

Power Amplifier

20MHz-3GHz/38dB Gain/29dBm Psat

Model: TLPA20M3G-38-28

TLPA20M3G-38-28 is a power amplifier with a typical small signal gain of 38 dB and a minimum Psat of 29 dBm across the frequency range of 20MHz to 3 GHz. The DC power requirement for the amplifier is +12 VDC/1 A. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Frequency range: 20MHz-3GHz
- Gain: 38dB Typ
- Output Power Psat: 29dBm 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	0.02		3	GHz
Small Signal Gain	35	38		dB
Gain Flatness			±3	dB
Output P1dB	28			dBm
Output Psat	29			dBm
Input VSWR		1.5	2	:1
DC Voltage		+12		V DC
DC Supply Current		1000		mA
Impedance		50		Ohms

Mechanical Specifications:

Parameter	Value	Units
Input /Output Connector	SMA Female/SMA Female	
DC Bias	Solder Pin	
Size	120*80*22	mm
Weight	200	

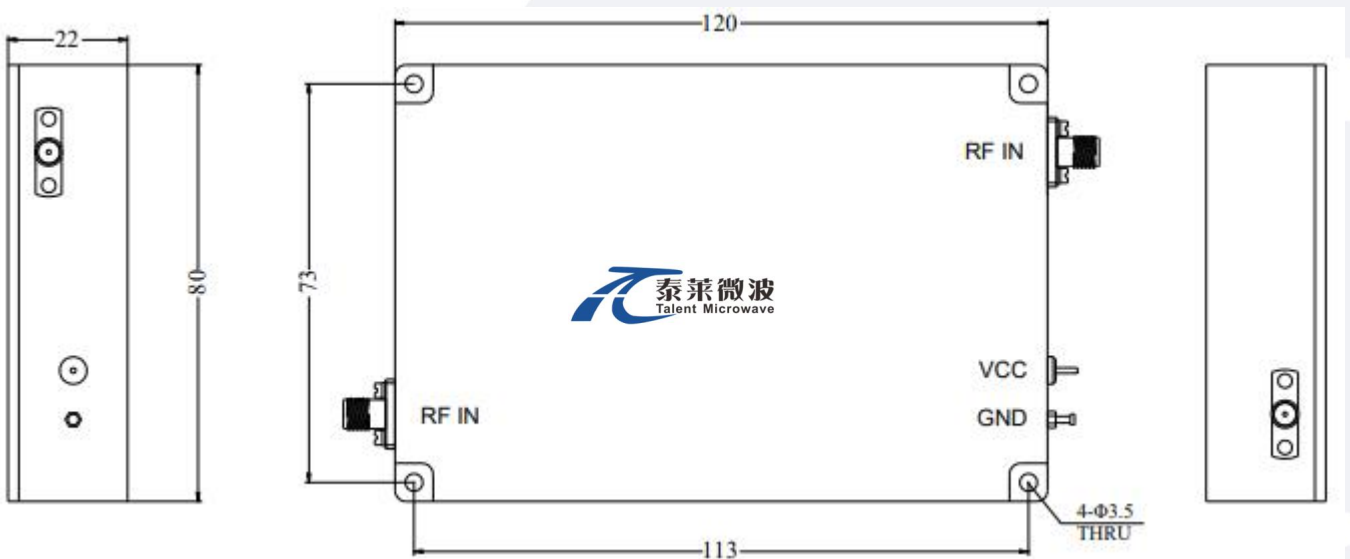
Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+15 V
RF Input Power	0 dBm
ESD sensitivity (HBM)	Class 0, passed 150V



Outline Drawing:

Unit:mm



*****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		+60	°C
Non-operating Temperature*	-50		+70	°C
Relative humidity		95		%
Altitude	10,000			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			

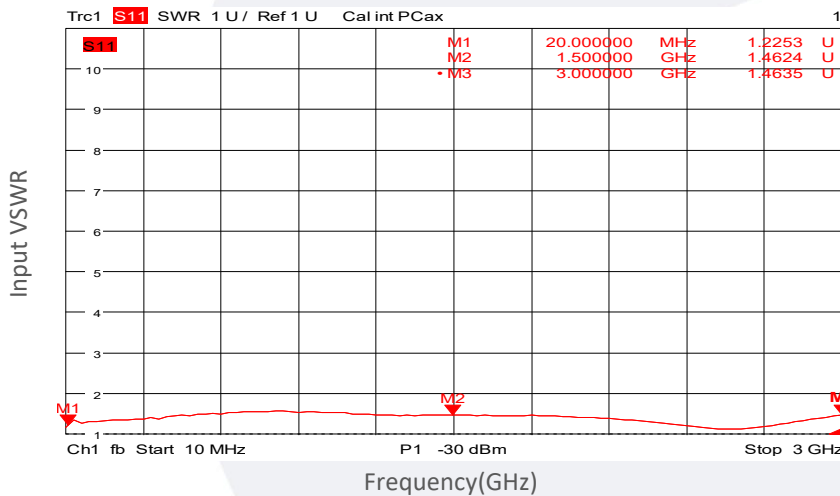
*Note: For a wider temperature range, please consult the manufacturer.

Ordering Information:

Base Number	Description	Revision
TLPA20M3G-38-28	Power amplifier 20MHz-3GHz, Gain:38dB,Psat:29dBm,+12V DC,Without Heatsink.	Rev.1.1
TLPA20M3G-38-28-HS	Power amplifier 20MHz-3GHz, Gain:38dB,Psat:29dBm,+12V DC,With Heatsink.	Rev.1.1

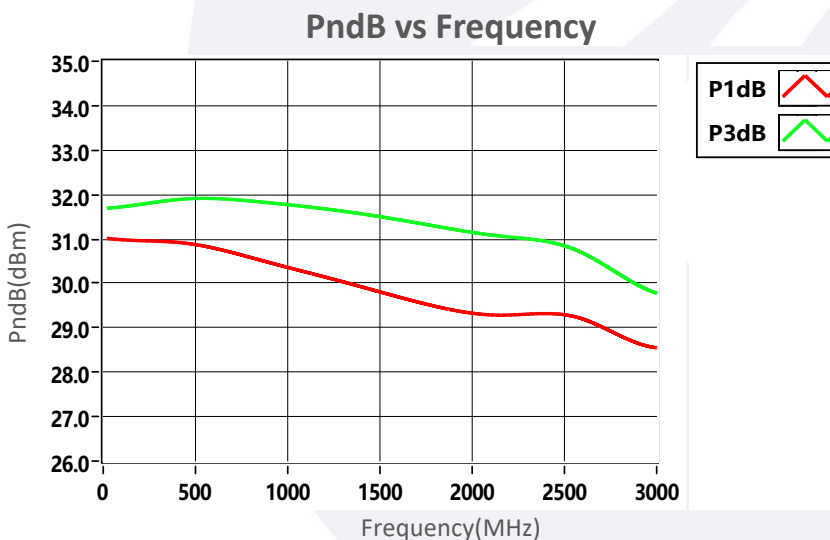
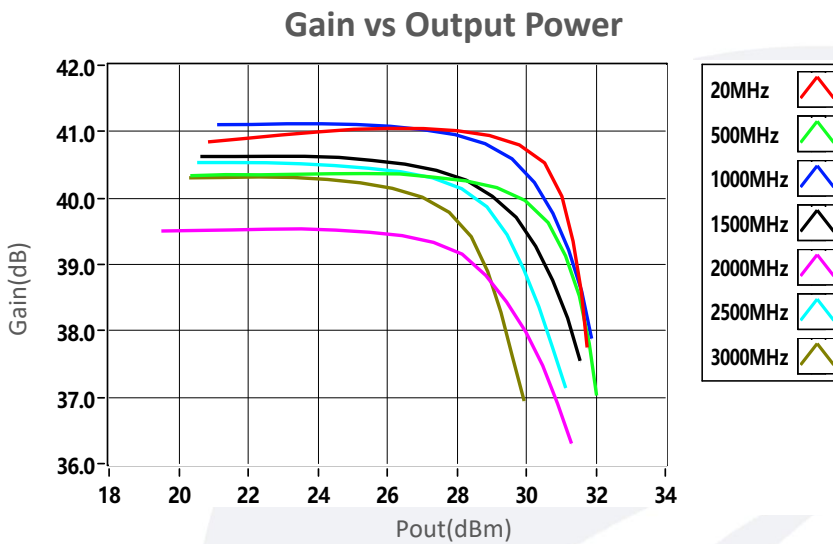
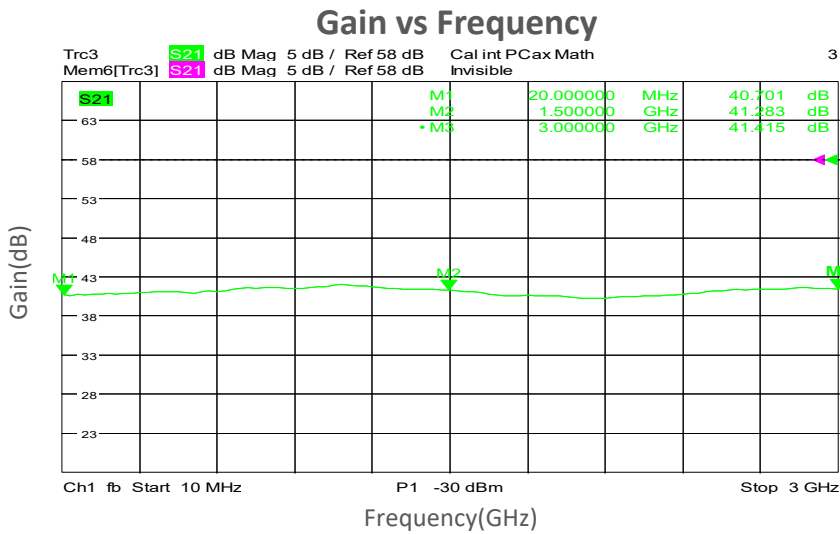
Typical Performance Data:

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.

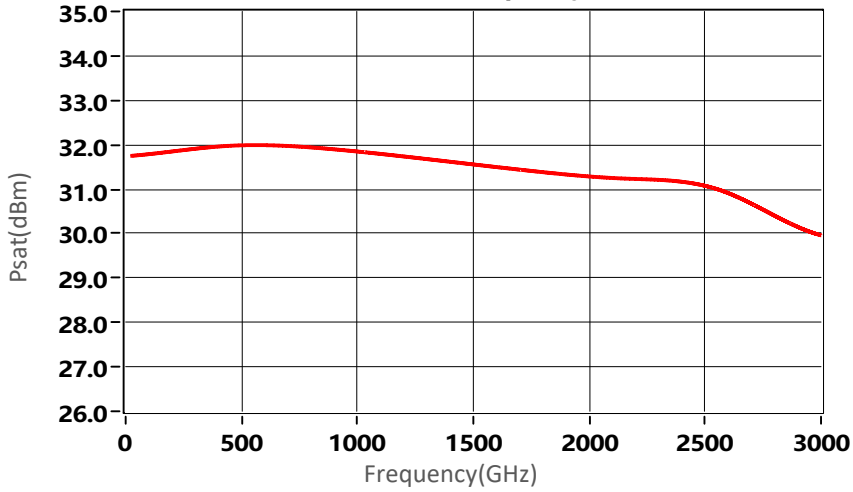
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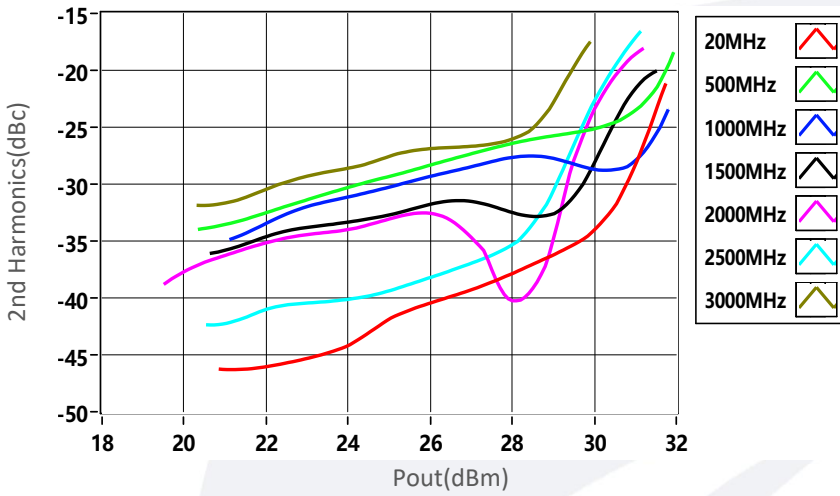
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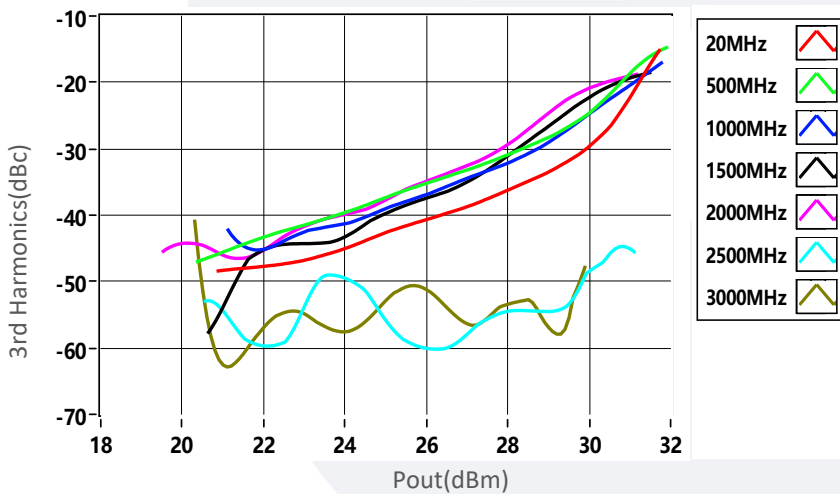
Psat vs Frequency



2nd Harmonics vs Output Power



3rd Harmonics vs Output Power



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