



MODEL MPM9298P53A
9.2~9.8GHz
200 Watt
X-BAND GAN PULSED POWER AMPLIFIER

Advantages:

- Operating Frequency :9.2~9.8GHz
- PPK:200W Typical
- Supply Voltage:+32V
- 50 Ohms Input and Output Matched

ELECTRICAL SPECIFICATIONS @ +32.0VDC, 25° C, 50Ω, 100 μ S, Duty Cycle=25%

Parameter	Symbol	Min	Typ	Max	Units
Operating Frequency	BW	9.2		9.8	GHz
RF Output Power	PPK		200		Watt
Duty Cycle	Duty Cycle			5	%
Pulse Width	P _{WIDTH}	0.5		300	μs
PRI	PRI	40		1500	μs
Harmonics @ Pout = 150W	H		-40		dBc
Spurious Signals	Spur		-55		dBc
RF Input Power @ P _{SAT}	P _{IN}	0		1	dBm
Input Return Loss / Output Return Loss	S ₁₁ /S ₂₂		-10		dB
Rise/Fall time(Pulse performance)	T _{RISE/FALL/OFF(10-90)}		100		ns
Switching Speed	T _{ON/OFF}		2	5	μs
Power droop	Droop		1		dB
In/Output Impedance	Impedance		50		Ω
Operating Voltage	V _{DC}	30	32	34	Volt
Peak Current Consumption @Pout=100W	I _{DD}			20	Amp
Aeaverage Current Consumption@Pout=100W	I _{DD}		8		Amp
Power Added Efficiency	Efficiency		12		%

MECHANICAL SPECIFICATIONS

Parameter	Value	Units	Notes
Dimensions	180x125x25 [7.09x4.92x0.98]	mm [inch]	Maximum
Weight	2 [4.4]	kg [lbs]	Maximum
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		60	°C	
Non-operating Temperature	-45		85	°C	Storage
Relative Humidity (non-condensing)			95	%	



ABSOLUTE MAXIMUM RATING

Input RF drive level without damage	+5 dBm (Max)
Load VSWR @ P _{OUT} =150W	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]

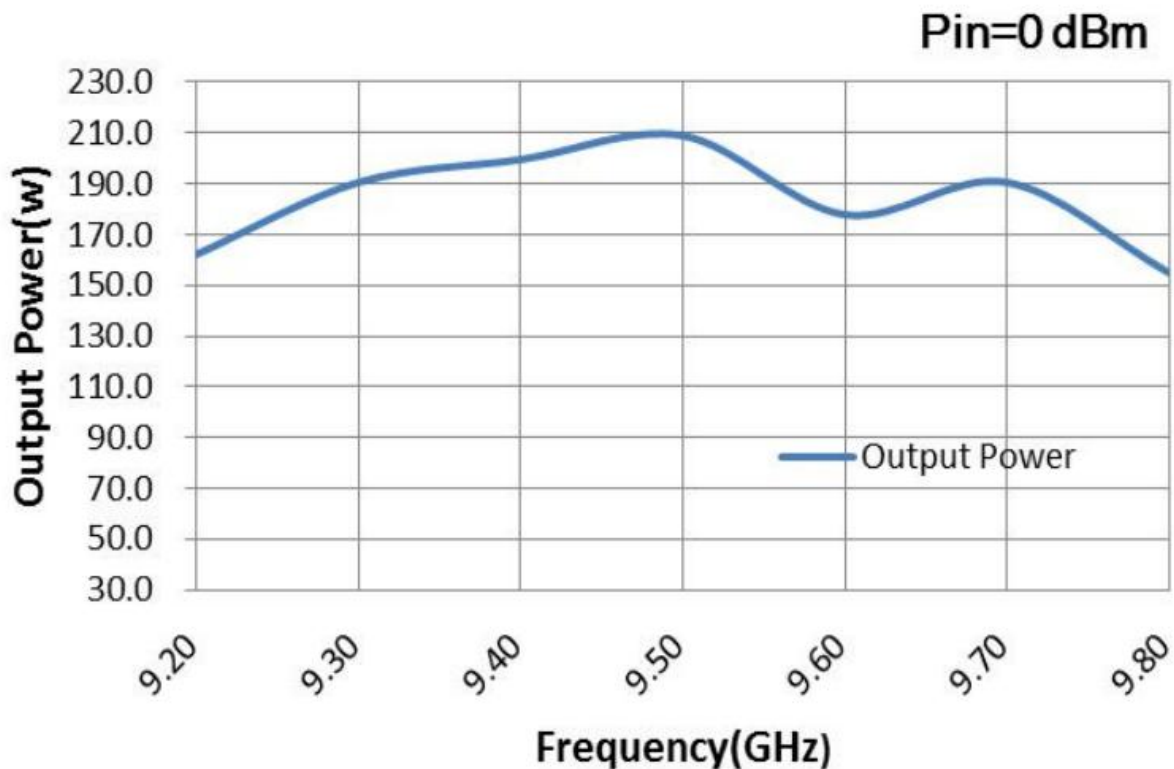
POWER INTERFACE CONNECTOR

Hybrid Male D-Sub is on the housing

Pin#	Name	Specifications
A1	GND	Ground
A2	VDD	32V _{DC}
1	RF ON/OFF	RF On: TTL Logic High (2.8-5.5V) Amplifier Radiate / To forbid radiate
2	TX-GATE	TX-GATE On:TTL Logic High (2.8-5.5V) Amplifier Standby / operating
3	CURRENT SENSE	Analog voltage relative to I _{DD} @ 100mV per Ampere
4	TEMP SENSE	Analog voltage relative to Module's Temperature @0.5V+10 mV/°C
5	GND	Ground

TYPICAL PERFORMANCE PLOTS (FOR REFERENCE ONLY)

Output Power (Normal temp. +25±3°C)



Note: Adequate heatsink required.

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