



MODEL MM80120P50A
8~12GHz
100 WATTS
WIDE BAND POWER RF AMPLIFIER

Advantages:

- Operating Frequency :8~12GHz
- Power Gain:50dB Typical
- Psat:100W Typical
- Supply Voltage:+30V
- 50 Ohms Input and Output Matched

ELECTRICAL SPECIFICATIONS @ +30VDC, 25°C, 50Ω

Parameter	Symbol	Min	Typ	Max	Units
Operating Frequency	BW	8		12	GHz
RF Output Power @Pin=0dBm	P _{SAT}		100		Watt
Power Gain	G _p		50		dB
Power Gain Flatness	Δ G _p		±2		dB
Input Return Loss	S ₁₁			-10	dB
Harmonics @100W	H		-30		dBc
Spurious Signals	Spur		-55		dBc
Switch On/Off@10-90% Time ,1kHz	T _{on/off}		2	5	μS
In/Output Impedance	Impedance		50		Ω
Operating Voltage	V _{DC}	28	30	32	Volt
DC Current @100W	I _{DD}		14		Amp

MECHANICAL SPECIFICATIONS

Parameter	Value	Units	Notes
Dimensions	180x125x25 [7.09x4.92x0.98]	mm [inch]	Maximum
Weight	2.0[4.4]	kg [lbs]	Maximum
RF Connectors Input	SMA, Female		
RF Connectors Output	Type-N, Female		
DC Interface Connector	Hybrid,D-Sub 17-Pin, Male		
Cooling	External Heat sink 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	+10 dBm (Max)
Load VSWR @ P _{OUT} =100W	∞ @ 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 #	Description	Specifications
A1	GND	Ground
A2	VDD	30VDC
1	RS232(-)	Transmit data-R x D
2	GND	Ground
3	N/C	No electrical connection
4	CURRENT SENSE	Analog voltage relative to IDD @ 100mV per Ampere
5	TEMP SENSE	Analog voltage relative to Module's Temperature @ 0.5V+10 mV/°C
6	ENABLE	Amplifier Enable: TTL Logic High (3.3V~5V) (Internally Pulled-Low)
7	N/C	No electrical connection
8	RS232(+)	Transmit data-T x D
9	FORWARD MONITOR	Analog voltage relative to forward power level
10	N/C	No electrical connection
11	REFLECTED POWER	Analog voltage relative to reflected power level
12	VOLTAGE MONITOR	Analog voltage relative to voltage level
13	ALARM	Alarm on @ Low output power.: TTL Logic High (2.8V-5.5V)
14	GND	Ground
15	N/C	No electrical connection

MONITORING PARAMETERS FUNCTION VIA RS232

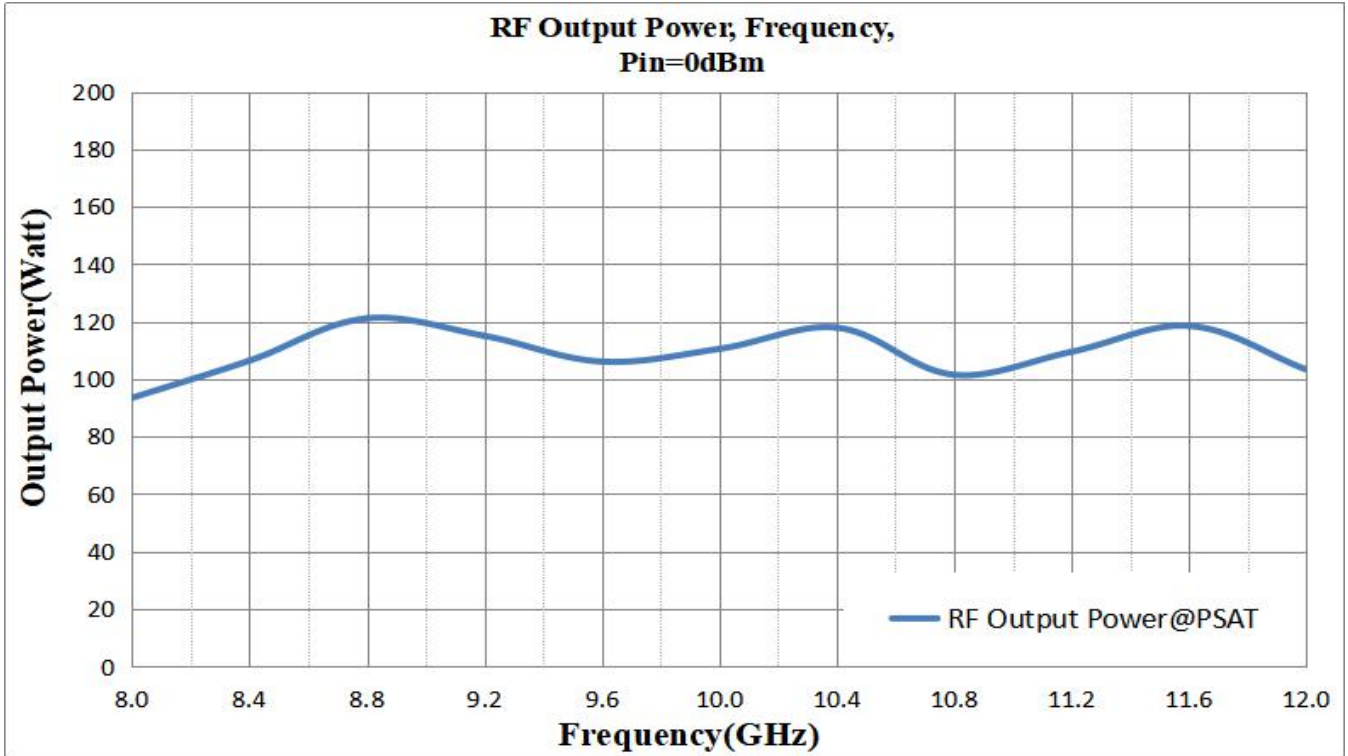
- Forward power
- Reflection power
- Current of power supply
- Temperature

PROTECTION AND WARNING FUNCTION

- Over threshold of VSWR (High VSWR)
- Over threshold of current
- Over threshold of temperature
- Warning low RF output power

TYPICAL PERFORMANCE PLOTS (FOR REFERENCE ONLY)

Output Power (Normal temp. +25±3°C)



Note: Adequate heatsink required.