

Power Amplifier

1-1000MHz /43dB Gain/43 dBm Psat

Model: TLPA1M1G-43-43

TLPA1M1G-43-43 is a power amplifier with a minimum small signal gain of 43 dB and a minimum Psat of 43 dBm across the frequency range of 1 to 1000 MHz. The DC power requirement for the amplifier is +28 VDC/6 A. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Frequency range: 1-1000MHz
- Gain: 43dB Min
- Output Power Psat: 43dBm Min
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

Applications:

- Cellular
- PCN
- GSM
- ISM
- Lab Test

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency range	1		1000	MHz
Small Signal Gain	43			dB
Gain Flatness			±5	dB
Outout P1dB	40			dBm
Output Psat	43			dBm
Spurious			-50	dBc
Input VSWR		1.5	2.0	:1
DC Voltage		+28		V DC
DC Supply Current		6		A
Impedance	50			Ohms

Mechanical Specifications:

Parameter	Value	Units
Input /Output Connector	SMA Female/SMA Female	
DC Bias	Solder Pin	
Size	200*120*25	mm
Weight	200	g

Absolute Maximum Ratings:

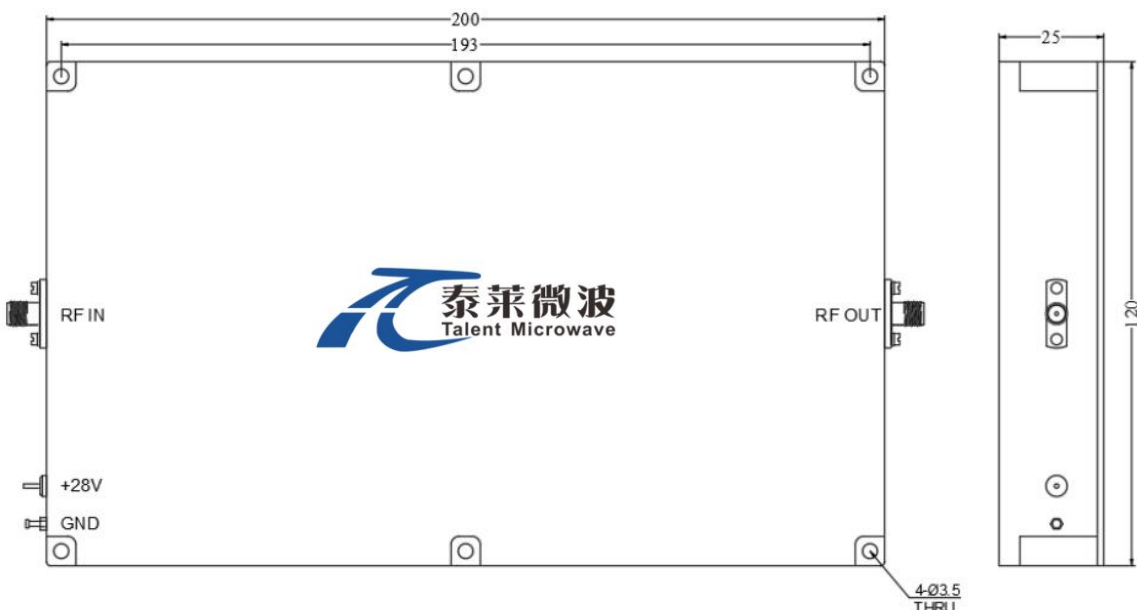
Parameter	Value
Supply Bias Voltage	+32 V
RF Input Power	+5 dBm
ESD sensitivity (HBm)	Class 0, passed 150V



Simple 220V System
Available SAC option

Outline Drawing:

Unit:mm; Tolerance:±0.1mm



*****Heat Sink Required During Operation**



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

Environmental Conditions:

Parameter	Min	Typ	Max	Units
Operating Temperature*	-40		+50	°C
Non-operating Temperature*	-50		+60	°C
Relative humidity		95		%
Altitude	30,000			feet
Shock / Vibration(MIL-STD-810F)	20g,11ms,saw-tooth			
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

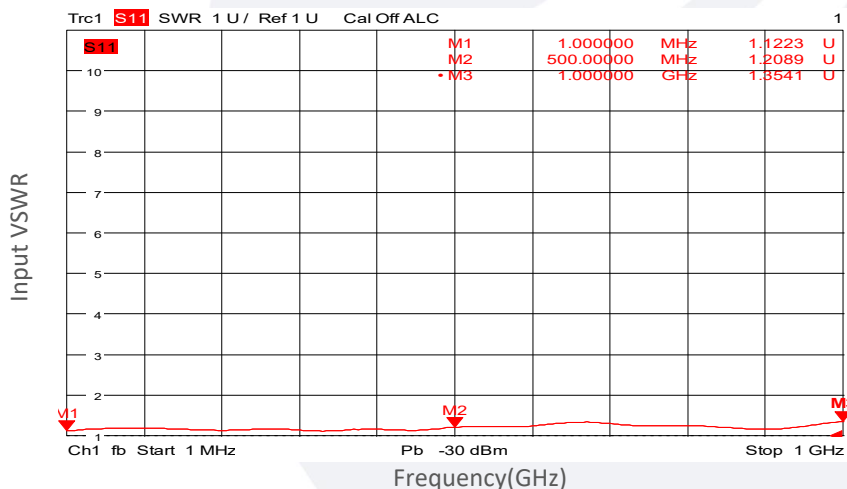
*Note: For a wider temperature range, please consult the manufacturer.

Ordering Information:

Base Number	Description	Revision
TLPA1M1G-43-43	Power amplifier 1-1000MHz, Gain:43dB,Psat:43dBm,+28V DC,Without Heatsink	Rev.1.1
TLPA1M1G-43-43-HS	Power amplifier 1-1000MHz, Gain:43dB,Psat:43dBm,+28V DC,With Heatsink	Rev.1.1

Typical Performance Data:

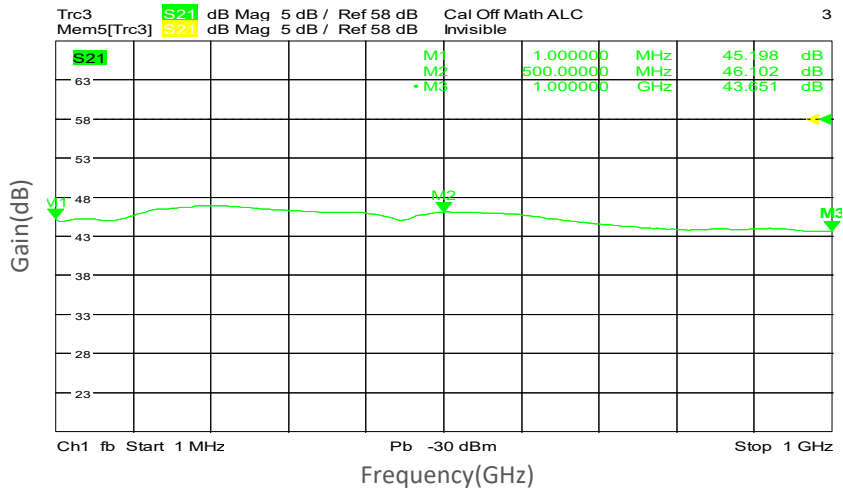
Input VSWR vs Frequency



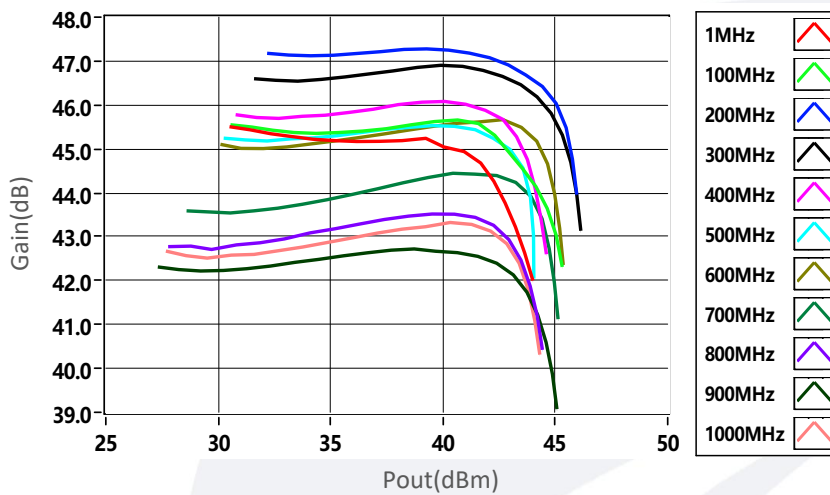
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

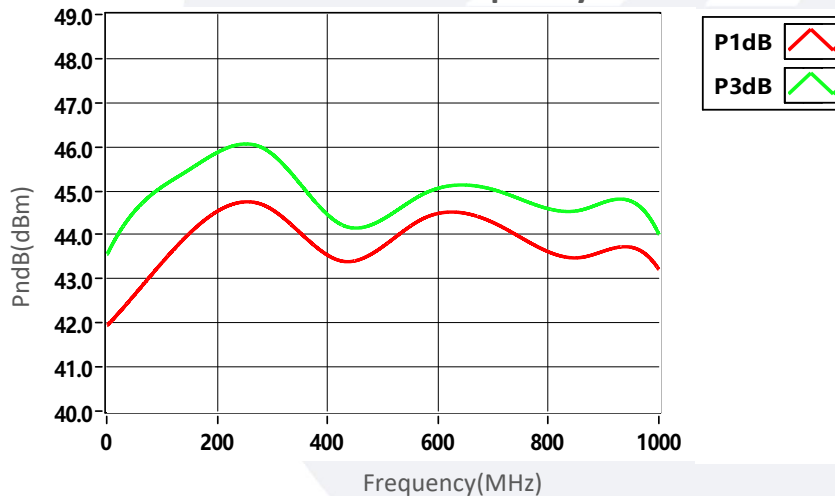
Small Signal Gain vs Frequency



Gain vs Output Power



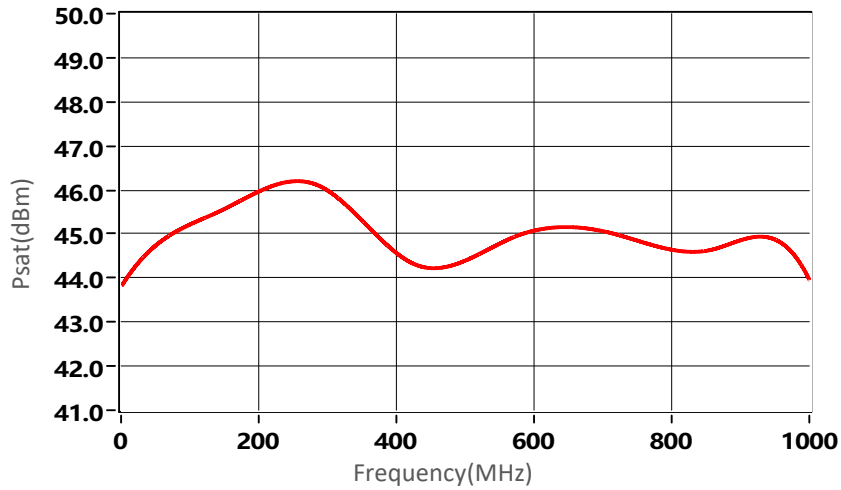
PndB vs Frequency



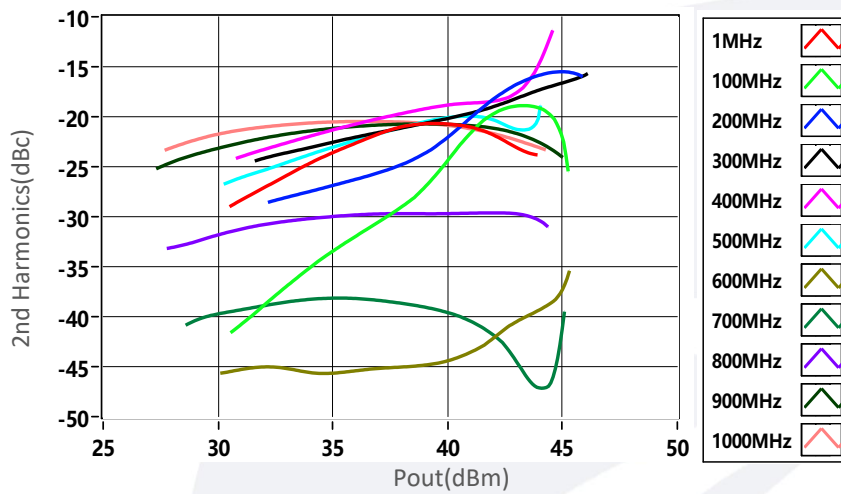
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Typical Performance Data:

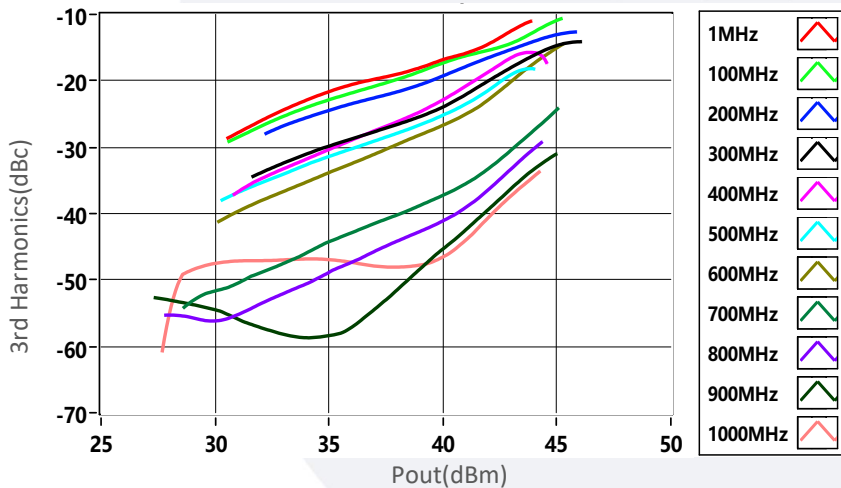
Psat vs Frequency



2nd Harmonics vs Frequency



3rd Harmonics vs Frequency



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