

Power Amplifier

2-22GHz/43dB Gain/43dBm Psat

Model: TLPA2G22G-43-43

TLPA2G22G-43-43 is a power amplifier with a minimum power gain of 43 dB and a minimum Psat of 43 dBm across the frequency range of 2 to 22 GHz. The DC power requirement for the amplifier is +18VDC/14A. The input and output port configuration offers coax adapter structure with 2.92mm female.

Features:

- Frequency range: 2-22GHz
- Gain: 43dB Min
- Output Power Psat: 43dBm Min
- Protection: Over voltage protection
- 50 Ohm Matched Input / Output

Applications:

- Cellular
- PCN
- GSM
- ISM
- Lab Test

Electrical Characteristics:

| Parameter | Min | Typ | Max | Units |
|---------------------|-----|-----|-----|-------|
| Frequency range | 2 | | 22 | GHz |
| Power Gain | 43 | | | dB |
| Gain Flatness | | ±4 | | dB |
| Output P1dB | 35 | | | dBm |
| Output Psat | 43 | | | dBm |
| Spurious@Pout=43dBm | | | -50 | dBc |
| Harmonic@Pout=43dBm | | | -10 | dBc |
| Input VSWR | | | 2 | :1 |
| DC Voltage | | 18 | 19 | V DC |
| DC Supply Current | | 14 | 15 | A |
| Impedance | | 50 | | Ohms |

Mechanical Specifications:

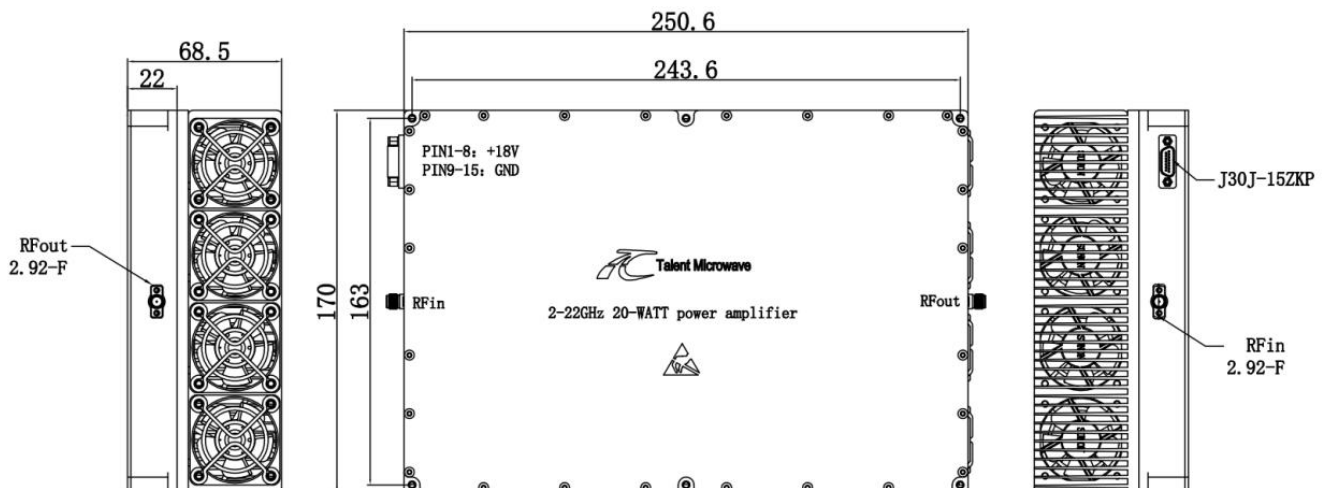
| Parameter | Value | Units |
|-------------------------|---|----------------------------|
| Input /Output Connector | 2.92mm Female/2.92mm Female | |
| DC Supply Connector | J30J-15ZKP | Pin1~8:+18V Pin9~15:GND |
| Size | 250.6*170*22(Without heatsink) 250.6*170*68.5(With heatsink) | mm |
| Weight | ≤3.5 | Kg |

Absolute Maximum Ratings:

| Parameter | Value |
|-----------------------|----------------------|
| Supply Bias Voltage | +19 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 | | +50 | °C |
| Non-operating Temperature* | -50 | | +60 | °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 | | | |

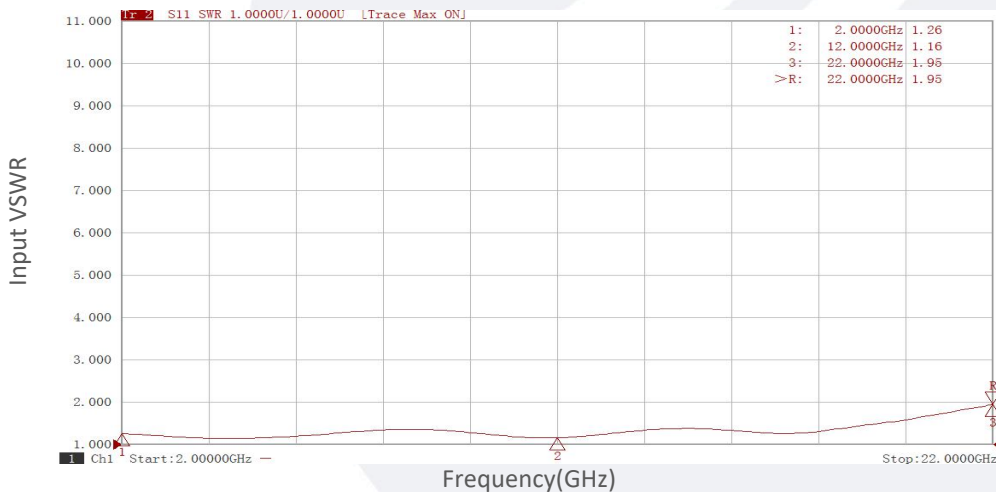
*Note: For a wider temperature range, please consult the manufacturer.

Ordering Information:

| Base Number | Description | Revision |
|-----------------|--|----------|
| TLPA2G22G-43-43 | Power amplifier 2-22GHz, Gain:43dB,Psat:43dBm,+18V DC,With Heatsink | Rev.1.1 |

Typical Performance Data:

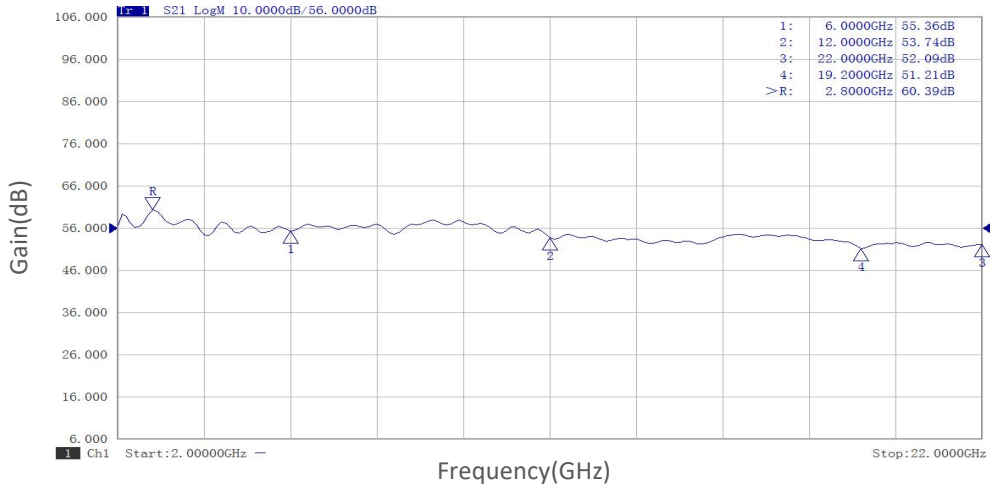
Input VSWR vs Frequency



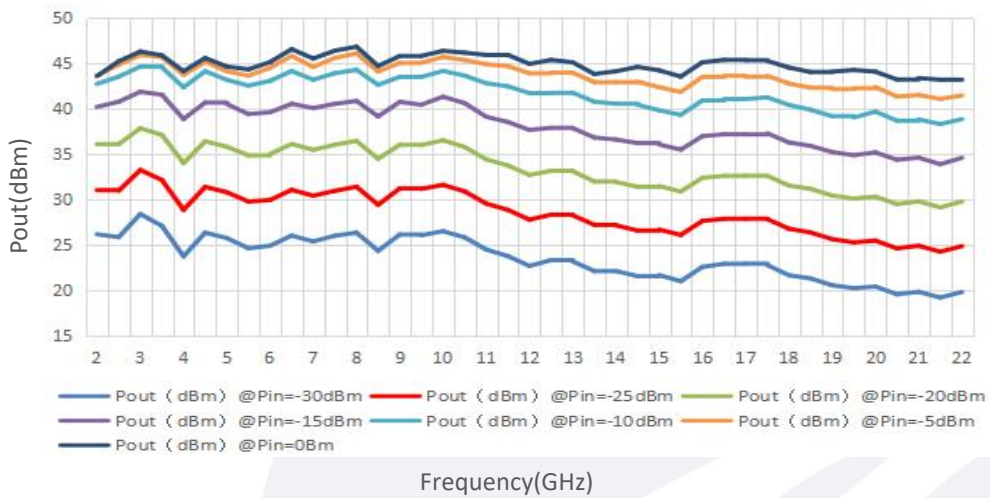
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

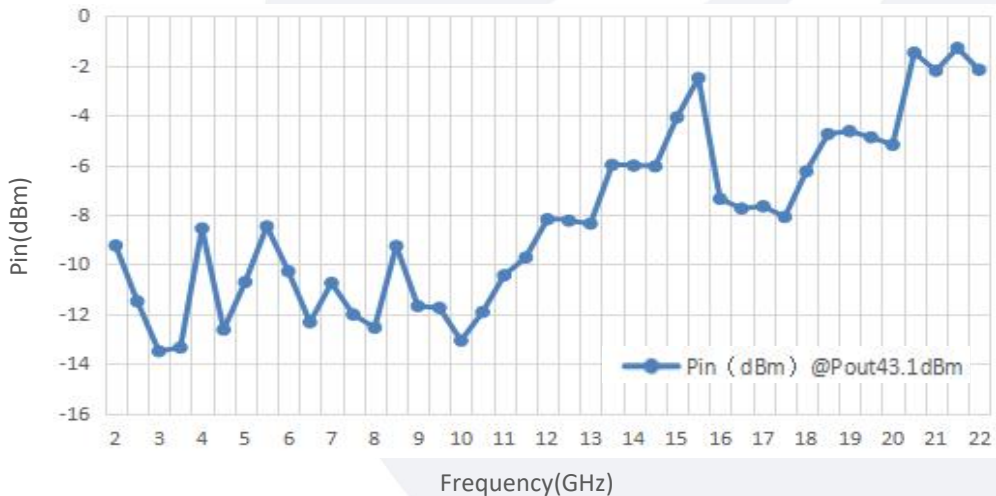
Small Signal Gain vs Frequency



Pout@Equal-Pin



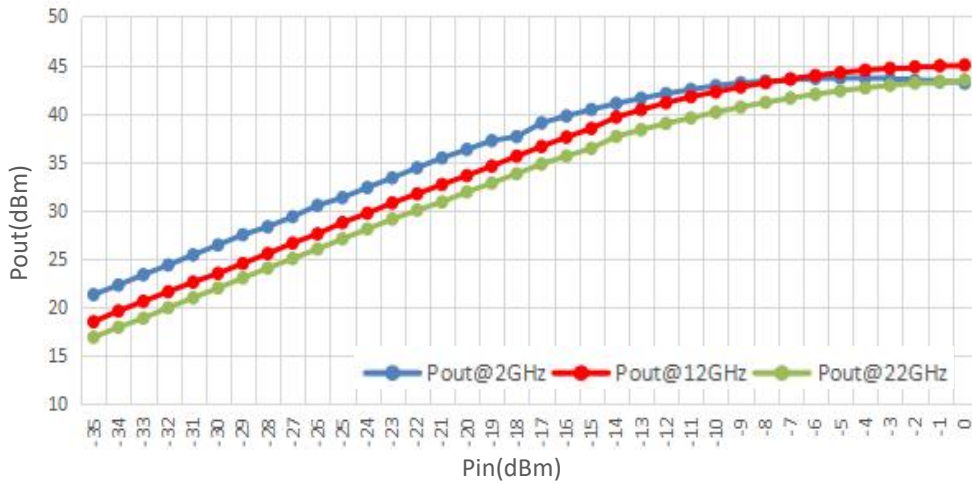
Pin@Equal-Pout



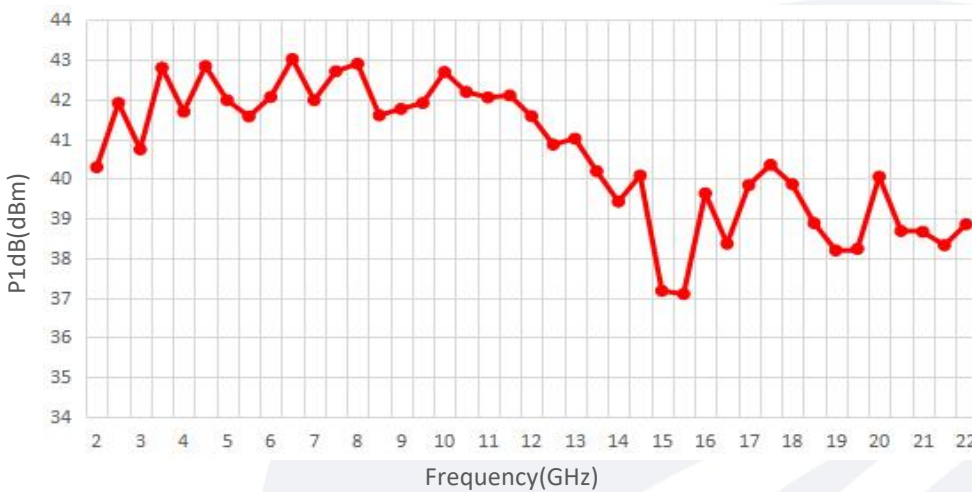
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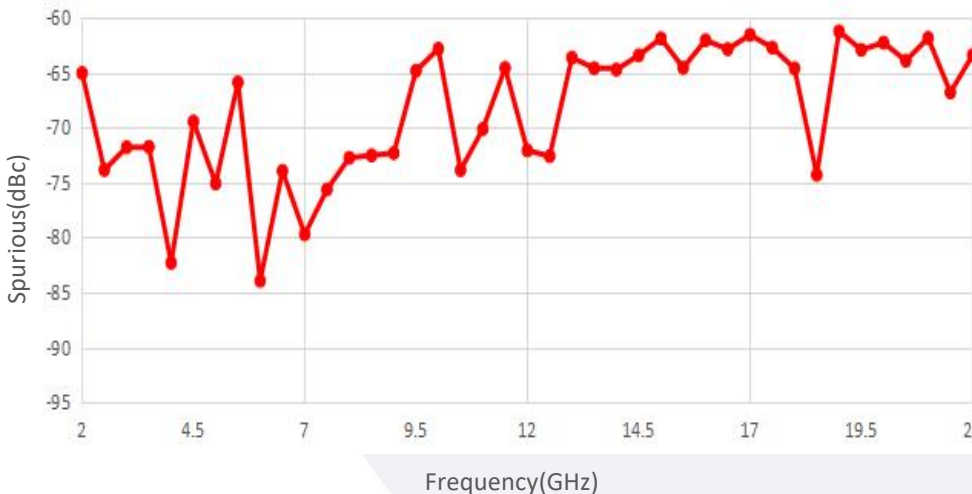
Pout@Pin



P1dB VS Frequency



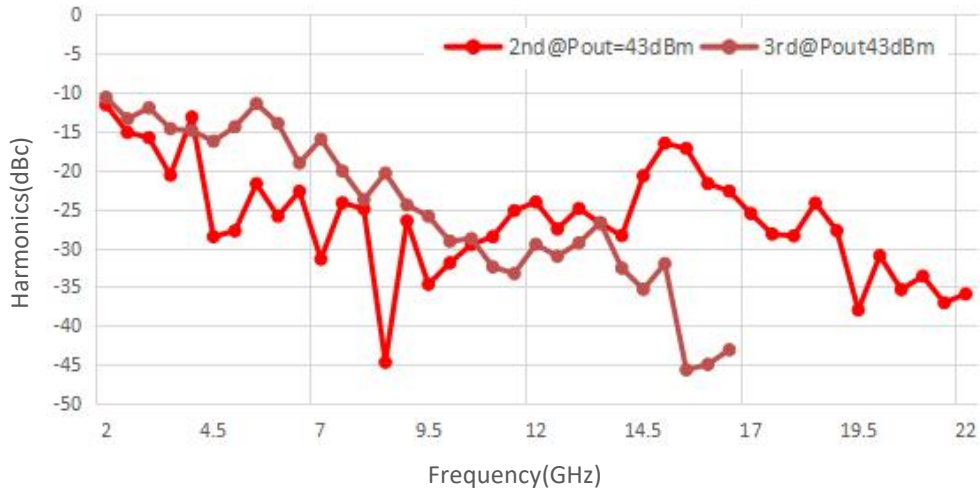
Spurious vs Frequency



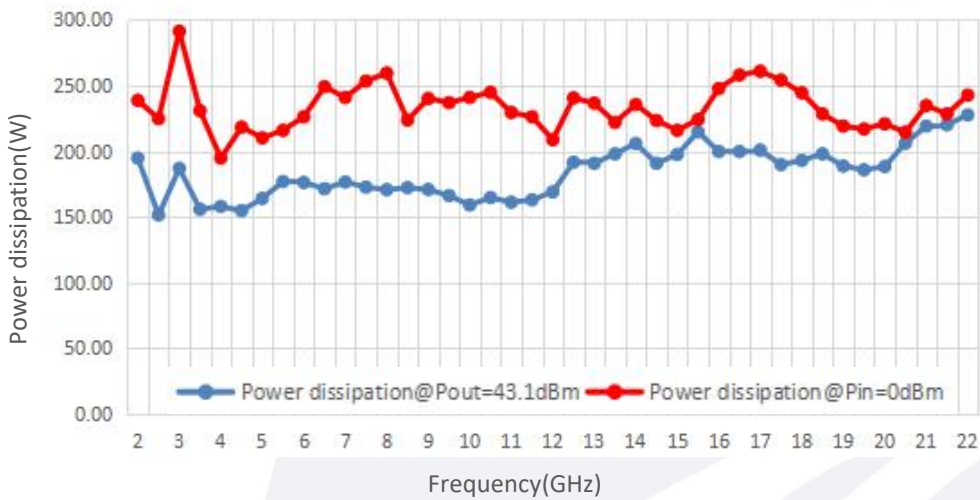
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Typical Performance Data:

Harmonic vs Frequency



Power dissipation



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