



**MODEL MM80120P43D**  
**8~12GHz**  
**20 WATTS**  
**WIDE BAND POWER RF AMPLIFIER**

**Advantages:**

- Operating Frequency :8~12GHz
- Power Gain:43dB Typical
- Psat:20W Typical
- Supply Voltage:+28V
- 50 Ohms Input and Output Matched

**ELECTRICAL SPECIFICATIONS @ +28VDC, 25°C, 50Ω**

Parameter	Symbol	Min	Typ	Max	Units
Operating Frequency	BW	8		12	GHz
RF Output Power @Pin=0dBm	P <sub>SAT</sub>		20		Watt
Power Gain	G <sub>p</sub>		43		dB
Power Gain Flatness	Δ G <sub>p</sub>		±2		dB
Input Return Loss	S <sub>11</sub>			-10	dB
Harmonics @15W	H		-25		dBc
Spurious Signals	Spur		-55		dBc
Switch On/Off@10-90% Time	Ton/off		2	5	μS
In/Output Impedance	Impedance		50		Ω
Operating Voltage	V <sub>DC</sub>	26	28	30	Volt
DC Current @15W	I <sub>DD</sub>		5		Amp

**MECHANICAL SPECIFICATIONS**

Parameter	Value	Units	Notes
Dimensions	160x120x25 [6.30x4.72x0.98]	mm [inch]	Maximum
Weight	2.5 [5.51]	kg [lbs]	Maximum
RF Connectors Input	SMA, Female		
RF Connectors Output	SMA, Female		
DC Interface Connector	Hybrid,D-Sub 7-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 @ POUT=15W	∞ @ all load phase & amplitude for duration of 1 minute; 3:1 @ all load phase & amplitude continuous.
Over Temperature	85°C @ heatsink [restored @ 60°C]

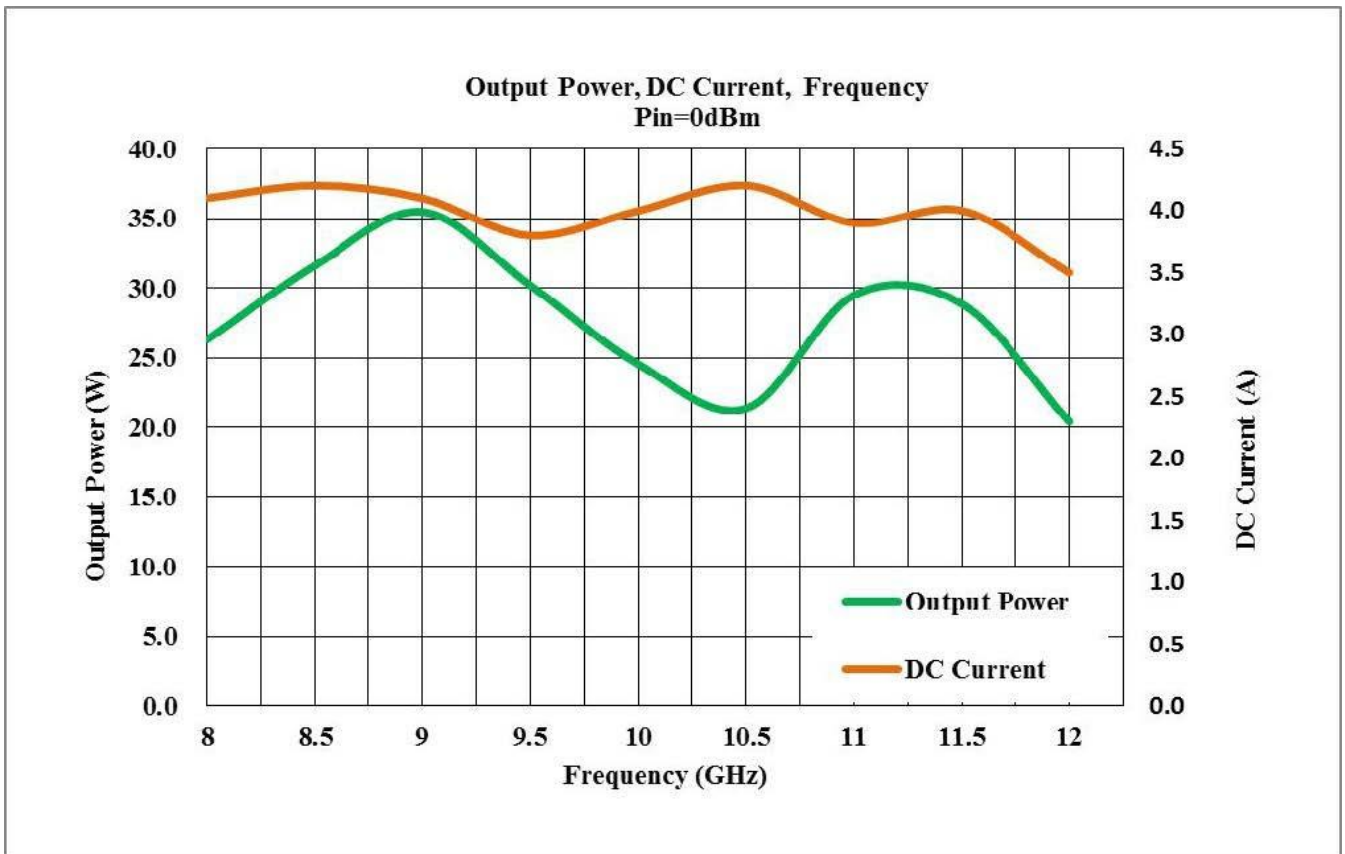
**POWER INTERFACE CONNECTOR**

Male D-Sub is on the housing

Pin #	Description	Specifications
A1	VDD	28VDC
A2	GND	Ground
1	ENABLE	Amplifier Enable: TTL Logic High (3.3V~5V) (Internally Pulled-Low)
2	TEMP SENSE	Analog voltage relative to Module's Temperature @ 0.5V+10 mV/°C
3	CURRENT SENSE	Analog voltage relative to IDD @ 100mV per Ampere
4	NC	No electrical connection
5	GND	Ground

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

Output Power (Normal temp. +25±3°C)



**Note:** Adequate heatsink required.