High (3.3-5V)
5	TX-GATE	TX-GATE On: TTL Logic High (3.3-5V)

OUTLINE DRAWING (All dimensions in mm [inch])

**1200-1800MHz/500Watt/Module****Model: OC-PPA1.2-1.8K500W****TYPICAL PERFORMANCE PLOTS****Note:**

1. Adequate heatsink required.