

Power Amplifier

10MHz-10GHz/32dB Gain/31dBm Psat

Model: TLPA10M10G-30-30

TLPA10M10G-30-30 is a power amplifier with a typical small signal gain of 32 dB and a nominal Psat of 31 dBm across the frequency range of 10MHz to 10GHz. The DC power requirement for the amplifier is +15 VDC/0.8 A. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Frequency range: 10MHz-10GHz
- Gain: 32dB Typ
- Output Power Psat: 31dBm Typ
- 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	10MHz-10GHz			
Small Signal Gain	30	32		dB
Gain Flatness@1.1-10GHz*		±1	±2	dB
Output Psat	30	31		dBm
Harmonic		-15		dBc
Input VSWR		1.5	2.0	:1
DC Voltage		15	16	V DC
DC Supply Current		0.8		A
Impedance	50			Ohms

*Note: The gain flatness becomes worse at frequencies below 1.1GHz.

Mechanical Specifications:

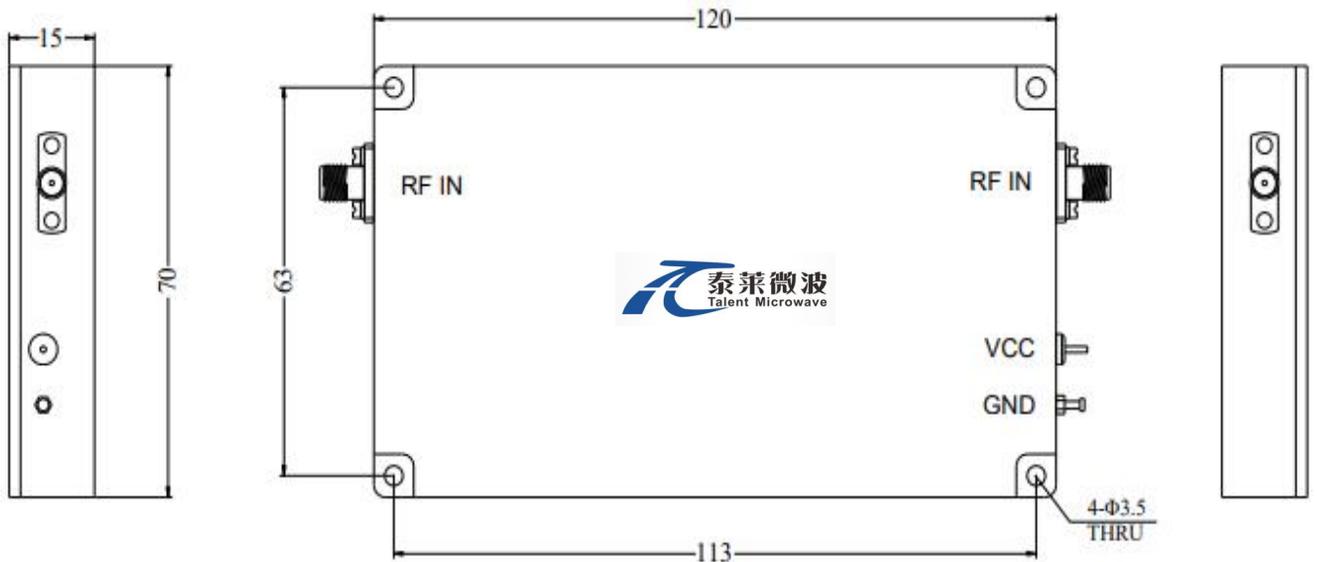
Parameter	Value	Units
Input /Output Connector	SMA Female/SMA Female	
DC Bias	Solder Pin	
Size	120*70*15	mm
Weight	150	g

Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+16 V
RF Input Power	+5 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			

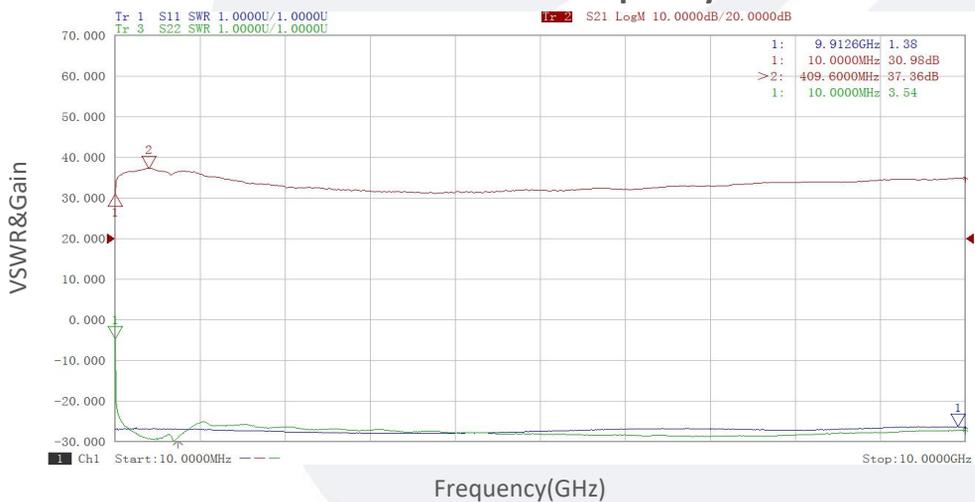
*Note: For a wider temperature range, please consult the manufacturer.

Ordering Information:

Base Number	Description	Revision
TLPA10M10G-30-30	Power amplifier 10MHz-10GHz, Gain:30dB,Psat:30dBm,+15V DC,Without Heatsink	Rev.1.1
TLPA10M10G-30-30-HS	Power amplifier 10MHz-10GHz, Gain:30dB,Psat:30dBm,+15V DC,With Heatsink	Rev.1.1

Typical Performance Data:

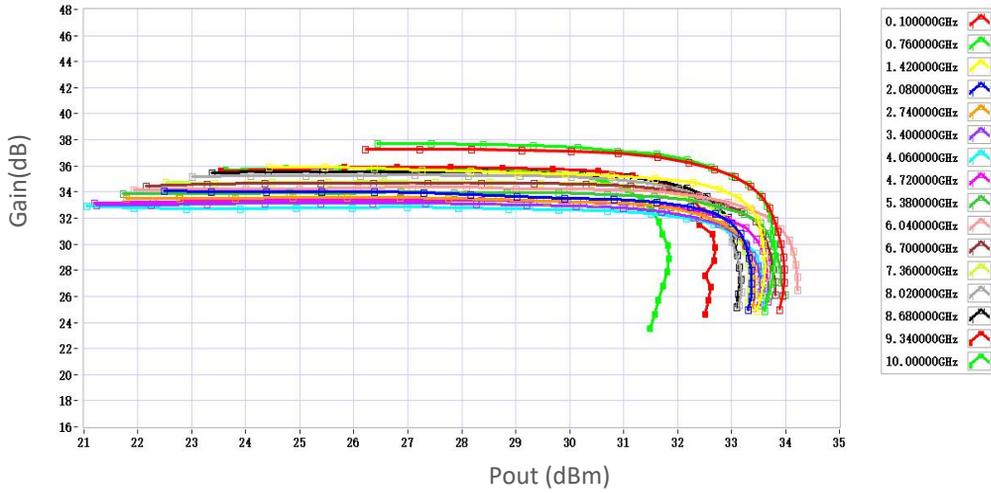
VSWR&Gain vs Frequency



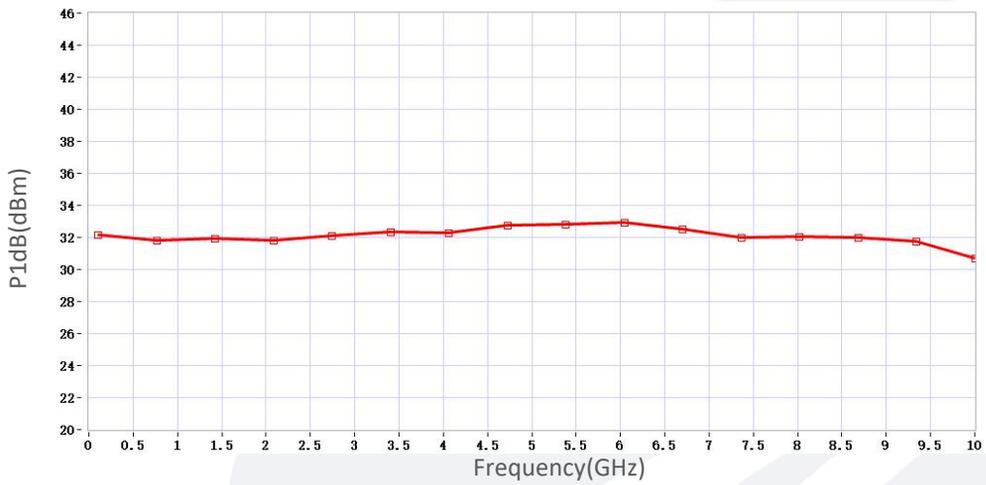
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

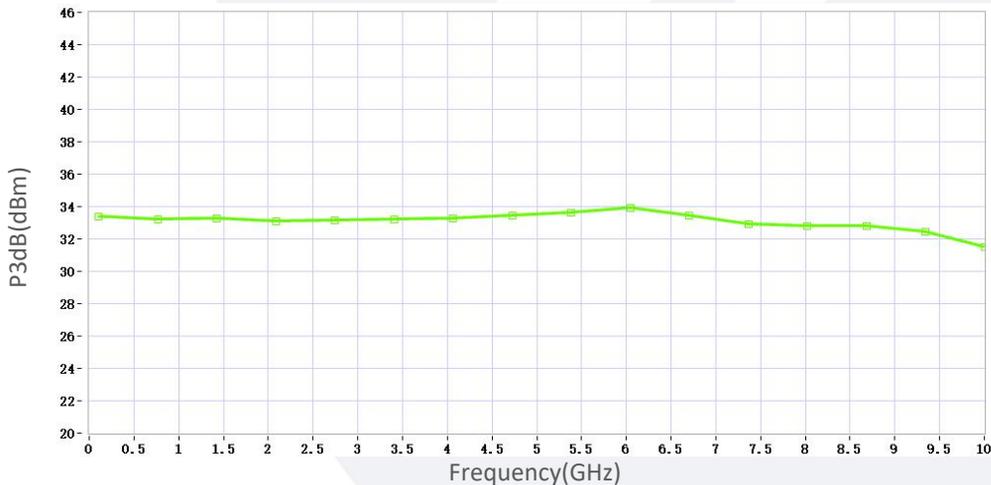
Gain vs Output Power



P1dB vs Frequency



P3dB vs Frequency



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Typical Performance Data:

P_{sat} vs Frequency



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