

Power Amplifier

26.5-40GHz/47dB Gain/47dBm Psat

Model: TLPA26.5G40G-47-47

TLPA26.5G40G-47-47 is a power amplifier with a minimum power gain of 47 dB and a minimum Psat of 47 dBm across the frequency range of 26.5 to 40 GHz. The DC power requirement for the amplifier is +22 VDC/30 A. The input port configuration offers coax adapter structure with 2.92mm female and output port configuration offers WR28.

Features:

- Frequency range: 26.5-40GHz
- Gain: 47dB Min
- Output Power Psat: 47dBm 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 | 26.5 | | 40 | GHz |
| Power Gain | 47 | | | dB |
| Gain Flatness | | ±4.5 | | dB |
| Output Psat | 47 | | | dBm |
| Spurious | | | -50 | dBc |
| Input VSWR | | 2 | 2.5 | :1 |
| DC Voltage | | +22 | +24 | V DC |
| DC Supply Current | | | 30 | A |
| Impedance | | 50 | | Ohms |

Mechanical Specifications:

| Parameter | Value | Units |
|------------------------------------|-------------------------|-------|
| Input /Output Connector | 2.92mm Female/WR28 | |
| DC Power Supply Interface | SUB-5W5 | |
| Control and Test Connector | J30J-15ZKP | |
| Forward/Reverse Coupling Connector | 2.92 Female/2.92 Female | |
| Size | 300*264*85 | mm |
| Weight | 10 | Kg |

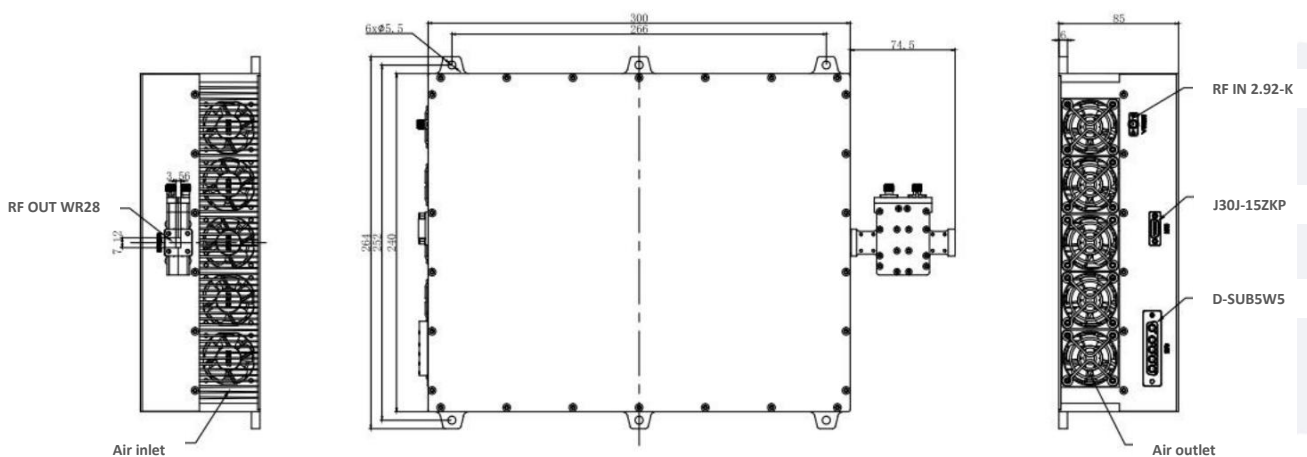
Absolute Maximum Ratings:

| Parameter | Value |
|-----------------------|----------------------|
| Supply Bias Voltage | +24 V |
| RF Input Power | +10 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.

DC Supply Connector(DSUB-5W5 Female):

| J30J-15ZKP Define | |
|-------------------|----------------------------------|
| Pin | Function |
| Pin1 | TTL(high for open,low for close) |
| Pin2 | Current Monitor |
| Pin3 | Temperature Monitor |
| Pin4 | 0.5dB Attenuation |
| Pin5 | 1dB Attenuation |
| Pin6 | 2dB Attenuation |
| Pin7 | 4dB Attenuation |
| Pin8 | 8dB Attenuation |
| Pin9 | 16dB Attenuation |
| Pin10-15 | GND |

| DSUB-5W5 Define | |
|-----------------|----------|
| Pin | Function |
| A1-A2 | +24V |
| A3-A5 | +24V |

Environmental Conditions:

| Parameter | Min | Typ | Max | Units |
|---------------------------------|--|-----|-----|-------|
| Operating Temperature* | 0 | | +40 | °C |
| Non-operating Temperature* | -45 | | +65 | °C |
| Relative humidity | | 95 | | % |
| Altitude | 10,000 | | | feet |
| Shock / Vibration(MIL-STD-810F) | 20g,11ms,saw-tooth | | | |
| Shock(non operating) | 20G for 11msc half sin wave,3 axis both directions | | | |

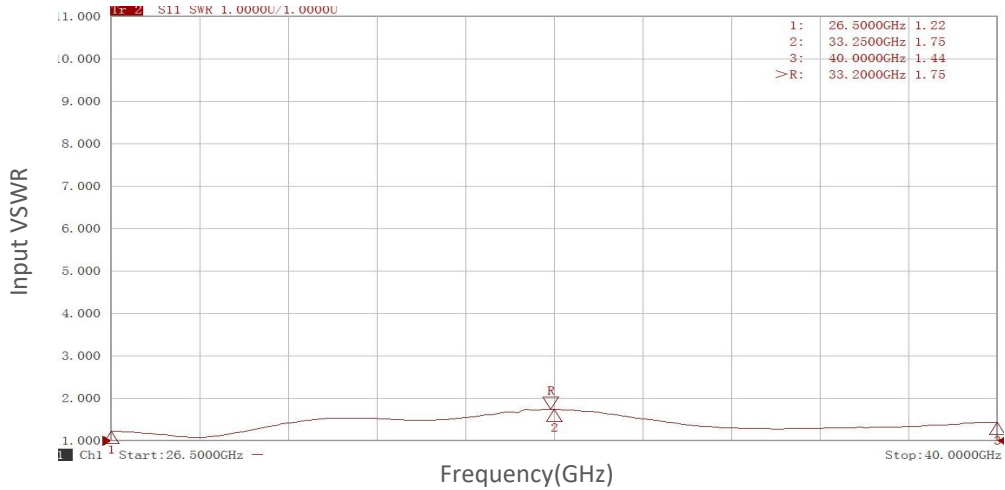
*Note: For a wider temperature range, please consult the manufacturer.

Ordering Information:

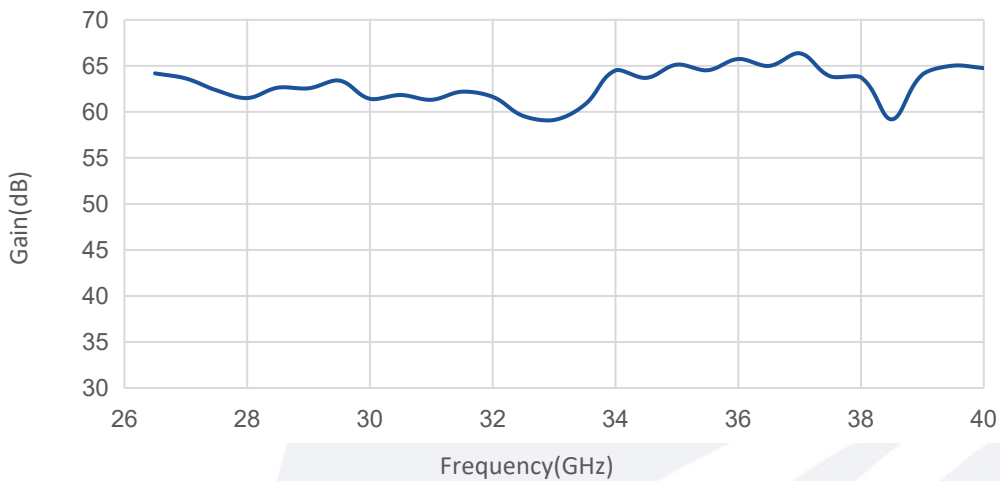
| Base Number | Description | Revision |
|--------------------|---|----------|
| TLPA26.5G40G-47-47 | Power amplifier 26.5-40GHz, Gain:47dB,Psat:47dBm,+22V DC,With Heatsink | Rev.1.1 |

Typical Performance Data:

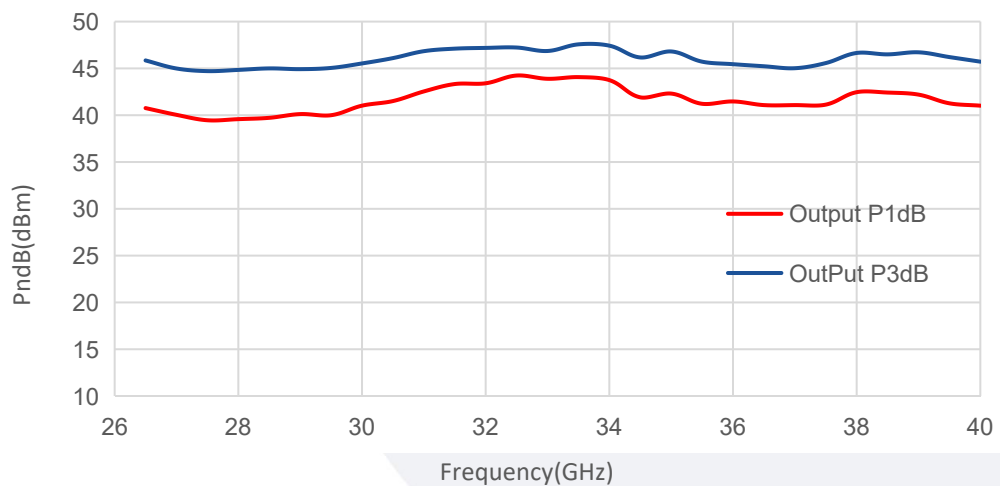
Input VSWR vs Frequency



Small Signal Gain vs Frequency



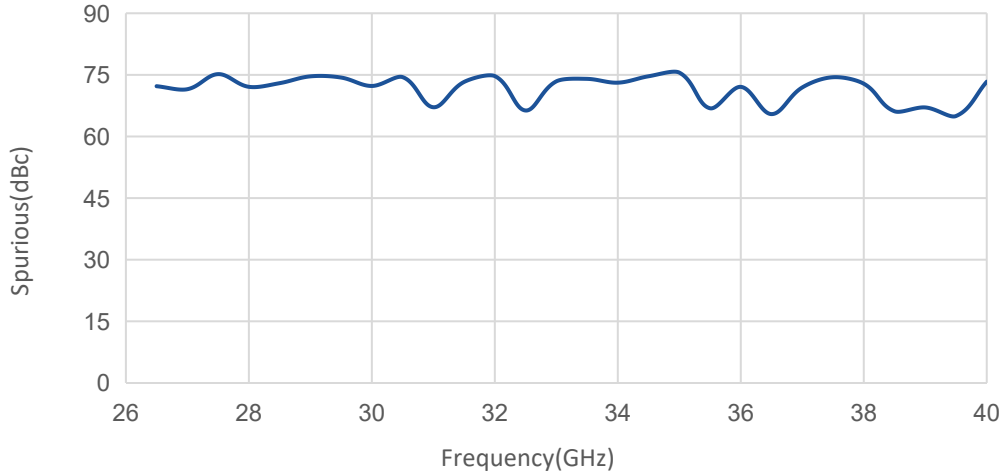
PndB vs Frequency



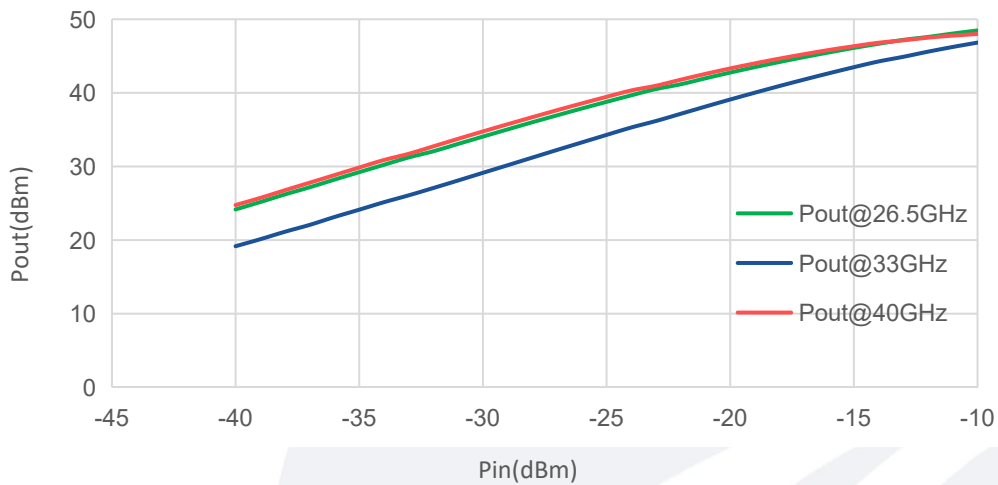
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

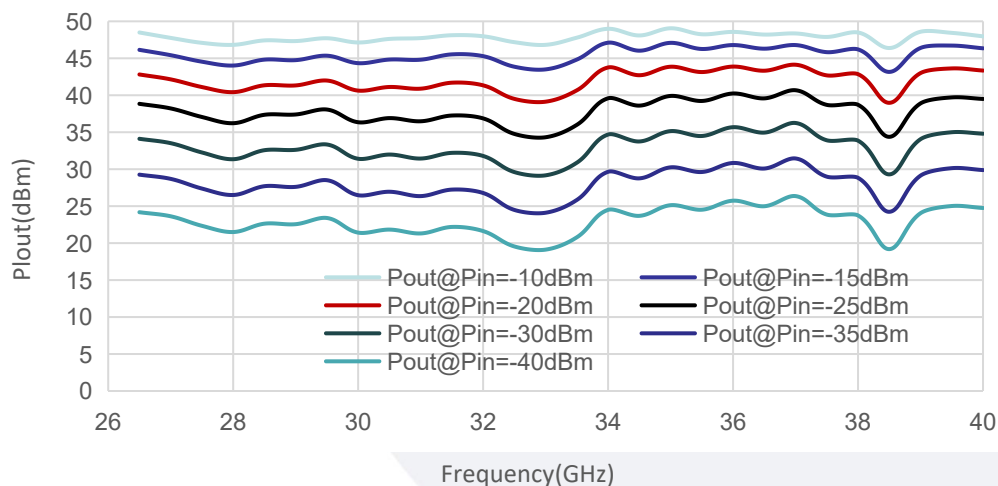
Spurious vs Frequency



Pout@Pin



Pout@Equal_Pin



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