

Power Amplifier

0.38-6GHz/35dB Gain/37 dBm Psat

Model: TLPA0.38G6G-30-37

TLPA0.38G6G-30-37 is a power amplifier with a minimum small signal gain of 35 dB and a nominal Psat of 37 dBm across the frequency range of 0.38 to 6 GHz. The DC power requirement for the amplifier is +30 VDC/2 A. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Frequency range: 0.38-6 GHz
- Gain: 35dB Min
- Output Power Psat: 37dBm 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 | 0.38 | | 6 | GHz |
| Small Signal Gain | 35 | | | dB |
| Gain Flatness | | ±2.5 | ±4 | dB |
| Output P1dB | | 35 | | dBm |
| Output Psat | 37 | | | dBm |
| Supurious | | -60 | | dBc |
| Harmonic | | -15 | | dBc |
| Input VSWR | | 1.5 | 2.5 | :1 |
| DC Voltage | | 30 | | V DC |
| DC Supply Current | | 2 | | A |
| Impedance | | 50 | | Ohms |

Mechanical Specifications:

| Parameter | Value | Units |
|---------------------------|-----------------------|-------|
| Input /Output Connector | SMA Female/SMA Female | |
| DC Power Supply Connector | J30J-9ZKW Male | |
| Size | 100*70*15 | mm |
| Weight | 200 | g |

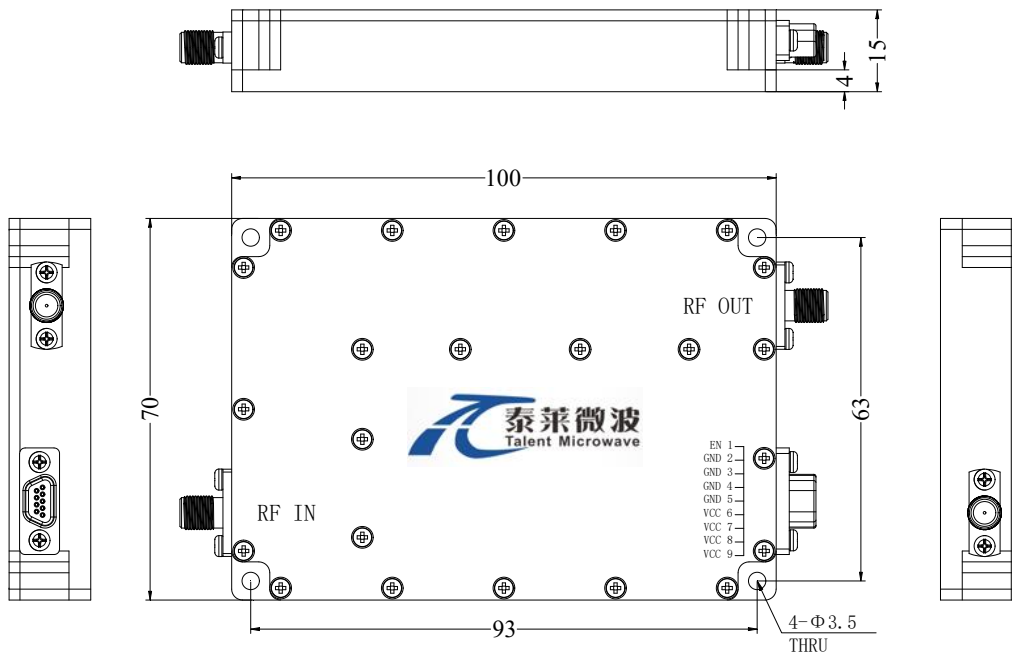
Absolute Maximum Ratings:

| Parameter | Value |
|-----------------------|----------------------|
| Supply Bias Voltage | +32 V |
| RF Input Power | +8 dBm |
| ESD sensitivity (HBm) | Class 0, passed 150V |



Outline Drawing:

Unit:mm



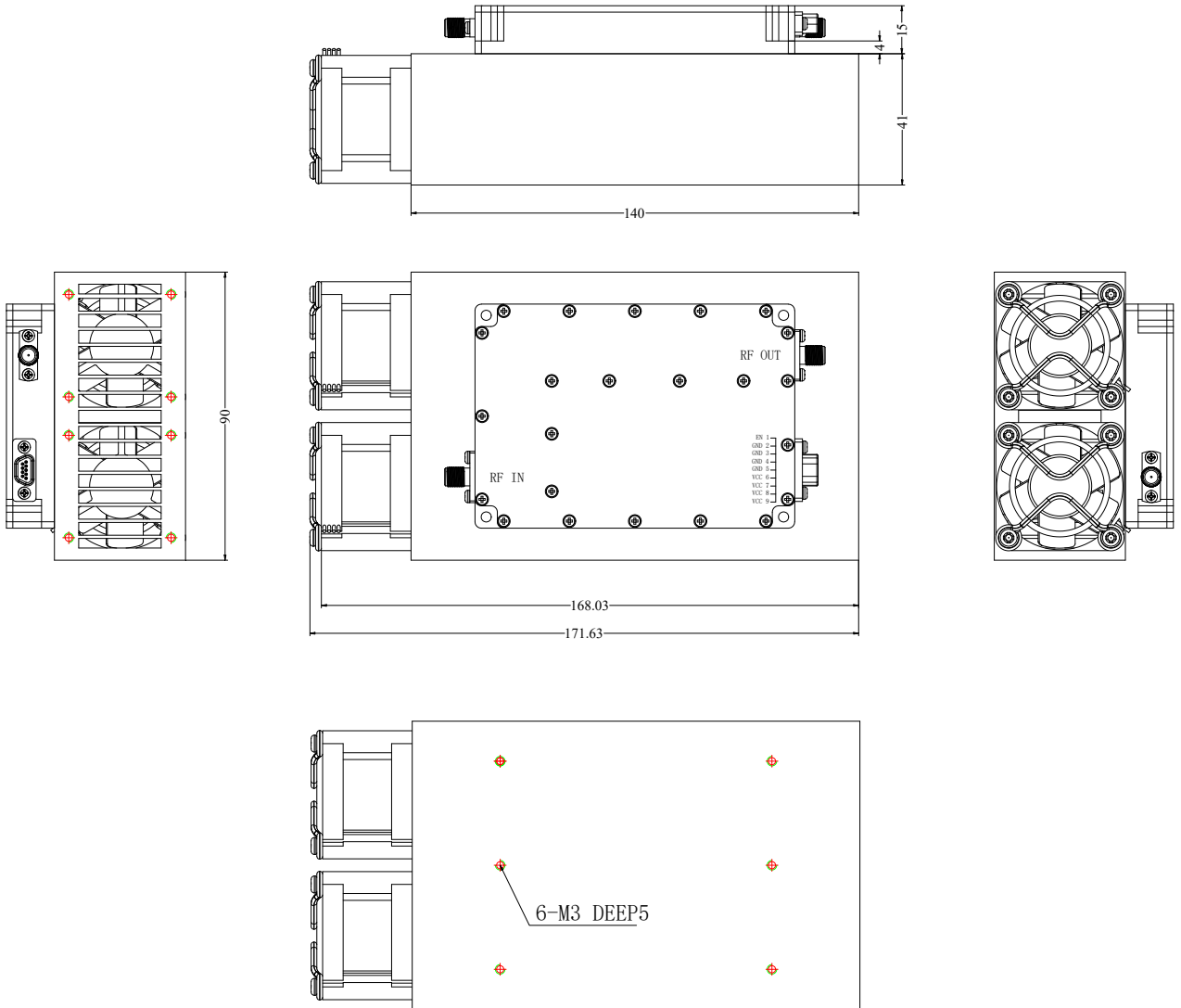
*****Heat Sink Required During Operation**



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

Outline Drawing:

Unit:mm



Fan power supply

| | |
|------------|--|
| Red line | Power supply positive, +24.0-28.0VDC DC current: 0.3A |
| Black line | Ground |

DC Supply Connector(J30J-9ZKW Male):

| Pin | Name | Function |
|-----|------|--|
| 1 | EN | Amplifier Enable: TTL High (5V) (Internally Pulled-High) Amplifier Disable: Short to ground |
| 2 | GND | Ground |
| 3 | GND | Ground |
| 4 | GND | Ground |
| 5 | GND | Ground |
| 6 | VCC | +26.0-30.0VDC |
| 7 | VCC | +26.0-30.0VDC |
| 8 | VCC | +26.0-30.0VDC |
| 9 | VCC | +26.0-30.0VDC |

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 | | | |

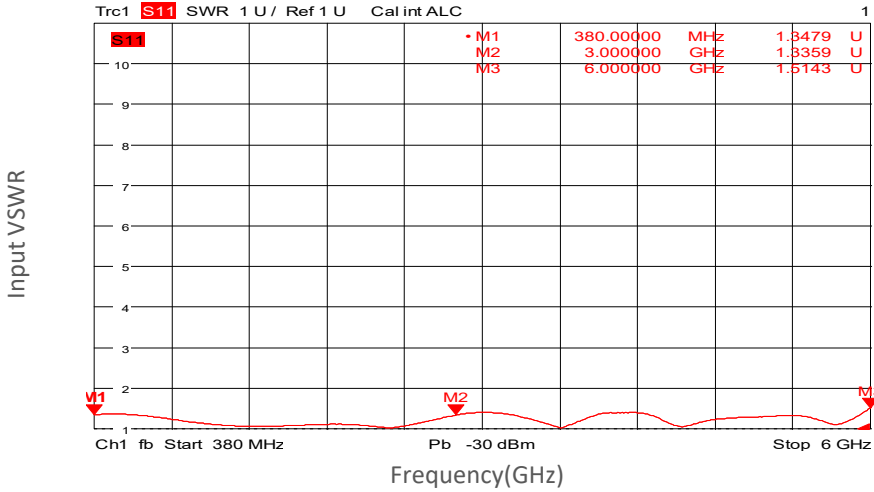
*Note: For a wider temperature range, please consult the manufacturer.

Ordering Information:

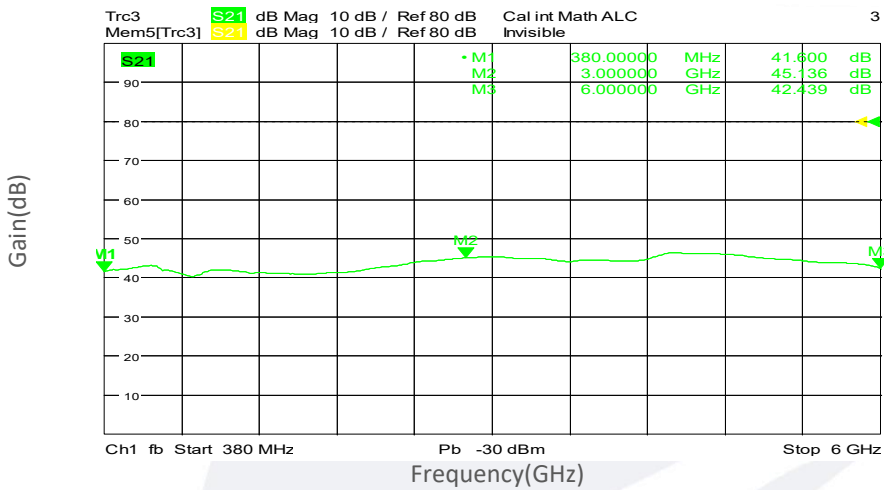
| Base Number | Description | Revision |
|----------------------|---|----------|
| TLPA0.38G6G-30-37 | Power amplifier 0.38-6GHz,Gain:35dB,Psat:37dBm, +30V DC,Without Heatsink | Rev.1.2 |
| TLPA0.38G6G-30-37-HS | Power amplifier 0.38-6GHz,Gain:35dB,Psat:37dBm, +30V DC,With Heatsink | Rev.1.2 |

Typical Performance Data:

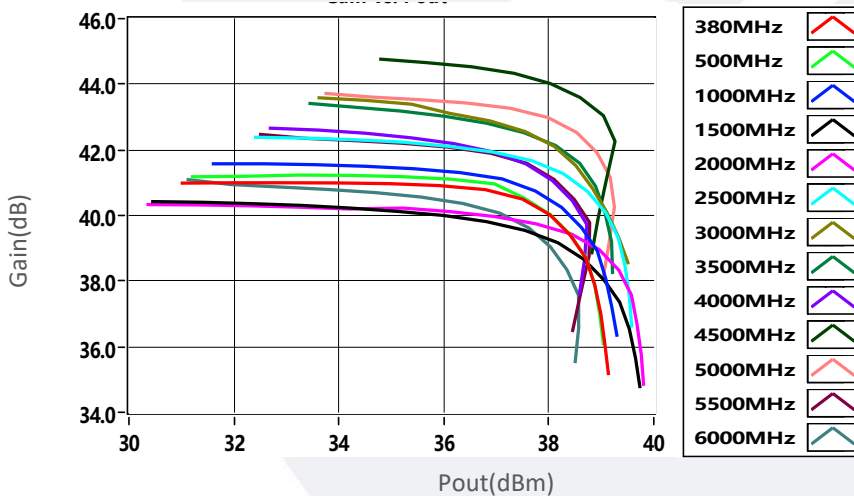
Input VSWR vs Frequency



Small Signal Gain vs Frequency

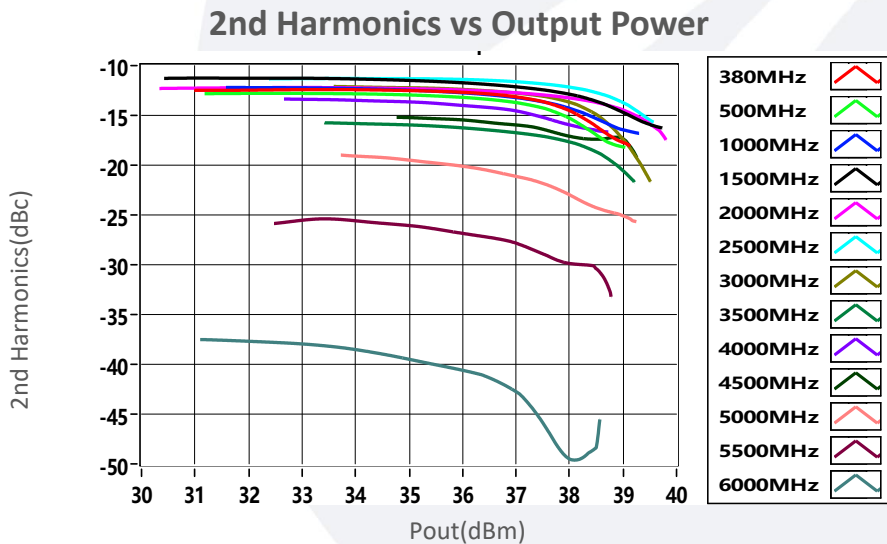
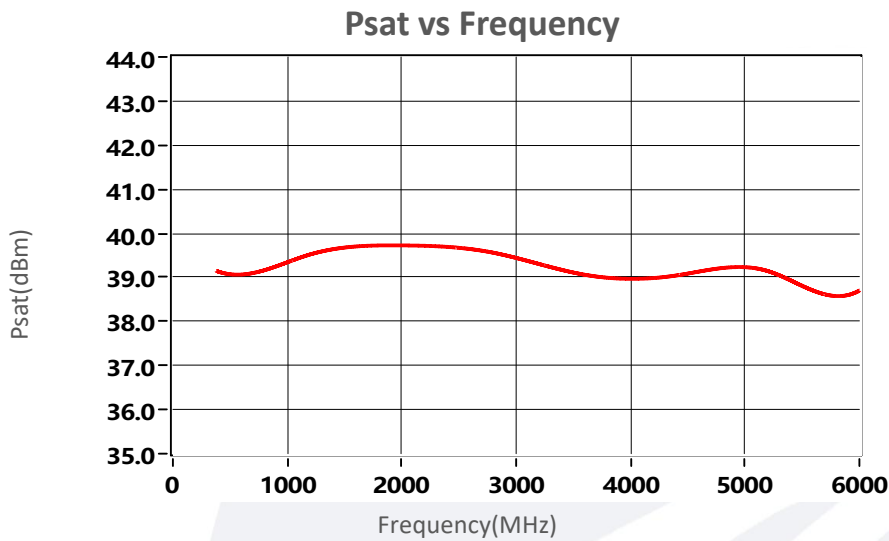
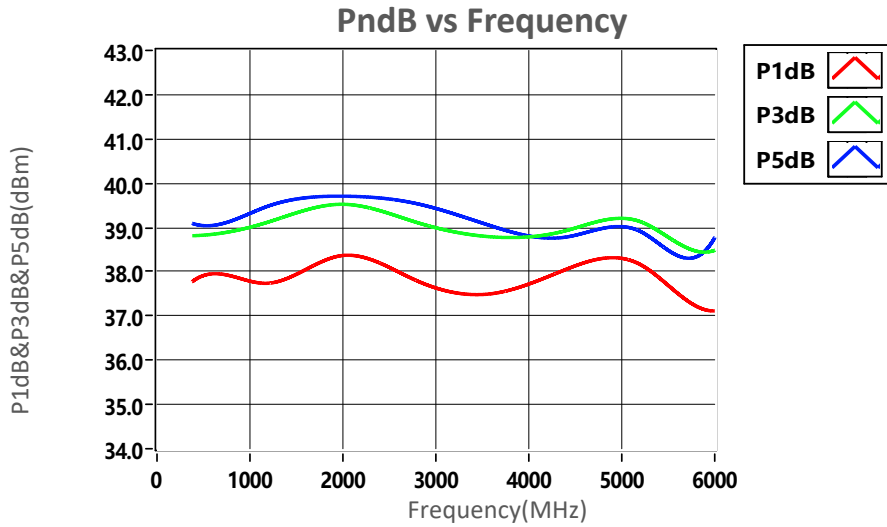


Gain vs Output Power



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.

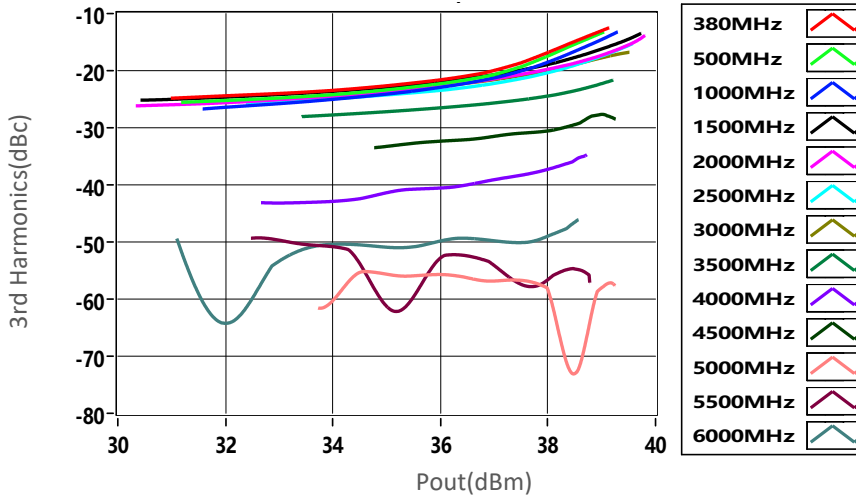
Typical Performance Data:



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Typical Performance Data:

3rd Harmonics vs Output Power



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