

Solid State High Power Amplifier Systems

0.1-400MHz/53dB Gain/200W Psat/220V AC

Model: TLPA0.1M400M-53-53-BC

TLPA0.1M400M-53-53-BC is a solid state high power amplifier systems provides high output power and high gain across the 0.1 to 400MHz frequency range. The amplifier features a built-in 220V power supply, making it easy to use in most lab environments. This model features thermal self protection, preventing damage to the amplifier and providing added reliability.

Features:

- Frequency range: 0.1-400MHz
- Gain: 53dB Min
- Psat Output Power: 200W Min
- Protection: Over TEM, over voltage, over current, over VSWR protection
- 50 Ohm Matched Input / Output

Electrical Characteristics:

| Parameter | Symbol | Min | Typ | Max | Units |
|-------------------|-------------|---------|-----|-----------|-------|
| Frequency range | BW | 0.1-400 | | | MHz |
| Power Gain | GP | 53 | | | dB |
| Gain flatness | Δ GL | | | ± 3.5 | dB |
| Output P1dB | P1dB | 150 | | | W |
| Output Psat | Psat | 200 | | | W |
| Spurious | Spur | | | -50 | dBc |
| Harmonics | HAM | | | -15 | dBc |
| Input VSWR | VSWRin | | | 2.0 | :1 |
| AC Voltage | Vac | | 220 | | V AC |
| Power Consumption | Pdiss | | | 800 | W |
| Impedance | I/O-IMP | 50 | | | Ohms |

Mechanical Specifications:

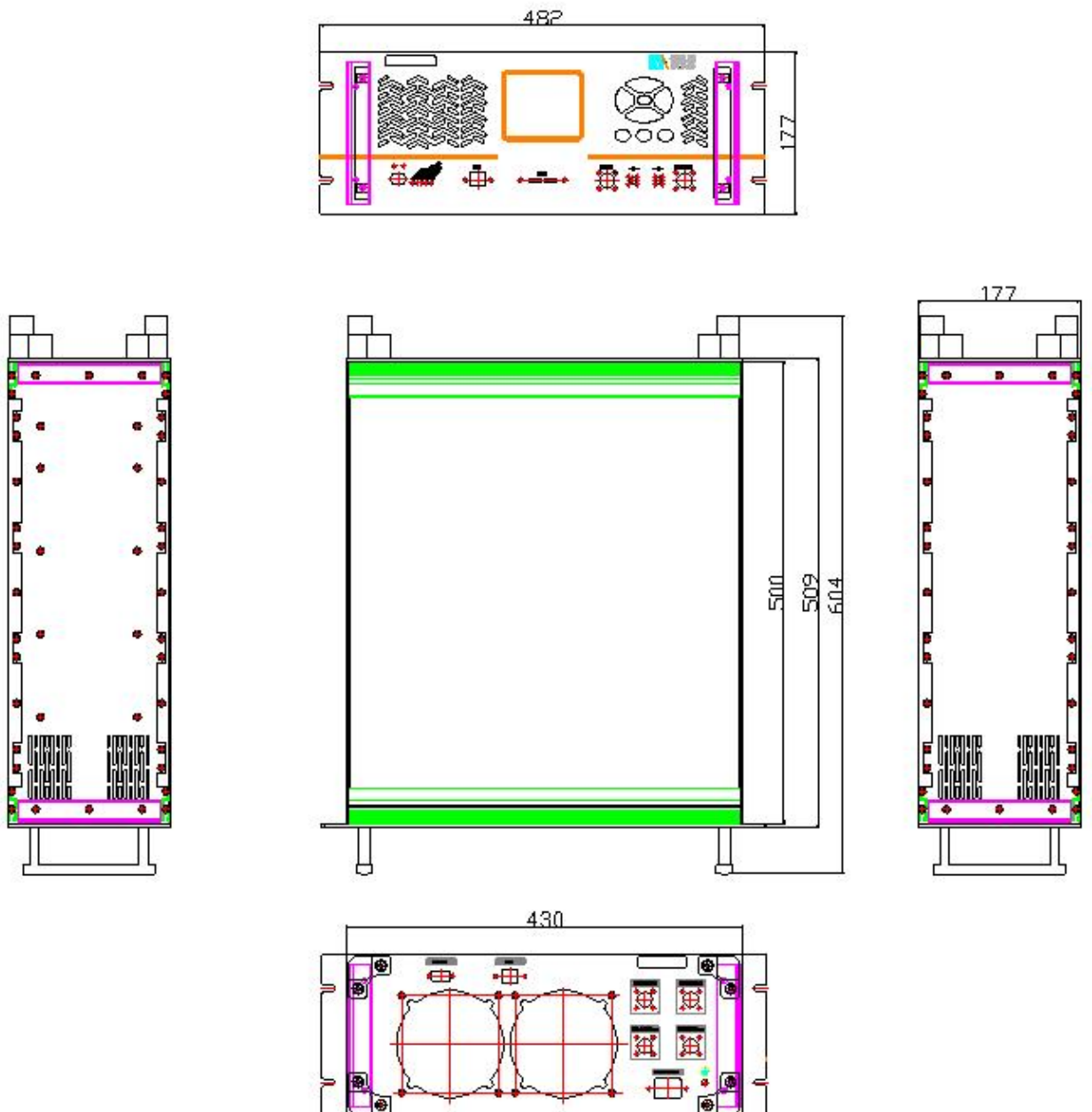
| Parameter | Value | Units |
|--------------------------|-------------------|-------|
| Input /Output Connector | N Female/N Female | |
| Forward/Reverse Coupling | N Female/N Female | |
| Control Connector | GPIO/Ethernet | |
| Size | 19 Inch 4U | mm |
| Weight | ≤ 25 | Kg |

Absolute Maximum Ratings:

| Parameter | Value |
|-----------------------|----------------------|
| RF Input Power | 0 dBm |
| ESD sensitivity (HBm) | Class 0, passed 150V |

Outline Drawing:

Unit:mm



Key Features:

| Parameter | Advantages |
|----------------------|---|
| Control functions | 1, Power setting On/Off 2, Gain adjustment (additional fees are required) |
| Protection functions | 1, Over TEM ($\leq 60^{\circ}\text{C}$) 2, Over voltage 3, Over current 4, Over VSWR ($\leq 5:1$) 5, Over excited ($< 200\text{W}$) |
| Remote control | RS422/Ethernet |
| Cooling system | Built in Cooling system, forced air cooling |

Environmental Conditions:

| Parameter | Min | Typ | Max | Units |
|----------------------------------|---|-----|-----|--------------------|
| Operating Temperature* | -20 | | +40 | $^{\circ}\text{C}$ |
| Non-operating Temperature* | -30 | | +50 | $^{\circ}\text{C}$ |
| 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 | | | |

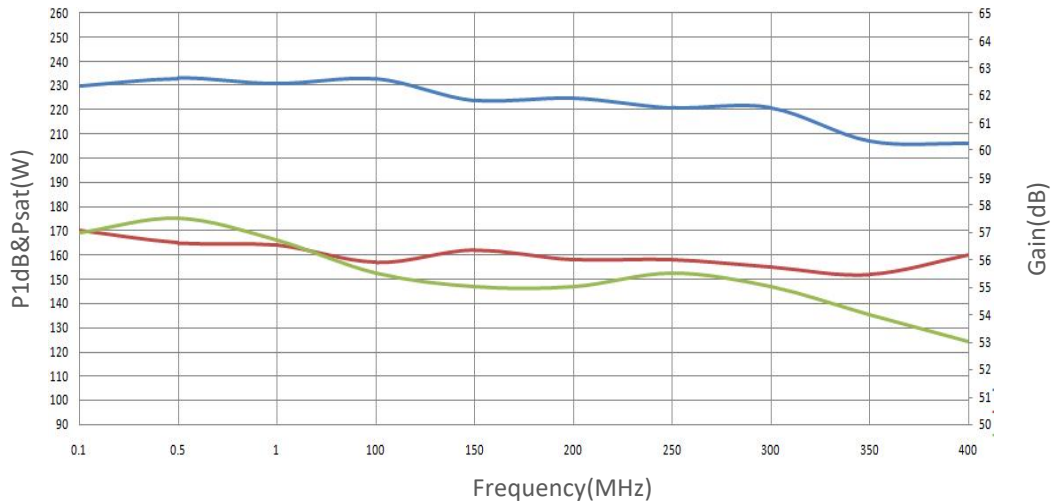
*Note: For a wider temperature range, please consult the manufacturer.

Ordering Information:

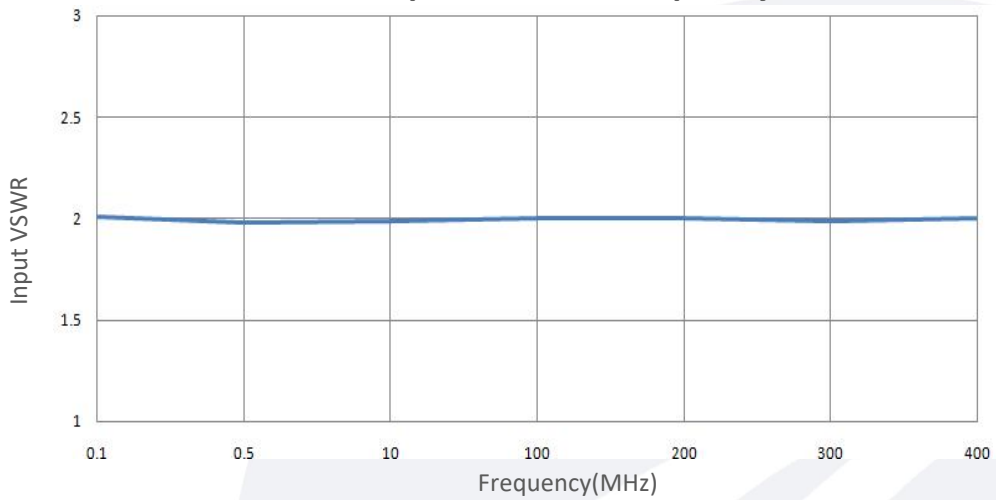
| Base Number | Description | Revision |
|-----------------------|--|----------|
| TLPA0.1M400M-53-53-BC | Solid State High Power Amplifier Systems 0.1-400MHz, Gain:53dB, Psat:200W, 220V AC, Built in Fan Cooling | Rev.1.1 |

Typical Performance Data:

Gain&P1dB&Psat vs Frequency



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.