

## Power Amplifier

5-500MHz/33dB Gain/33dBm P1dB

Model: TLPA5M500M-30-33

TLPA5M500M-30-33 is a power amplifier with a typical gain of 33 dB and a minimum P1dB of 33 dBm across the frequency range of 5 to 500 MHz. The DC power requirement for the amplifier is +24 VDC/0.9 A. The input and output port configuration offers coax adapter structure with SMA female.

### Features:

- Frequency range: 5-500MHz
- Gain: 33dB Typ
- Output Power P1dB: 33dBm 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   | 5   |      | 500 | MHz   |
| Gain              | 30  | 33   |     | dB    |
| Gain Flatness     |     | ±0.5 | ±1  | dB    |
| Output P1dB       | 33  | 34   |     | dBm   |
| Output IP3        |     | 38   |     | dBm   |
| Noise Figure      |     | 7    |     | dB    |
| Input VSWR        |     | 1.5  | 2   | :1    |
| Output VSWR       |     | 1.5  | 2   | :1    |
| DC Voltage        |     | +24  | +28 | V DC  |
| DC Supply Current |     | 0.9  | 1.5 | A     |
| Impedance         |     | 50   |     | Ohms  |

### Mechanical Specifications:

| Parameter               | Value  | Units |
|-------------------------|--|-------|
| Input /Output Connector | SMA Female/SMA Female                                    |       |
| DC Bias                 | Solder Pin   |       |
| Size                    | 110*48*15(With heatsink)<br>110*144*45(Without heatsink) | mm    |
| Weight                  | 400  | g     |

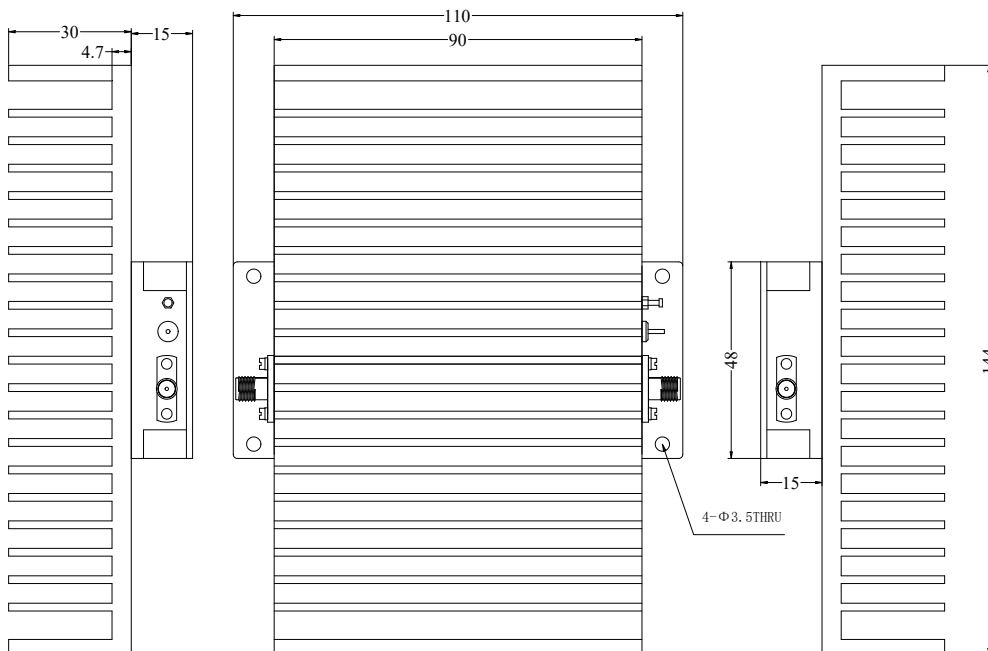
### Absolute Maximum Ratings:

| Parameter             | Value                |
|-----------------------|----------------------|
| Supply Bias Voltage   | +28 V                |
| RF Input Power        | +10 dBm              |
| ESD sensitivity (HBm) | Class 0, passed 150V |



### Outline Drawing:

Unit:mm



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) | 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 |
|---------------------|--|----------|
| TLPA5M500M-30-33    | Power amplifier 5-500MHz,<br>Gain:33dB,P1dB:33dBm,+24V DC,Without Heatsink | Rev.1.1  |
| TLPA5M500M-30-33-HS | Power amplifier 5-500MHz,<br>Gain:33dB,P1dB:33dBm,+24V DC,With Heatsink    | Rev.1.1  |