

Power Amplifier

0.1-22GHz /30dB Gain/27 dBm Psat

Model: TLPA0.1G22G-30-27

TLPA0.1G22G-30-27 is a power amplifier with a typical small signal gain of 33 dB and Psat of 27 dBm across the frequency range of 0.1 to 22 GHz. The DC power requirement for the amplifier is +24 VDC/0.85 A. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Frequency range: 0.1-22GHz
- Small Signal Gain: 30dB Min
- Output Power Psat: 27dBm 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	0.1		22	GHz
Small Signal Gain	30	33		dB
Gain Flatness		±2		dB
Output P1dB	26	29		dBm
Output Psat	27	30		dBm
Input VSWR		1.6	2	:1
Output VSWR		1.6	2	:1
DC Voltage		24		V DC
DC Supply Current		850		mA
Impedance		50		Ohms

Note: Below 500MHz, some technical specifications will deteriorate.

Mechanical Specifications:

Parameter	Value	Units
Input /Output Connector	SMA Female/SMA Female	
Size	60*65*11(Without Heatsink) 60*90*41(With Heatsink)	mm
Weight	200	g

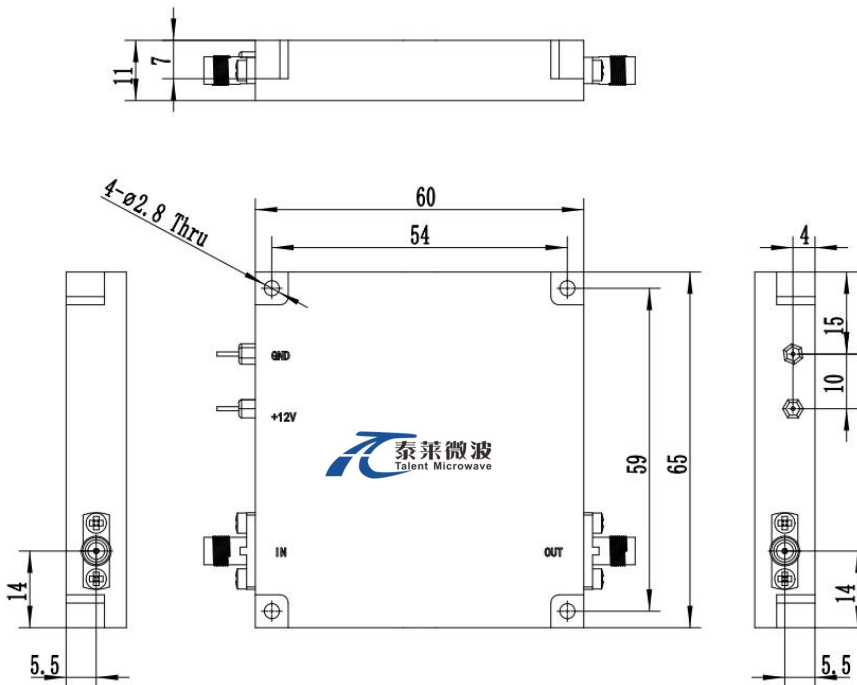
Absolute Maximum Ratings:

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



Outline Drawing:

Unit:mm



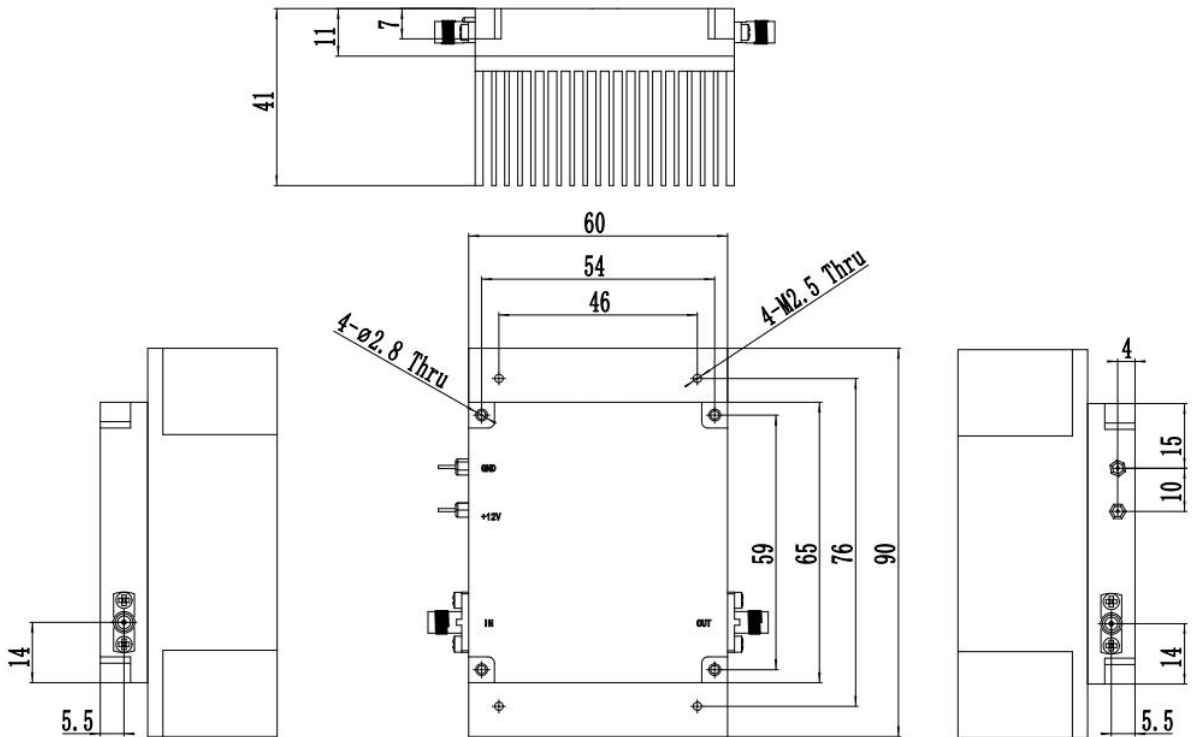
*****Heat Sink Required During Operation**



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

Outline Drawing:

Unit:mm



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			

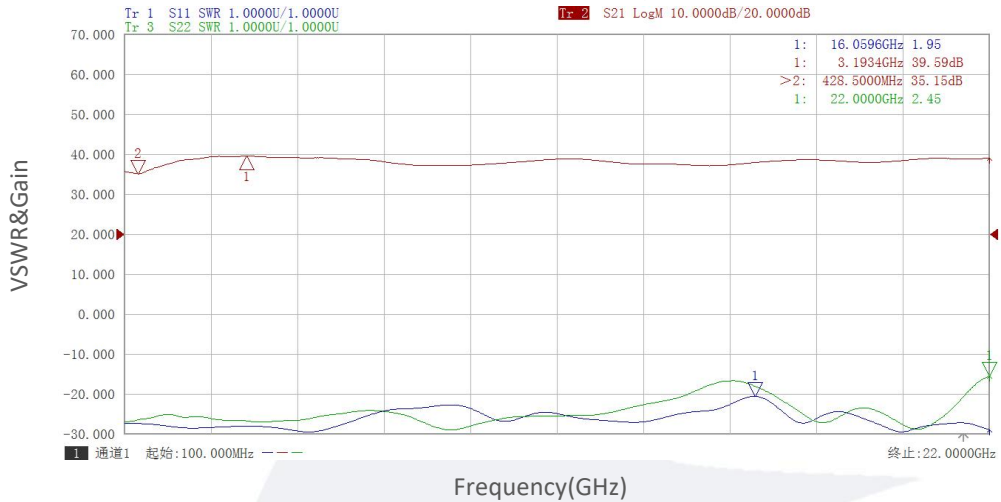
*Note: For a wider temperature range, please consult the manufacturer.

Ordering Information:

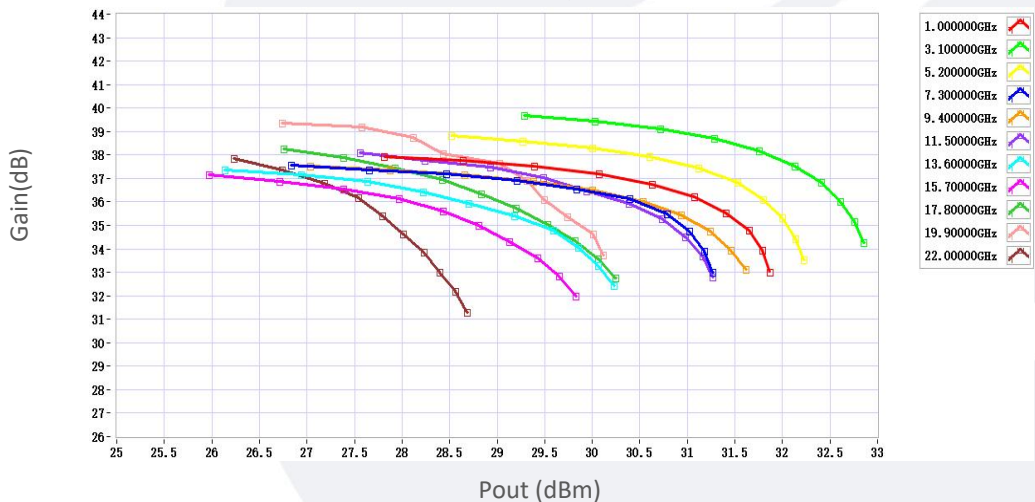
Base Number	Description	Revision
TLPA0.1G22G-30-27	Power amplifier 0.1-22GHz, Gain:30dB,Psat:27dBm,+24V DC,Without Heatsink	Rev.1.1
TLPA0.1G22G-30-27-HS	Power amplifier 0.1-22GHz, Gain:30dB,Psat:27dBm,+24V DC,With Heatsink	Rev.1.1

Typical Performance Data:

VSWR&Gain vs Frequency



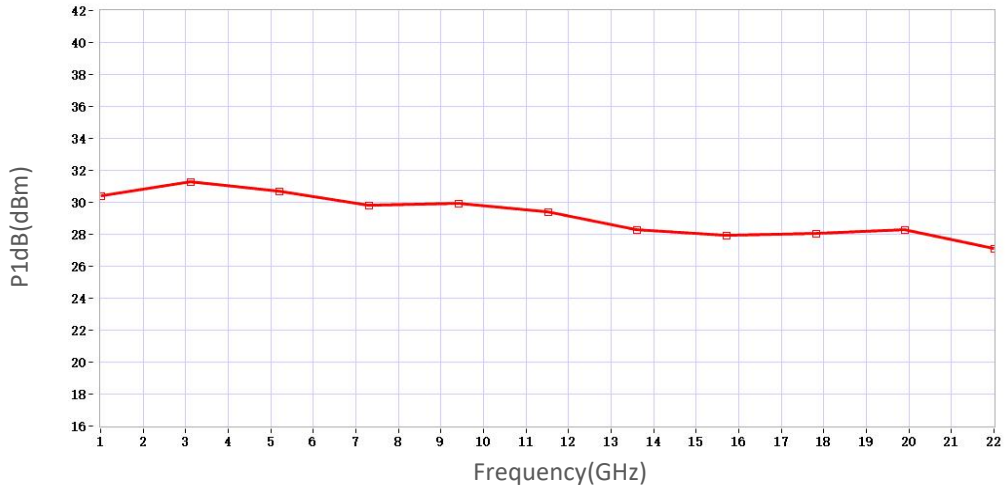
Gain vs Output Power



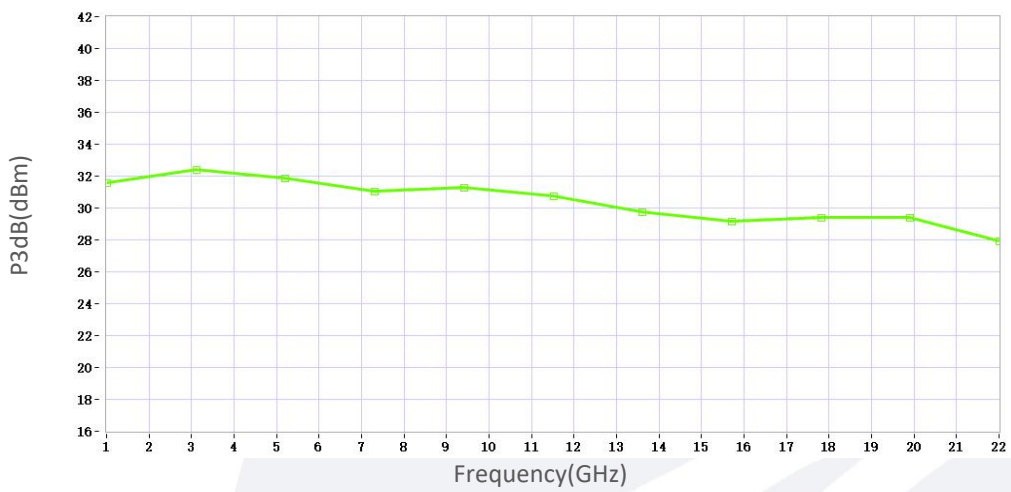
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

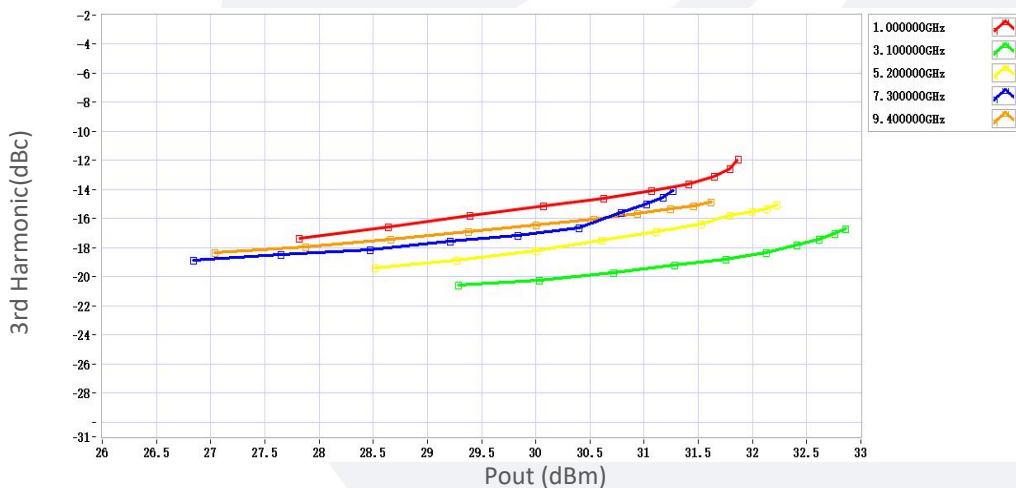
P1dB vs Frequency



P3dB vs Frequency



3rd Harmonic vs Output Power



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