

**MODEL MM60180P47EC1**  
**6~18GHz**  
**50 WATTS**  
**WIDE BAND POWER RF AMPLIFIER**

**Advantages:**

- Operating Frequency :6~18GHz
- Power Gain:47dB Typical
- Psat:50W 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	6		18	GHz
RF Output Power @Pin=0dBm	P <sub>SAT</sub>		50		Watt
Power Gain	G <sub>p</sub>		48		dB
Power Gain Flatness	Δ G <sub>p</sub>		±2		dB
Input Return Loss	S <sub>11</sub>		-10		dB
2 <sup>nd</sup> Harmonics @P <sub>SAT</sub>	H		-15	-12	dBc
Spurious Signals	Spur			-60	dBc
In/Output Impedance	Impedance		50		Ω
Operating Voltage	V <sub>DC</sub>	26	28	30	Volt
DC Current @50W	I <sub>DD</sub>		18	21	Amp
Switching On/Off@10-90% Time,1kHz	T <sub>ON/OFF</sub>		2	5	μS

**MECHANICAL SPECIFICATIONS**

Parameter	Value	Units	Notes
Dimensions	180x120x25[7.09x4.72x0.98]	mm [inch]	Maximum
Weight	1.3 [2.87]	kg [lbs]	Maximum
RF Connectors Input	SMA, Female		
RF Connectors Output	N, Female		
DC Interface Connector	J29A-25ZKP		
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	+5 dBm (Max)
Load VSWR @ POUT =30W	3:1 @ all load phase & amplitude continuous More than 4:1 may cause PA damage
Over Temperature	85°C @ heatsink [restored @ 60°C]

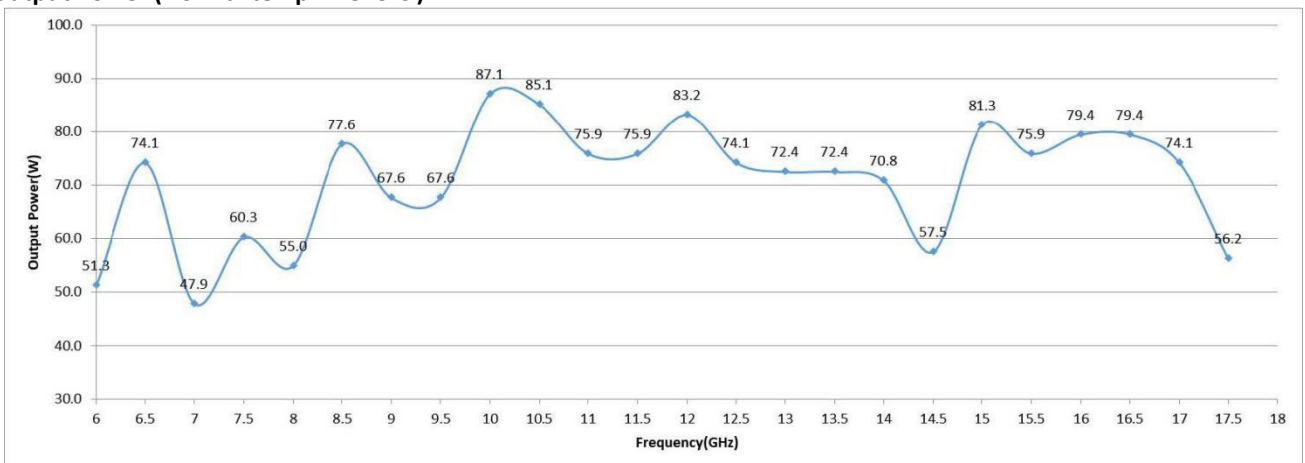
**POWER INTERFACE CONNECTOR**

Pin #	Description	Specifications
1-9	VDD	28VDC
10-19	GND	Ground
20	ENABLE	Amplifier Enable: TTL Logic High (3.3V~5V) (Internally Pulled-Low)
21	CURRENT SENSE	Analog voltage relative to IDD @ 100mV per Ampere
22	CURRENT ALARM	Amplifier Alarm indicator: Normally TTL Low
23	TEMP ALARM	Amplifier Alarm indicator: Normally TTL Low
24	TEMP SENSE	Analog voltage relative to Module's Temperature @ 0.5V+10 mV/°C
25	GND	Ground

Male D-Sub is on the housing

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

**Output Power (Normal temp. +25±3°C)**



**Note:** Adequate heatsink required.