



MODEL MPM2731P63A
2.7~3.1GHz
2000 WATTS
S-BAND PULSED POWER RF AMPLIFIER

Advantages:

- Operating Frequency :2.7~3.1GHz
- Power Gain:63dB Typical
- P_{PK}:2000W Typical
- Supply Voltage:+50V
- 50 Ohms Input and Output Matched

ELECTRICAL SPECIFICATIONS @ +50.0VDC, 25°C, 10μS, 10%, 50Ω

Parameter	Symbol	Min	Typ	Max	Units
Operating Frequency	BW	2.7		3.1	GHz
RF Output Power	P _{PK}		2000		Watt
Duty Cycle	Duty Cycle			10	%
Pulse Width	P _{WIDTH}	0.5		10	μS
PRI	PRI	50		1000	μS
Harmonics @ Pout = 1000W	H		-30		dBc
Spurious Signals	Spur		-55		dBc
RF Input Power @ Pout = 2000W	P _{IN}		0		dBm
Input Return Loss	S ₁₁		-10		dB
Rise /Fall time (Pulse Performance)(10-90%)	T _{RISE/FALL}		100		nS
Switching Speed	T _{ON/OFF}		2		μs
Power droop	Droop		1		dB
In/Output Impedance	Impedance		50		Ω
Operating Voltage	V _{DC}	48	50	52	Volt
Peak Current Consumption @Pout=2000W	I _{DD}			120	Amp
Average Current Consumption @Pout=2000W	I _{DD}		24		Amp

MECHANICAL SPECIFICATIONS

Parameter	Value	Units	Notes
Dimensions	300x280x25 [5.91x3.54x0.98]	mm [inch]	Maximum
Weight	6[13.2]	kg [lbs]	Maximum
RF Connectors Input	SMA, Female		
RF Connectors Output	N, 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} =500W	∞ @ all load phase & amplitude for duration of 1 minute; 3:1 @ all load phase & amplitude continuous.
Over Temperature	85°C @ heatsink [restored @ 60°C]

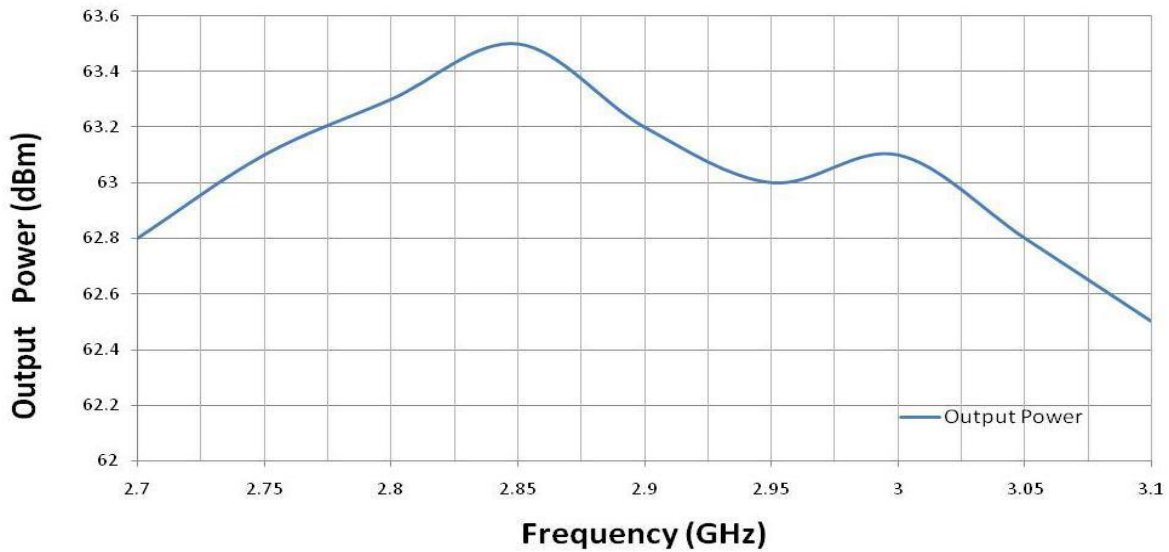
POWER INTERFACE CONNECTOR

Male D-Sub is on the housing

Pin #	Name	Specifications
A1	GND	Ground
A2	VDD	50VDC
1	NC	No electrical connection
2	CURRENT SENSE	Analog voltage relative to I _{DD} @ 100mV per Ampere
3	TEMP SENSE	Analog voltage relative to Module's Temperature @0.5V+10 mV/°C
4	RF ON/OFF	RF On: TTL Logic High (3.3V)
5	ENABLE	Amplifier Enable: TTL Logic High (Internally Pulled-Low)

TYPICAL PERFORMANCE PLOTS (FOR REFERENCE ONLY)

Output Power (Normal temp. +25±3 °C)



Note: Adequate heatsink required.