泰莱微波
Talent Microwave

Suzhou Talent Microwave,Inc
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Low Phase Noise Power Amplifier Systems

50-500MHz/38dB Gain/33dBm Psat/8CH Model: TLPNA50M500M-33-8CH-AC

TLPA50M500M-40-33-8CH-SAC is an 8 channel, low phase noise, power amplifie Systems with a typical signal gain of 39 dB and a minimun Psat of 32 dBm across the frequency range of 50 to 500 MHz. The AC power requirement for the amplifier is +220V AC. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Frequency range: 50-500MHz
- Gain: 39dB Typ
- Output Power Psat: 32dBm Min
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

Applications:

- AOM

Electrical Characteristics:

Parameter		Min	Typ	Max	Units
Frequency range		50		500	MHz
Small Signal Gain			39		dB
Gain Flatness			±2		dB
Noise Figure			5		dB
Output P1dB		31	32		dBm
Output Psat		32	33		dBm
Input VSWR			2.0		:1
AC Voltage			220		V AC
Impedance			50		Ohms
Phase Noise(50MHz)	@100Hz			-134	dBc/Hz
	@1KHz			-138	dBc/Hz
	@10KHz			-149	dBc/Hz
	@100KHz			-149	dBc/Hz
	@1MHz			-149	dBc/Hz

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Mechanical Specifications:

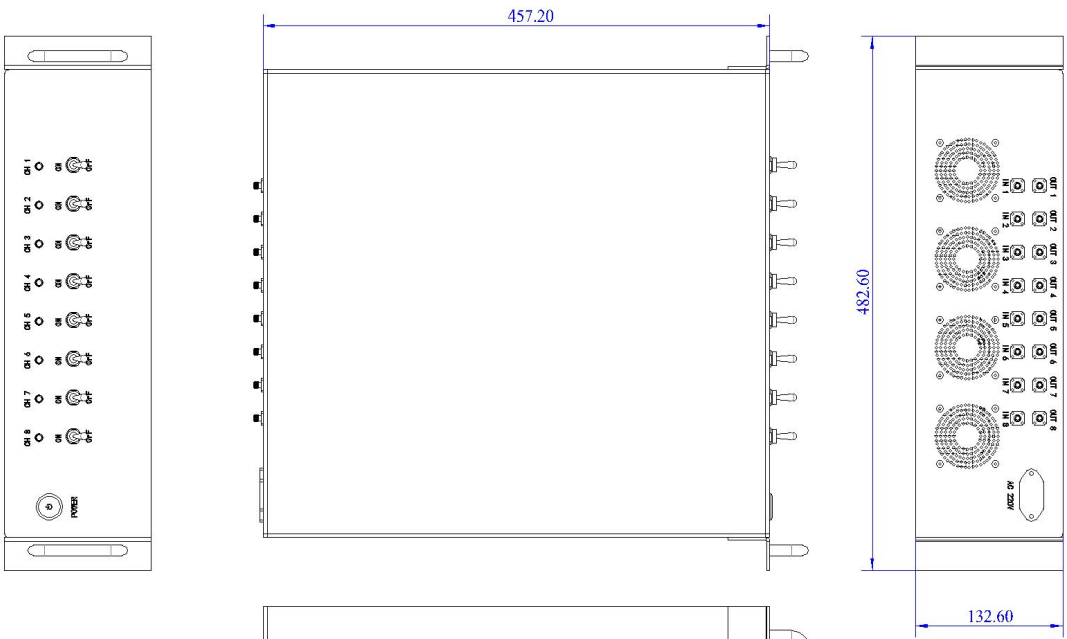
Parameter	Value	Units
Input /Output Connector	SMA Female/SMA Female	
Size	457.2*482.6*132.6	mm

Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	220V
RF Input Power	0dBm
ESD sensitivity (HBm)	Class 0, passed 150V

Outline Drawing:

Unit:mm; Tolerance:±0.1mm



ESD Protection: Strictly adhere to ESD precautions to prevent electrostatic damage.

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Environmental Conditions:

Parameter	Min	Typ	Max	Units
Operating Temperature*	-40		+60	℃
Non-operating Temperature*	-50		+70	℃
Relative humidity		95		%
Altitude	50,000			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			

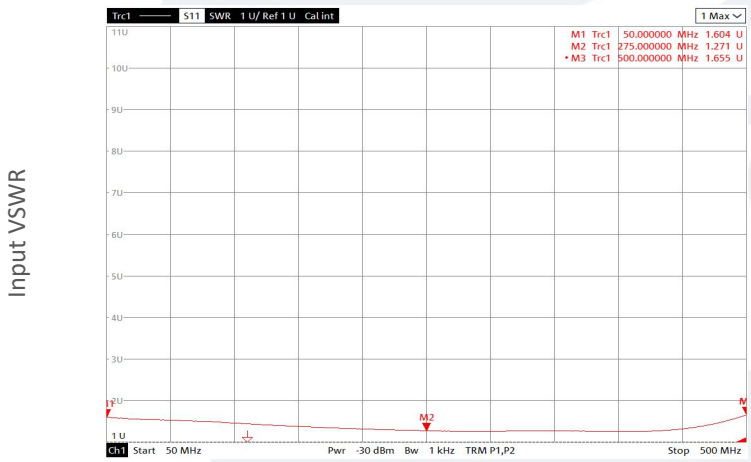
*Note: For a wider temperature range, please consult the manufacturer.

Ordering Information:

Base Number	Description	Revision
TLPNA50M500M-33-8CH-AC	8CH Power amplifier Simple System 50-500MHz, Gain:39dB,Psat:32dBm,+220V AC,Built in Fan Cooling	Rev.1.0

Typical Performance Data:

Input VSWR vs Frequency



Input VSWR

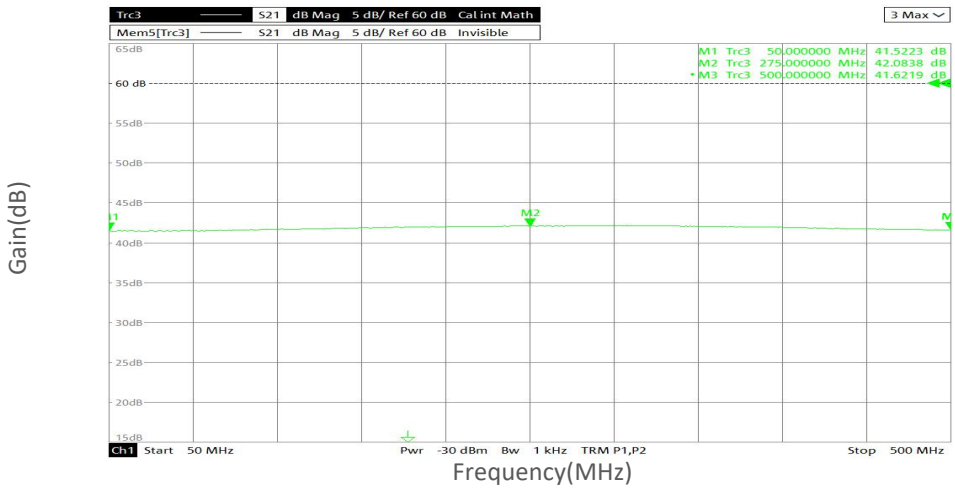
Frequency(MHz)

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.

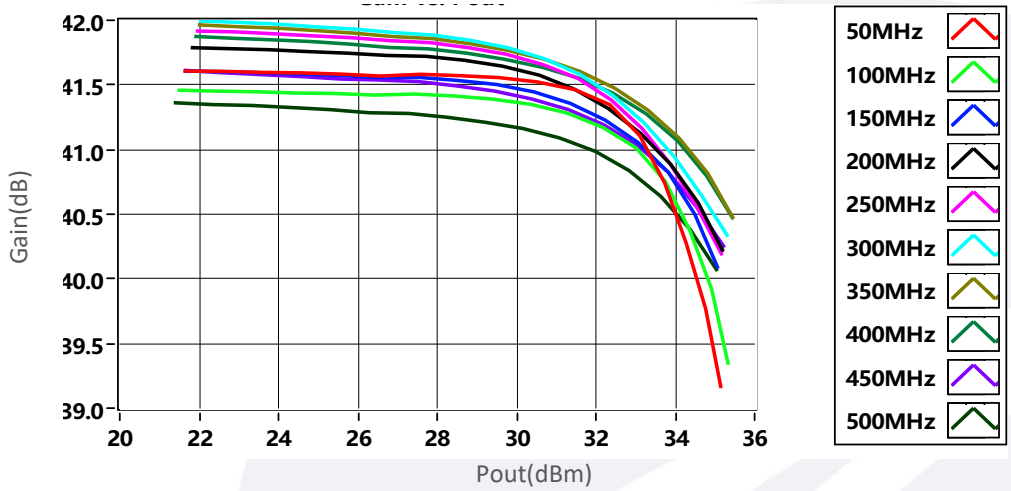
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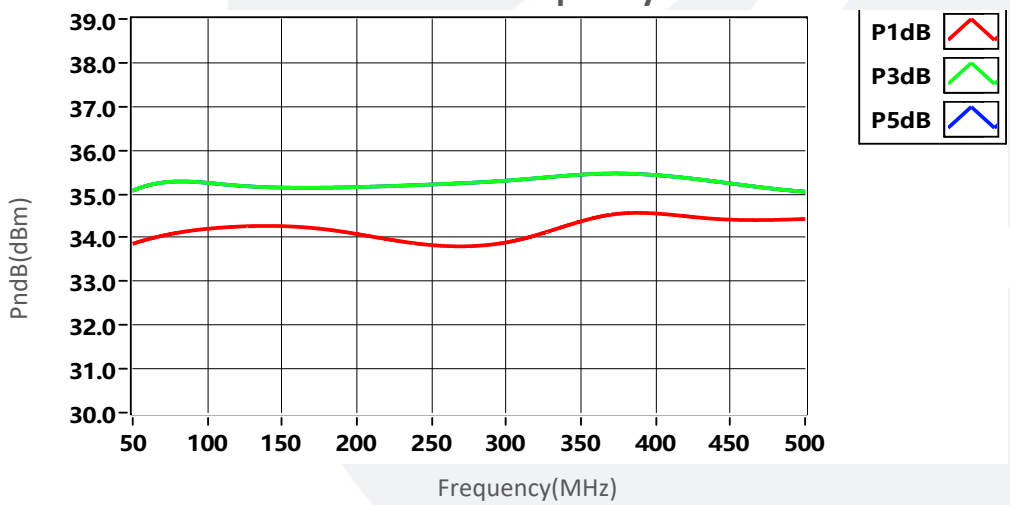
Small Signal Gain vs Frequency



Gain vs Output Power



PndB vs Frequency

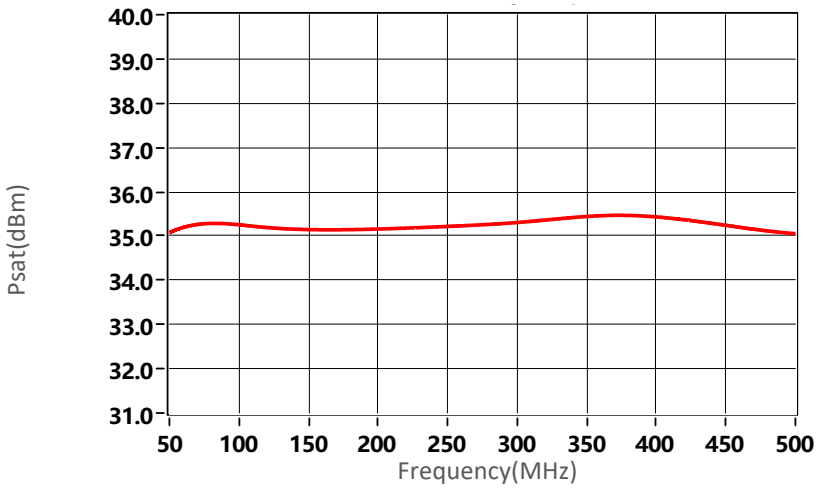


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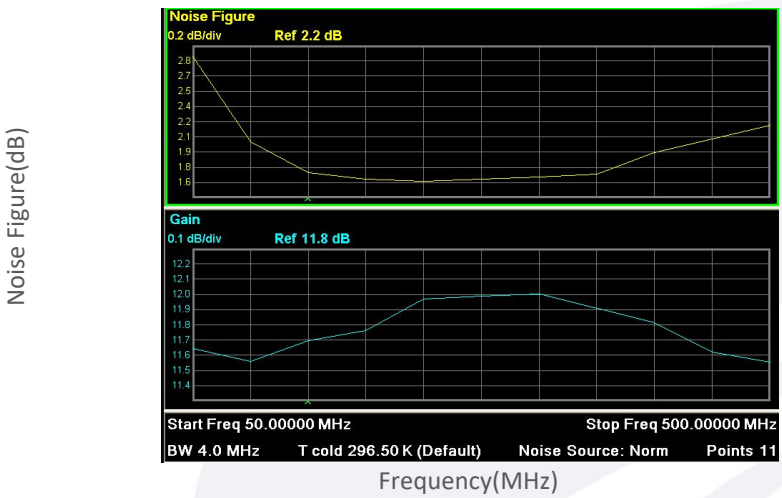
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Typical Performance Data:

Psat vs Frequency



Noise Figure vs Frequency



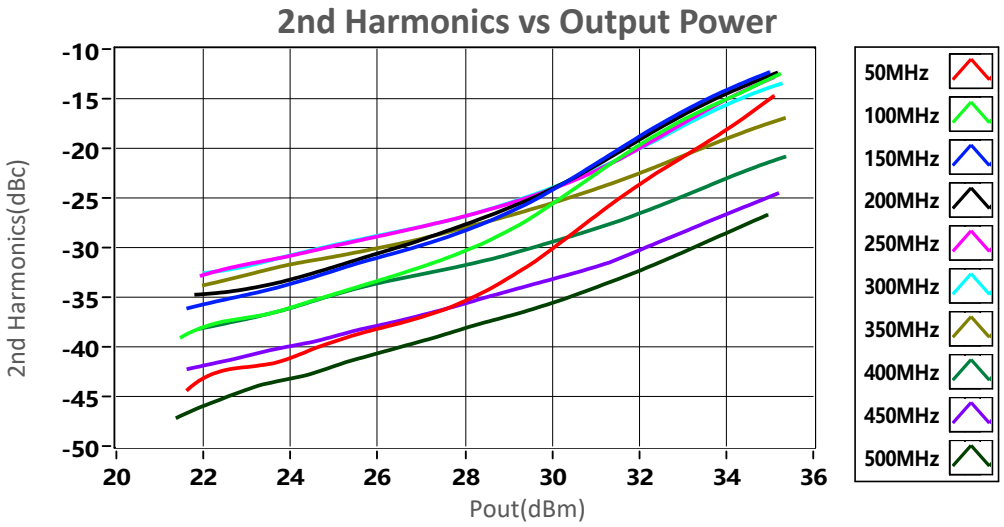
Phase Noise@Pout=33dBm

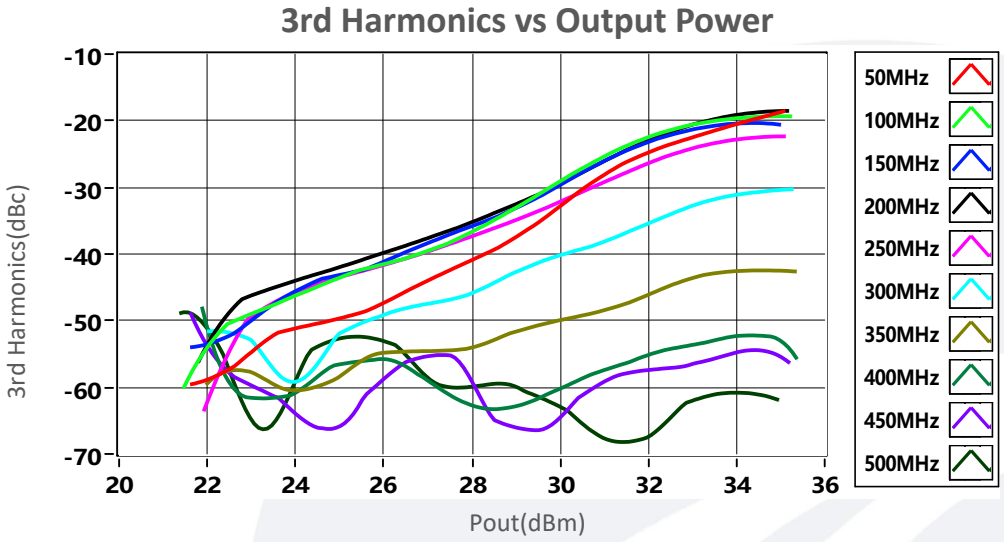
Parameter	100Hz	1KHz	10KHz	100KHz	1MHz	10MHz
Phase Noise (50MHz)	-134.62dBc/Hz	-138.21dBc/Hz	-149.92dBc/Hz	-149.95dBc/Hz	-149.63dBc/Hz	-149.64dBc/Hz
Phase Noise (100MHz)	-123.51dBc/Hz	-142.05dBc/Hz	-146.83dBc/Hz	-149.33dBc/Hz	-149.88dBc/Hz	-149.59dBc/Hz
Phase Noise (200MHz)	-126.51dBc/Hz	-143.94dBc/Hz	-148.93dBc/Hz	-149.06dBc/Hz	-149.68dBc/Hz	-149.22dBc/Hz
Phase Noise (300MHz)	-118.35dBc/Hz	-143.50dBc/Hz	-147.90dBc/Hz	-148.96dBc/Hz	-149.54dBc/Hz	-149.27dBc/Hz
Phase Noise (400MHz)	-122.85dBc/Hz	-146.34dBc/Hz	-147.61dBc/Hz	-149.09dBc/Hz	-149.17dBc/Hz	-149.26dBc/Hz
Phase Noise (500MHz)	-114.76dBc/Hz	-140.31dBc/Hz	-147.44dBc/Hz	-147.59dBc/Hz	-147.89dBc/Hz	-147.89dBc/Hz

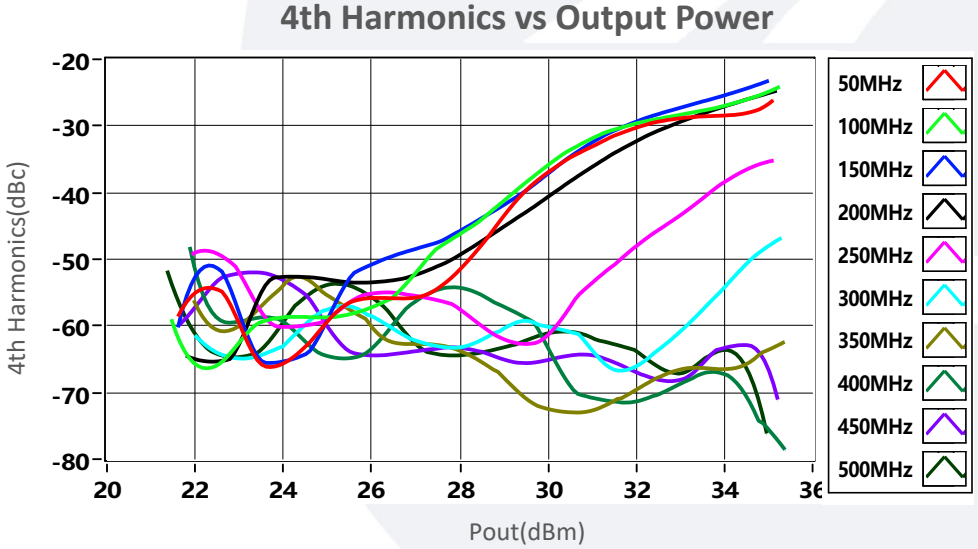
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