

Power Amplifier

0.1-22GHz/35dB Gain/32dBm Psat

Model: TLPA0.1G22G-35-32

TLPA0.1G22G-35-32 is a power amplifier with a typical small signal gain of 35 dB and Psat of 32 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: 35dB Typ
- Output Power Psat: 32dBm 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	0.1		22	GHz
Small Signal Gain	33	35		dB
Gain Flatness		±2.5		dB
Output P1dB		30		dBm
Output Psat		32		dBm
Input VSWR		2		:1
Output VSWR		2		:1
DC Voltage		24	25	V DC
DC Supply Current		850		mA
Impedance		50		Ohms

*Performance may degrade below 300 MHz. Please refer to below typical test plots

Mechanical Specifications:

Parameter	Value	Units
Input /Output Connector	SMA Female/SMA Female	
Size	38*58.5*12.5	mm

Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+25V
RF Input Power	0 dBm
ESD sensitivity (HBm)	Class 0, passed 150V



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		+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			

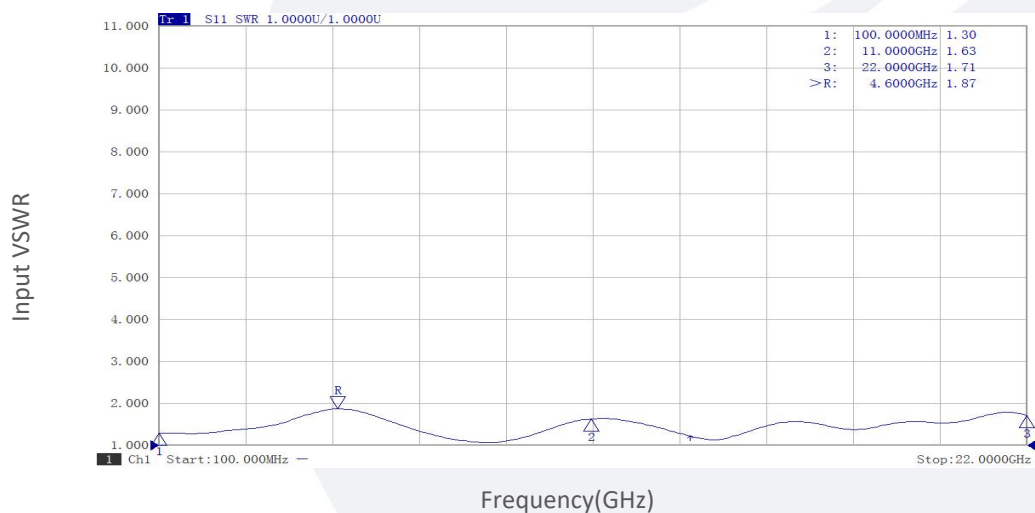
*Note: For a wider temperature range, please consult the manufacturer.

Ordering Information:

Base Number	Description	Revision
TLPA0.1G22G-35-32	Power amplifier 0.1-22GHz, Gain:35dB,Psat:32dBm,+24V DC,Without Heatsink	Rev.1.2
TLPA0.1G22G-35-32-HS	Power amplifier 0.1-22GHz, Gain:35dB,Psat:32dBm,+24V DC,With Heatsink	Rev.1.2

Typical Performance Data:

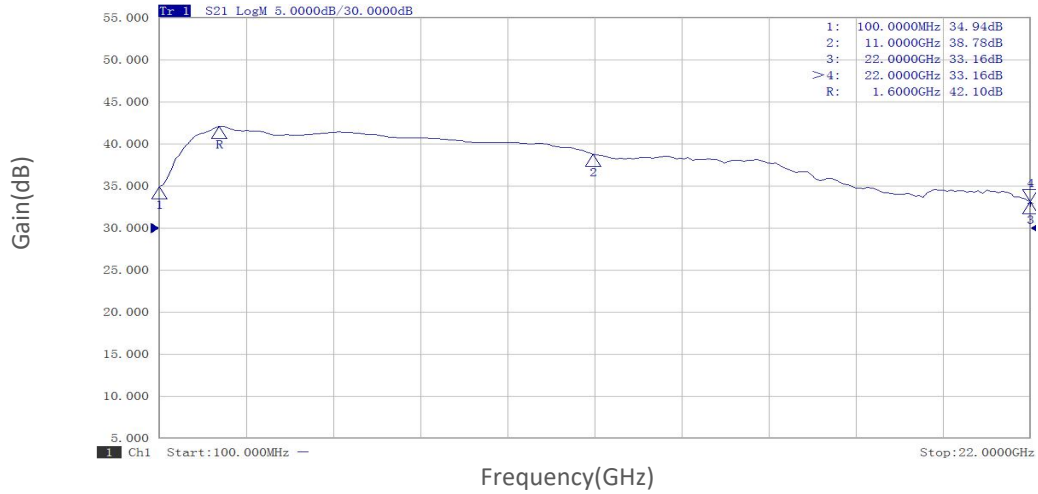
Input VSWR vs Frequency



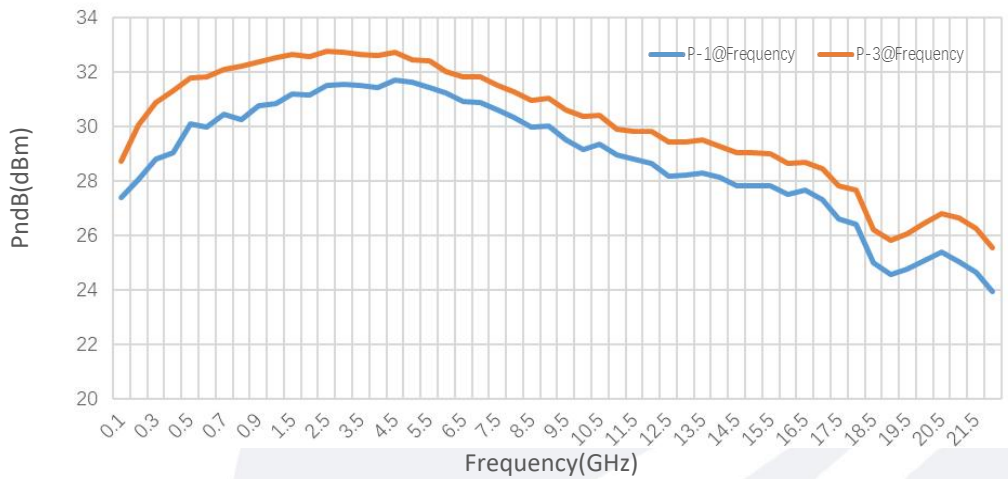
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

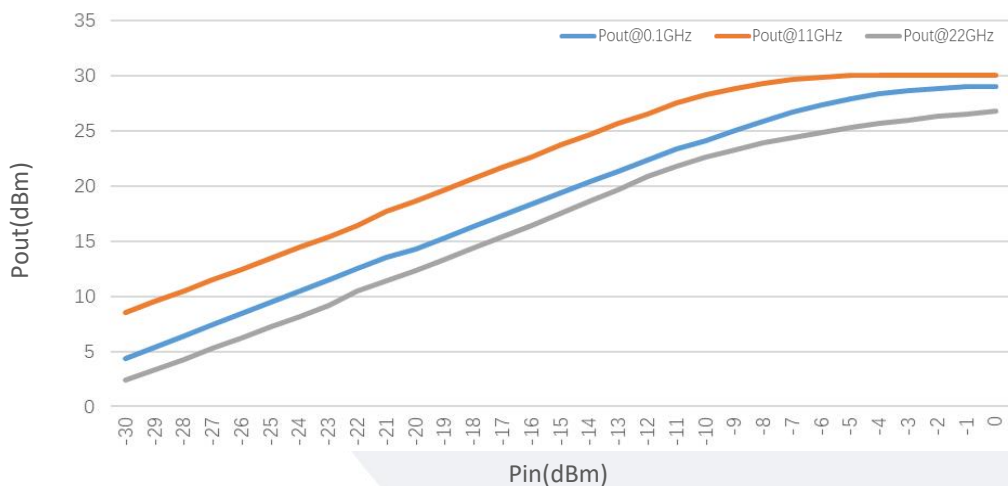
Small Signal Gain vs Frequency



PndB vs Frequency



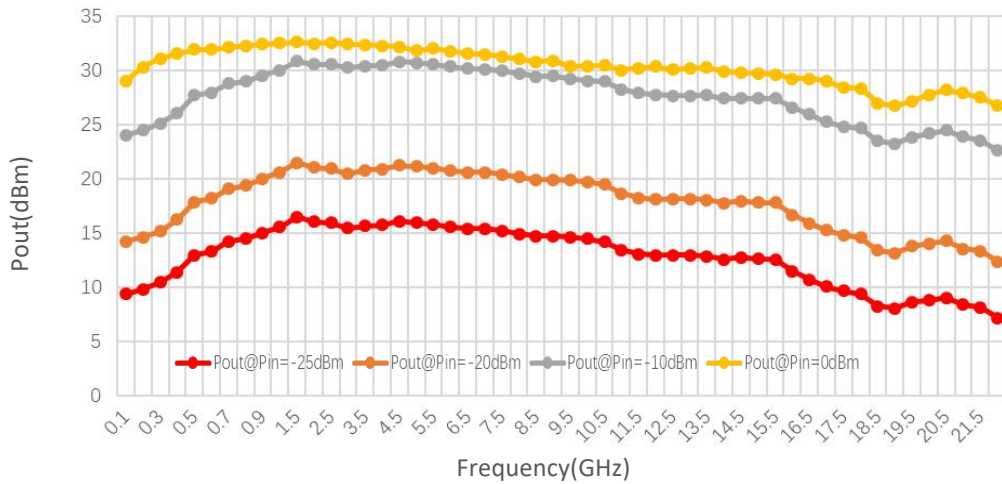
Pout@Pin



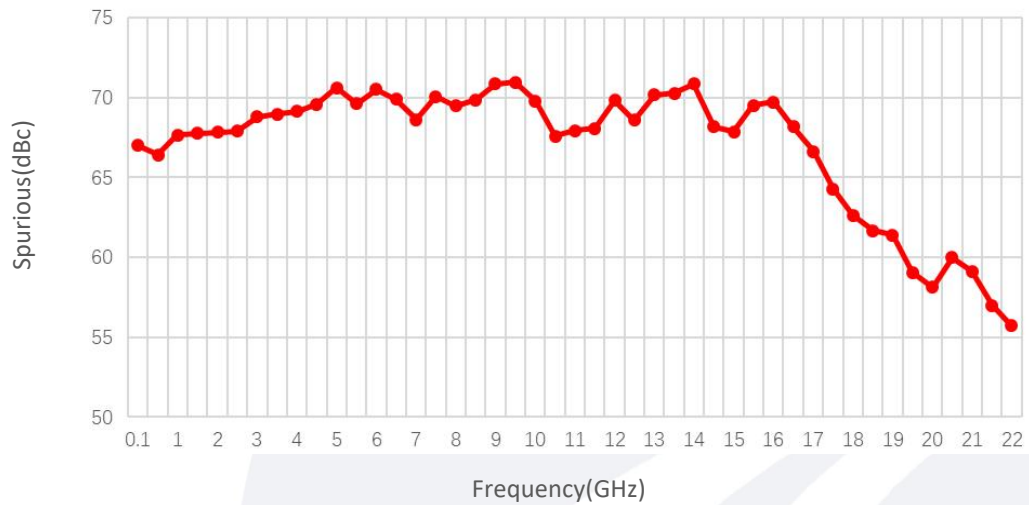
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

Pout@Equal_Pin



Spurious vs Frequency



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