

Power Amplifier

10-1000MHz/38dB Gain/36dBm Psat

Model: TLPA10M1000M-38-36

TLPA10M1000M-38-36 is a power amplifier with a typical small signal gain of 38 dB and a minimum Psat of 36 dBm across the frequency range of 10 to 1000 MHz. The DC power requirement for the amplifier is +28 VDC/1.5 A. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Frequency range: 10-1000MHz
- Gain: 38dB Typ
- Output Power Psat: 36dBm 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 | 10 | | 1000 | MHz |
| Small Signal Gain | 36 | 38 | 39 | dB |
| Gain Flatness | | ±1 | ±1.5 | dB |
| Output P1dB | 35 | 36 | | dBm |
| Output Psat | 36 | 37 | | dBm |
| Input VSWR | | 1.5 | 2.0 | :1 |
| DC Voltage | | +28 | | V DC |
| DC Supply Current | | 1.5 | | A |
| Impedance | | 50 | | Ohms |

Mechanical Specifications:

| Parameter | Value | Units |
|-------------------------|-----------------------|-------|
| Input /Output Connector | SMA Female/SMA Female | |
| DC Bias | Solder Pin | |
| Size | 90*48*15 | mm |
| Weight | 150 | g |

Absolute Maximum Ratings:

| Parameter | Value |
|-----------------------|----------------------|
| Supply Bias Voltage | +30 V |
| RF Input Power | +3 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 | | +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 | | | |

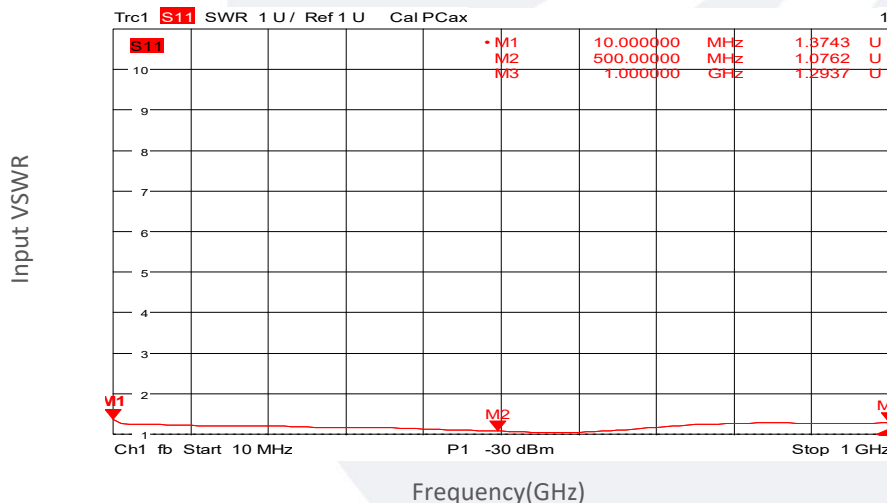
*Note: For a wider temperature range, please consult the manufacturer.

Ordering Information:

| Base Number | Description | Revision |
|-----------------------|--|----------|
| TLPA10M1000M-38-36 | Power amplifier 10-1000MHz, Gain:38dB,Psat:36dBm,+28V DC,Without Heatsink | Rev.1.1 |
| TLPA10M1000M-38-36-HS | Power amplifier 10-1000MHz, Gain:38dB,Psat:36dBm,+28V DC,With Heatsink | Rev.1.1 |

Typical Performance Data:

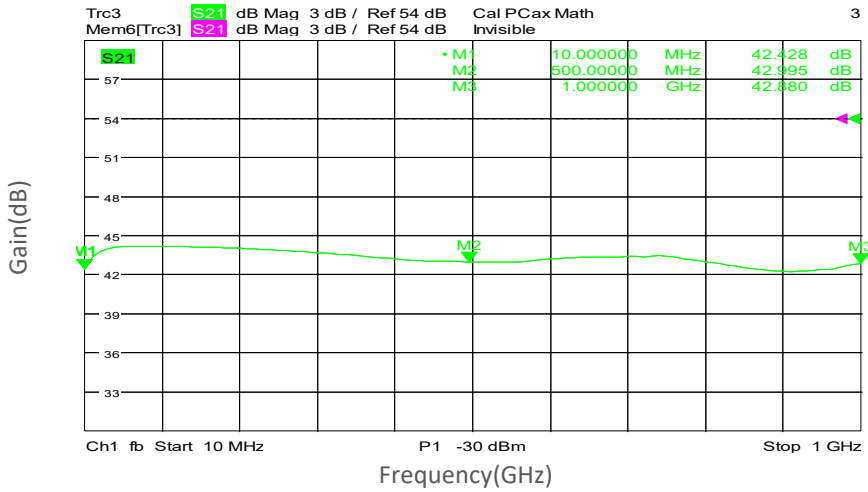
Input VSWR vs Frequency



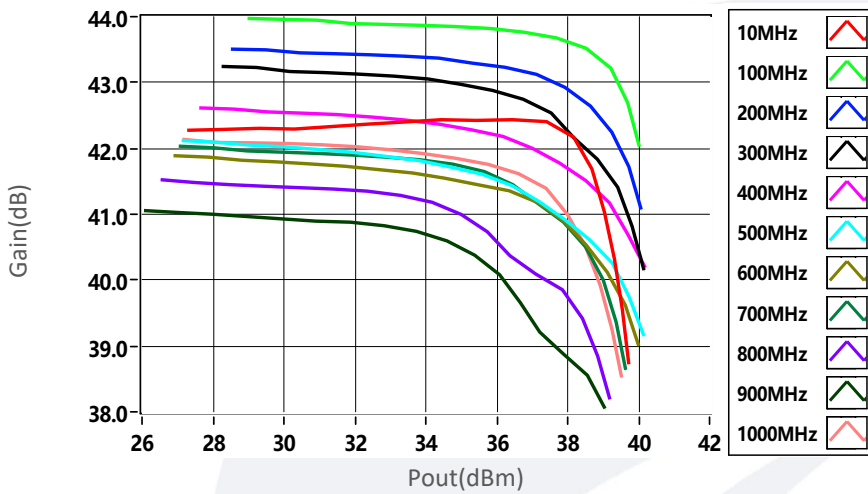
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

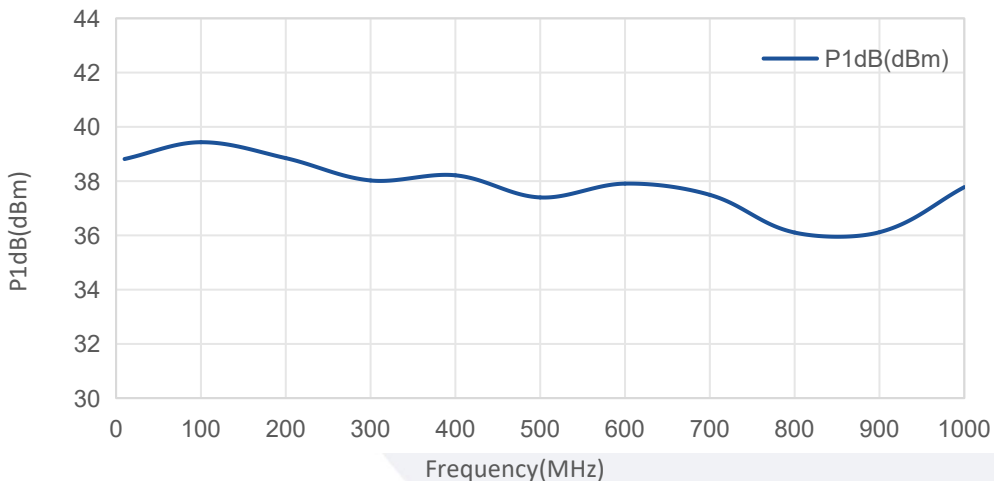
Small Signal Gain vs Frequency



Gain vs Output Power



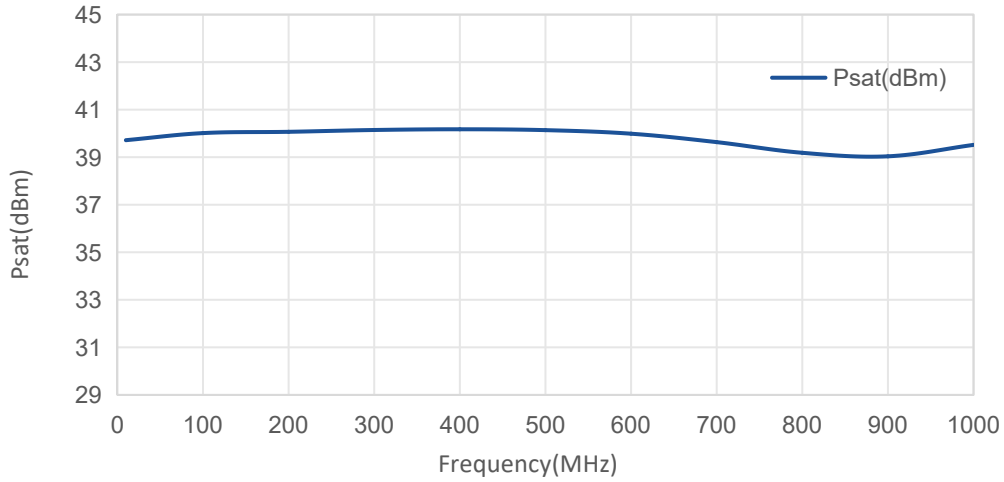
P1dB vs Frequency



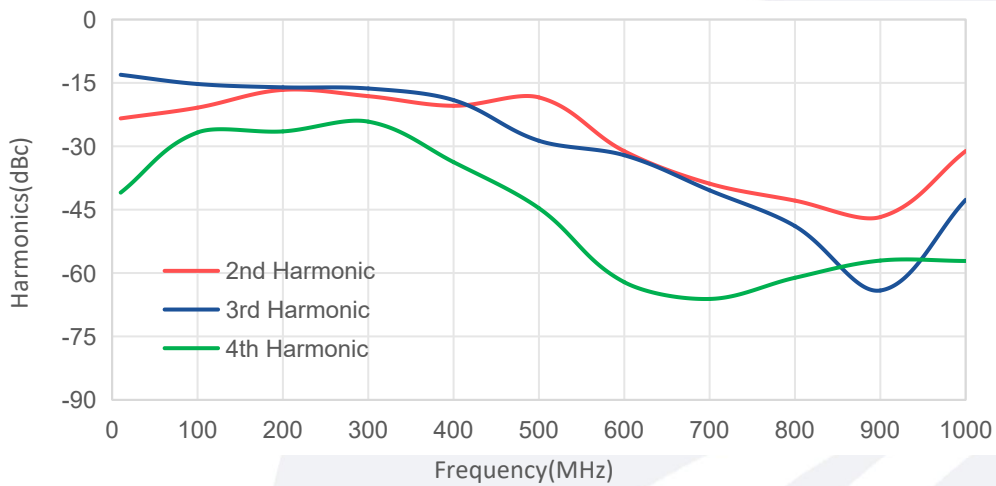
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Typical Performance Data:

Psat vs Frequency



Harmonics vs Frequency



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