



**MODEL MPM2731P60A**  
**2.7~3.1GHz**  
**1000 WATTS**  
**S-BAND PULSED POWER RF AMPLIFIER**

**Advantages:**

- Operating Frequency :2.7~3.1GHz
- Power Gain:60dB Typical
- Psat:1000W Typical
- Supply Voltage:+48V
- 50 Ohms Input and Output Matched

**ELECTRICAL SPECIFICATIONS @ +48VDC, 25°C, 50Ω**

Parameter	Symbol	Min	Typ	Max	Units
Operating Frequency	BW	2.7		3.1	GHz
RF Output Power	P <sub>PK</sub>	800	1000		Watt
Duty Cycle	Duty Cycle			10	%
Pulse Width	P <sub>WIDTH</sub>	2		100	μS
PRI	PRI	70		1000	μS
2 <sup>nd</sup> Harmonics @ Pout = 1000W	H		-20		dBc
Spurious Signals	Spur		-55		dBc
RF Input Power @ Pout = 1000W	P <sub>IN</sub>	-1	0	1	dBm
Input Return Loss	S <sub>11</sub>			-10	dB
Rise /Fall time (Pulse Performance)(10-90%)	T <sub>RISE/FALL</sub>		100		nS
Switching Speed	T <sub>ON/OFF</sub>		2	5	μs
Power droop	Droop		1		dB
In/Output Impedance	Impedance		50		Ω
Operating Voltage	V <sub>DC</sub>	46	48	50	Volt
Peak Current Consumption @Pout=1000W	I <sub>DD</sub>			35	Amp
Average Current Consumption@Pout=1000W	I <sub>DD</sub>		8		Amp
Power Added Efficiency	Efficiency		25		%

**MECHANICAL SPECIFICATIONS**

Parameter	Value	Units	Notes
Dimensions	300x250x30 [11.81x9.84x1.18]	mm [inch]	Maximum
Weight	8 [17.64]	kg [lbs]	Maximum
RF Connectors Input	SMA, Female		
RF Connectors Output	Type -N, Female		
DC Interface Connector	D-Sub 9-Pin, Male		
Cooling	External Heatsink		

**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	+10 dBm (Max)
Load VSWR @ P <sub>OUT</sub> =1000W	∞ @ all load phase & amplitude for duration of 1 minute; 3:1 @ all load phase & amplitude continuous.
Thermal Overload	85°C shutdown

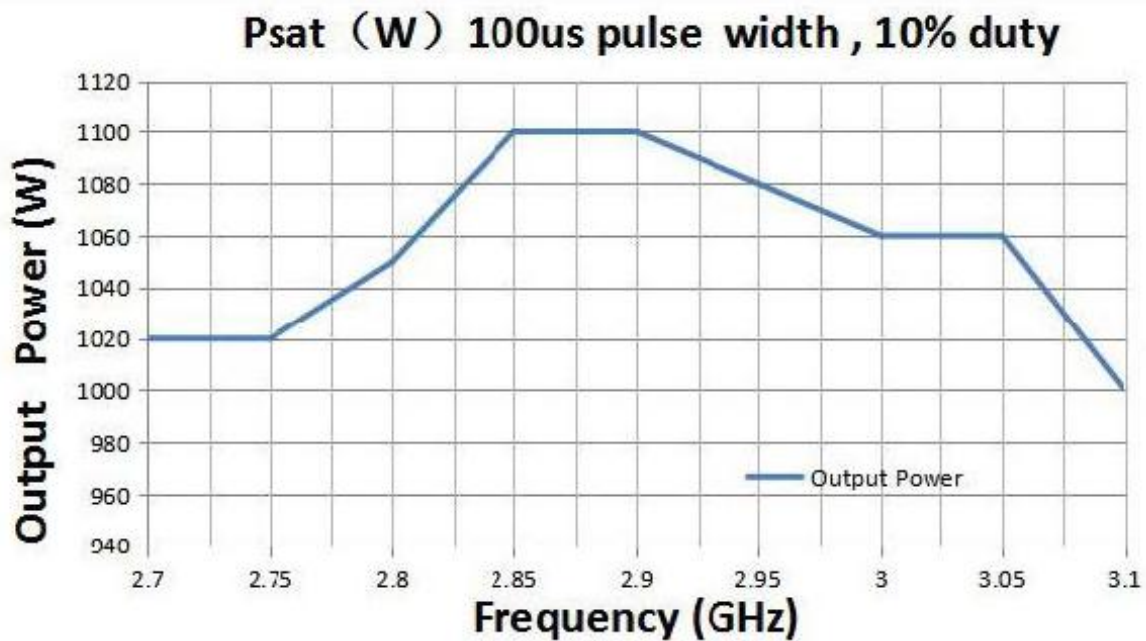
**POWER INTERFACE CONNECTOR**

Male D-Sub is on the housing

Pin #	Description	Specifications
A1	VDD	48VDC
A2	GND	Ground
1	TX-GATE	Amplifier Enable: TTL Logic High (3.3V~5V)
2	CURRENT SENSE	Analog voltage relative to I <sub>DD</sub> @ 100mV per Ampere
3	TEMP SENSE	Analog voltage relative to Module's Temperature @ 0.5V+10 mV/°C
4	RF ON/OFF	RF Switch On: TTL Logic High(3.3V~5V)
5	GND	Ground

**TYPICAL PERFORMANCE PLOTS (FOR REFERENCE ONLY)**

Output Power (Normal temp. +25±3°C)



Note: Adequate heatsink required.