MODEL MM1020P47A
1000～2000MHz
50 WATTS
WIDE BAND POWER RF AMPLIFIER

Advantages:

- Operating Frequency :1000～2000MHz
- Power Gain:48dB Typical
- Psat:50W Min
- Supply Voltage:+28V
- 50 Ohms Input and Output Matched

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

Parameter	Symbol	Min	Typ	Max	Units
Operating Frequency	BW	1000		2000	MHz
RF Output Power @Pin=0dBm	P_{SAT}	50			Watt
Power Gain	G_p		48		dB
Power Gain Flatness	ΔG_p		±1.5		dB
Input Return Loss	S_{11}			-10	dB
Harmonics @50W	H		-15		dBc
Spurious Signals	Spur		-60		dBc
Switch On/Off@10-90% Time,1kHz	$T_{ON/OFF}$		2	5	μS
In/Output Impedance	Impedance		50		Ω
Operating Voltage	V_{DC}	24	28	32	Volt
Current Consumption @Pout=50W	I_{DD}			7	Amp
Current Consumption @ Shutdown	I_{SD}		0.05		Amp
RF Input to Output Isolation (During OFF State)	Isolation		85		dBc

MECHANICAL SPECIFICATIONS

Parameter	Value	Units	Notes
Dimensions	140x85x20.5 [5.5x3.3x0.8]	mm [inch]	Maximum
Weight	0.65 [1.43]	kg [lbs]	Maximum
RF Connectors Input	SMA, Female		
RF Connectors Output	SMA, Female		
DC Interface Connector	D-Sub 9-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} =30W	∞ @ all load phase & amplitude for duration of 1 minute; 3:1 @ all load phase & amplitude continuous.
Over Temperature	85°C @ heatsink [restored @ 60°C]

Version. 1.0 _2024.09.25

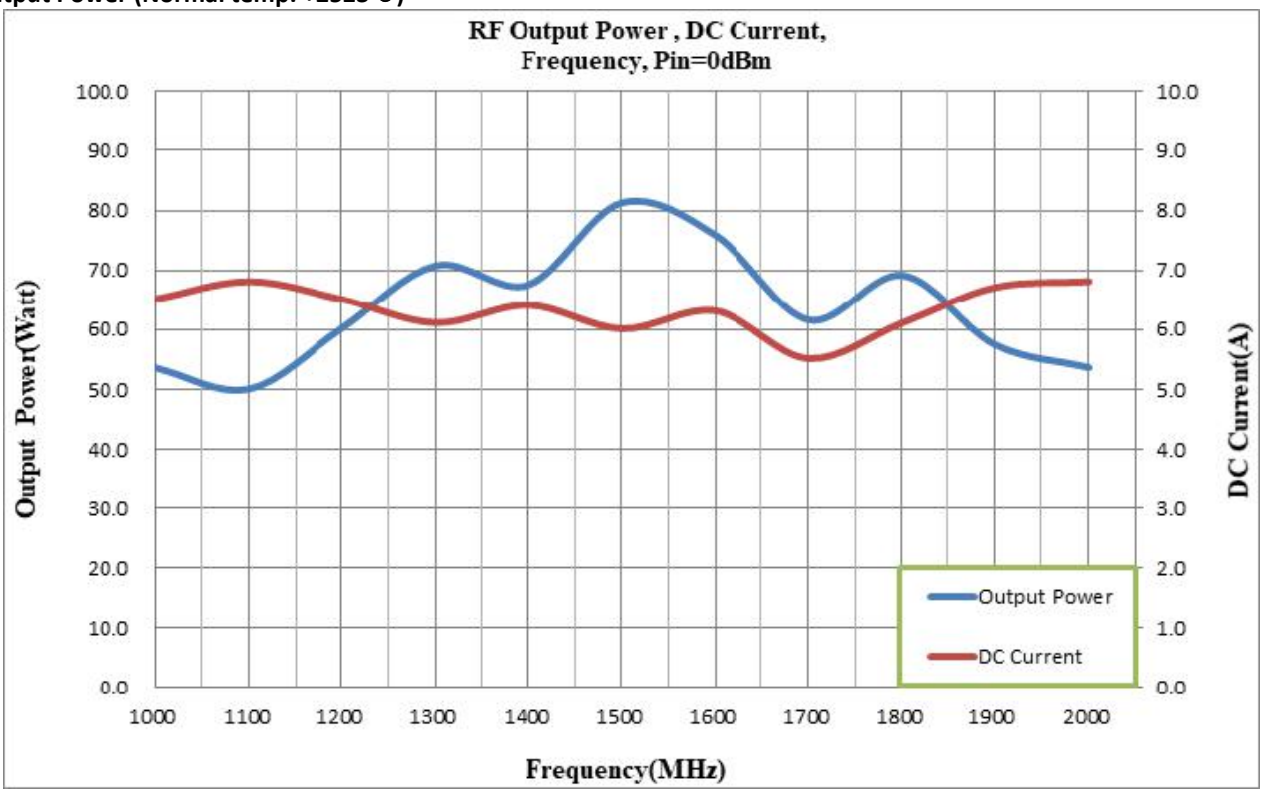
POWER INTERFACE CONNECTOR

Male D-Sub is on the housing

Pin #	Description	Specifications
1	N/C	No electrical connection
2	ALARM	Amplifier Alarm indicator: Normally TTL Low
3	SHUTDOWN	Amplifier Disable: TTL Logic High (3.3V~5V) (Internally Pulled-Low)
4	TEMP SENSE	Analog voltage relative to Module's Temperature @ 0.5V+10 mV/°C
5	CURRENT SENSE	Analog voltage relative to IDD @ 100mV per Ampere
6	VDD	28VDC
7	VDD	28VDC
8	GND	Ground
9	GND	Ground

TYPICAL PERFORMANCE PLOTS (FOR REFERENCE ONLY)

Output Power (Normal temp. +25±3℃)



Note: Adequate heatsink required.