泰莱微波
Talent Microwave

Suzhou Talent Microwave,Inc
+86-0512-62657975
sales@talentmw.com
www.talentmw.com

Model:TLPA20M520M-50-50-SSPA

Power Amplifier 20-520MHz,Gain:50dB,Psat:50dBm

Feature:

- Wide Band: 20-520MHz
- Gain: 50dB Min
- Psat Output Power: 50 dBm Min
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

Electrical Specifications:

Parameter	Min	Typ	Max	Units
Frequency range		20-520		MHz
Gain	50	52		dB
Gain Flatness		±1.0dB	±1.5dB	dB
Noise Figure			10	dB
Output P1dB		48		dBm
OIP3 2-Tone @ 37dBm/Tone, 100KHz Spacing		56		dBm
Output Psat	50	51		dBm
Harmonics @Pout=100W		-15		dBc
Spurious			-60	dBc
Input VSWR		1.5	2.0	:1
DC Voltage	26	28	30	V DC
Current Consumption @ POUT = 100W		8	12	A
Switching Time @ 10kHz TTL		1		us
Impedance		50		Ohms

Mechanical Specifications:

Parameter	Value	Units
Input /Output Connector	SMA Female /N Female	
Bias	D-sub 9-pin, Male	
Size	180*115*25	mm
Weight	1100	g

Absolute Maximum Ratings:

Parameter	Value
RF INPUT POWER	10 dBm
ESD sensitivity (HBm)	Class 0, passed 150V

Available 220V System Benchtop Amplifier

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DC power Interface,D-sub, 9-Pin, Female:

Pin	Identification	Type	Function specification
1	+28V	Input	Power supply positive +26.0-30.0VDC
2	+28V	Input	Power supply positive +26.0-30.0VDC
3	+28V	Input	Power supply positive +26.0-30.0VDC
4	+28V	Input	Power supply positive +26.0-30.0VDC
5	+28V	Input	Power supply positive +26.0-30.0VDC
6	GND	Input	Power supply negative
7	GND	Input	Power supply negative
8	GND	Input	Power supply negative
9	GND	Input	Power supply negative

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Monitor and Control Interface,J30J, 9-Pin, Female：

Pin	Identification	Type	Function specification
1	EN	Input	A high (or suspended) level turns on the power amplifier, and a low level turns it off
2	Over VSWR	Output	When the external standing wave of the power amplifier output is greater than 5, the power amplifier is turned off, and this pin will output a high level. When the external standing wave is less than 5, this pin outputs a low level.
3	Over Temp	Output	When the temperature of the power amplifier housingis greater than 70° C, the power amplifier isclosed and this pin will output a high level. Whenthe temperature of the power shell is reduced to 60℃,the power amplifier returns to normal operation, and this pin will output a low level.
4	Reset	Input	When the power amplifier triggers standing wave protection, the power amplifier willshut down and enter a state lock. Giving this pin a low pulse of 10us will restart the power amplifier. Only standing wave protection can be reset.
5	APC	Input	Voltage controlled attenuation control voltage input, 0-7V, attenuation of 30dB-0dB.2-7V, attenuation of 10dB-0dB.。
6	NC		No internal connection
7	NC		No internal connection
8	NC		No internal connection
9	GND	Input	Ground

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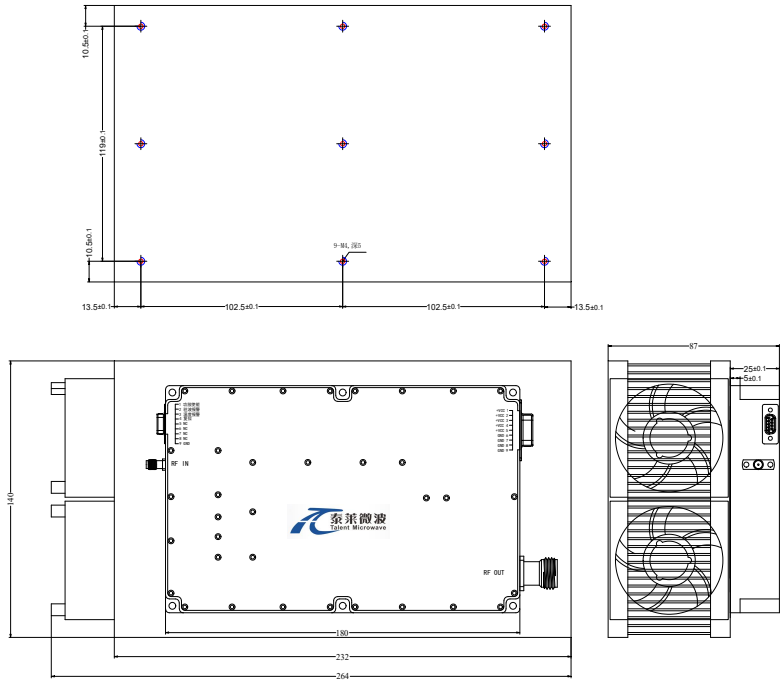
Outline Drawing:

Unit: mm



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ELECTROSTATIC SENSITIVE
DEVICES

Environmental Conditions:

Parameter	Min	Typ	Max	Units
Operating Temperature	-45		+70	℃
Non-operating Temperature	-55		+125	℃
Relative humidity		95		%
Altitude	30,000			feet
Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

Ordering Information:

Part Number	Description	Revision
TLPA20M520M-50-50-SSPA	Power amplifier 20-520MHz,Gain:50dB,Psat:50dBm, 28V DC， Without Heatsink	Rev.1.0
TLPA20M520M-50-50-SSPA-HS	Power amplifier 20-520MHz,Gain:50dB,Psat:50dBm, 28V DC， With Heatsink	Rev.1.0

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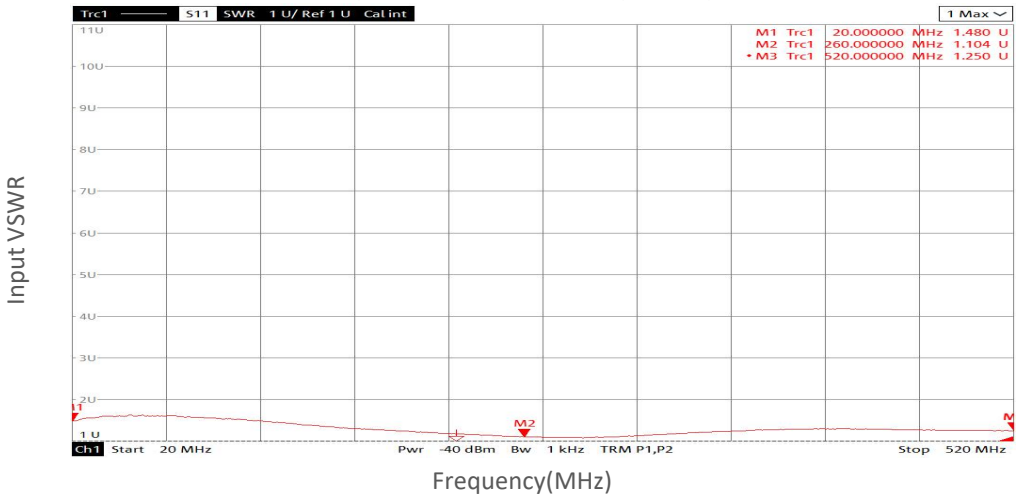
Typical Performance Data:

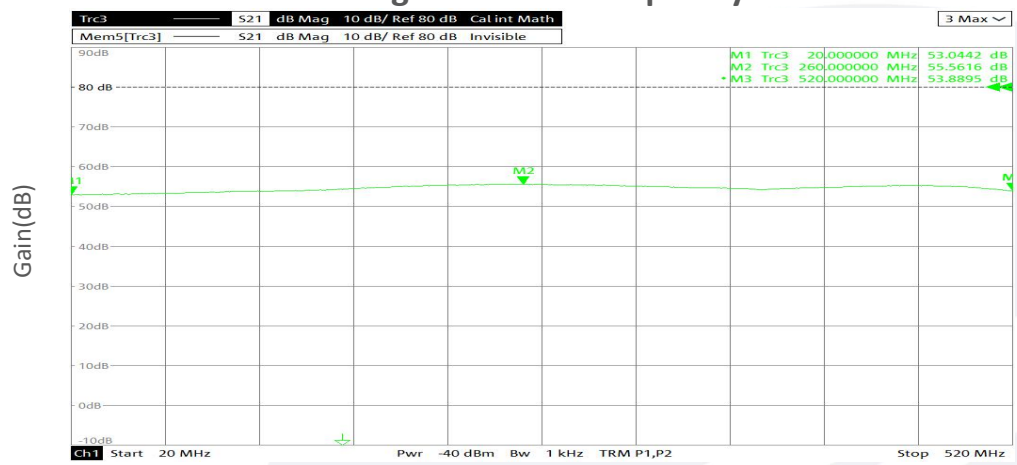
Input VSWR vs Frequency



Input VSWR

Frequency(MHz)

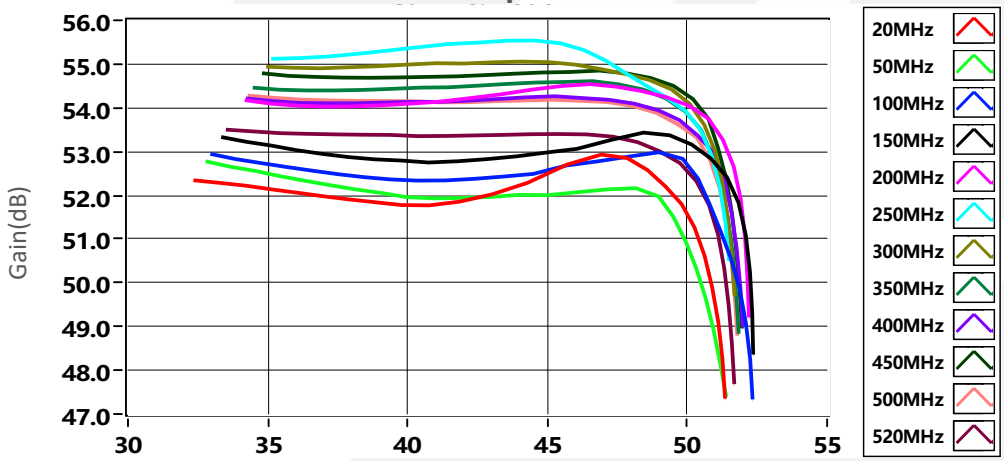
Small Signal Gain vs Frequency



Gain(dB)

Frequency(MHz)

Gain vs Output Power



Gain(dB)

Pout(dBm)

Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

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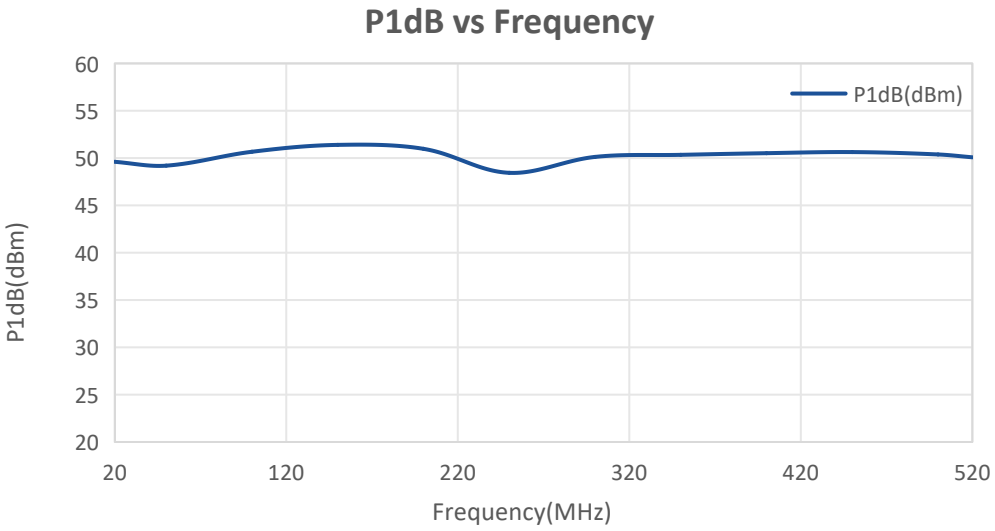

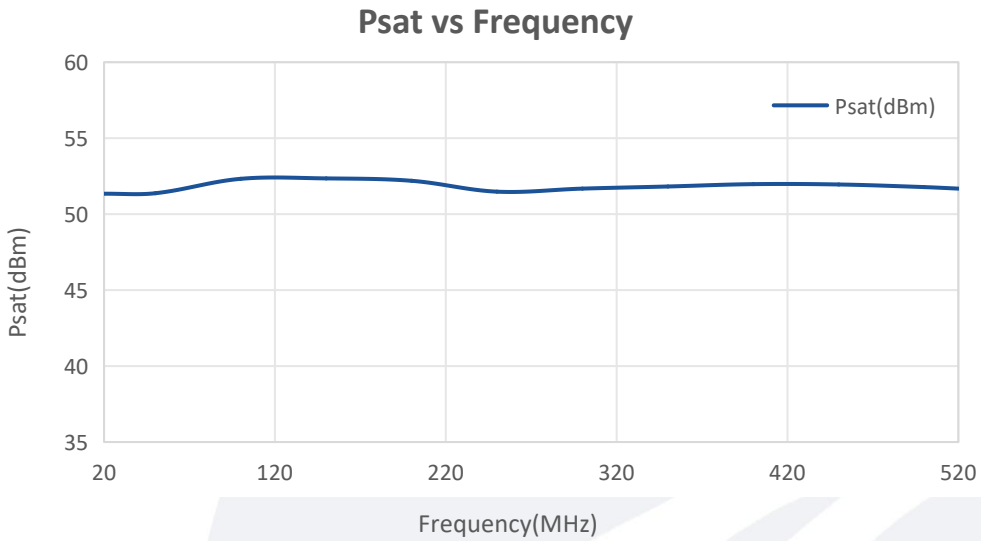

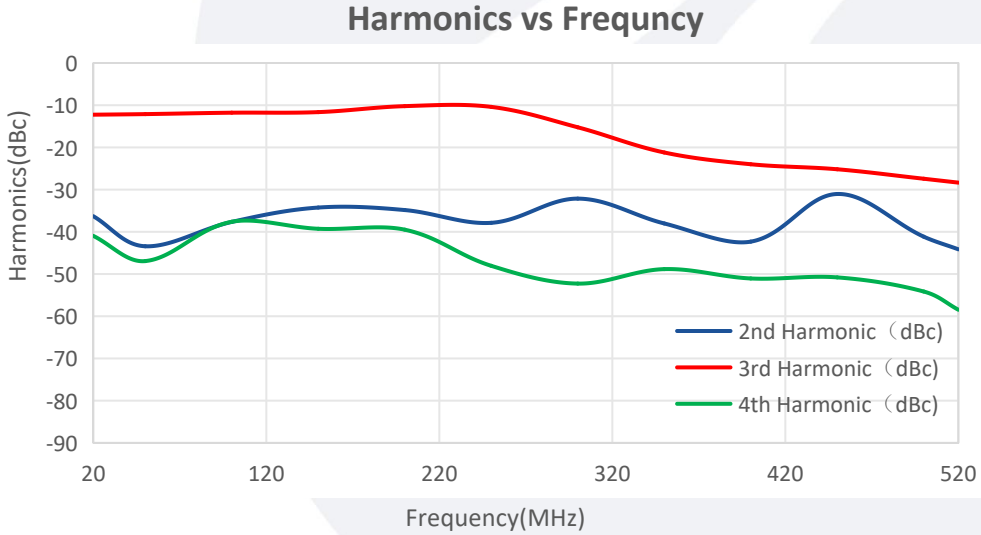

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