



Power Amplifier

Model: PA-30M-1G-20

0.03-1GHz 20W CW

Ultrabroad frequency range, high performance and exceptional RF characteristics

Features:

- Frequency range: 0.03-1GHz
- High output power at saturation, 20W Min.
- High gain, 43 dB Min.
- 50 Ohm Matched Input / Output.

Applications:

- Cellular
- PCN
- GSM
- ISM
- Lab Test

Product Overview:

The PA-30M-1G-20 is a power amplifier with a minimum gain of 43 dB and a minimum Psat of 20W across the frequency range of 0.03 to 1GHz. The DC power requirement for the amplifier is +28 VDC/1 A. The input and output port configuration offers coax adapter structure with SMA female. And it has built-in protection functions included over TEM protection.



Electrical Specifications at 25°C:

| Parameter | Min | Typ | Max | Units |
|-------------------|------|-----|-----|-------|
| Frequency range | 0.03 | | 1 | GHz |
| Gain | 43 | 45 | | dB |
| Gain Flatness | | ±2 | ±3 | dB |
| Output P1dB | 41 | | | dBm |
| Output Psat | 43 | 44 | | dBm |
| Harmonic | | -10 | | dBc |
| Input VSWR | | 1.5 | 2 | :1 |
| DC Voltage | | +28 | 30 | V DC |
| DC Supply Current | | 1 | 6 | A |
| Impedance | | 50 | | Ohms |

Mechanical Specifications:

| ParameterKg | Value | Notes |
|---------------------------------|--|-------|
| Operating Temperature* | -40°C to +50°C | |
| Non-operating Temperature* | -50°C to +60°C | |
| Relative humidity | 95% | |
| RF Input/Output Connector | SMA Female/SMA Female | |
| DC Bias | D-SUB-9 | |
| 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 | |
| Dimensions W x H x D | 170*80*20 | mm |
| Weight | 500 | Kg |

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

Absolute Maximum Ratings:

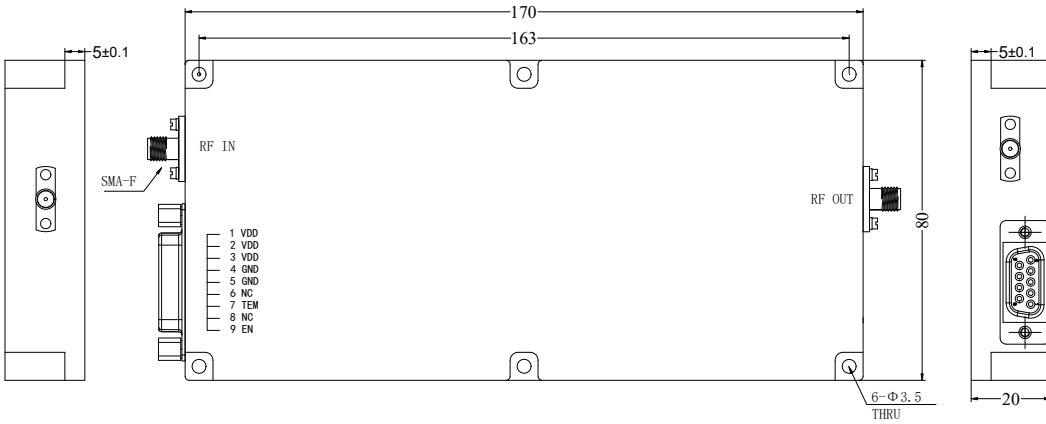
| Parameter | Value |
|-----------------------|----------------------|
| Supply Bias Voltage | +30 V |
| RF Input Power | +5 dBm |
| ESD sensitivity (HBm) | Class 0, passed 150V |



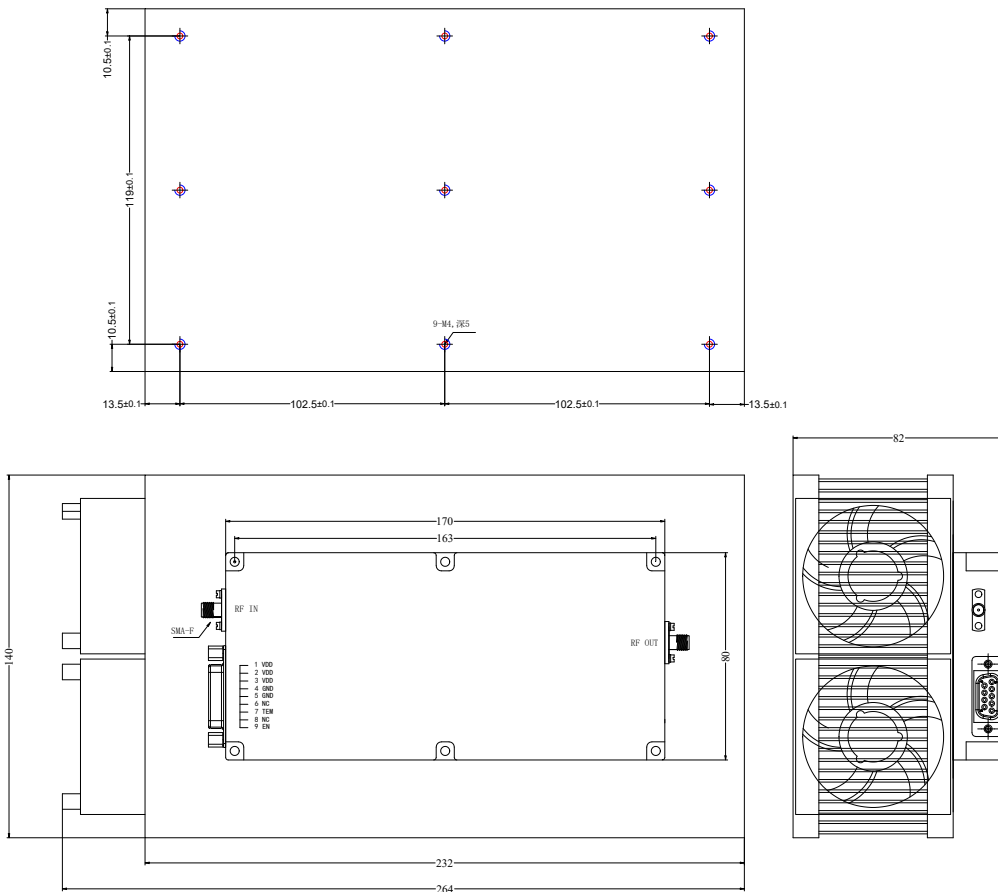
Outline Drawing:

Unit:mm

PA-30M-1G-20



PA-30M-1G-20-HS





Fans Supply Current:

| Fan power supply | |
|------------------|---|
| Red line | Power supply positive,+24 VDC DC current: 0.4A |
| Black line | Ground |

DC Supply Connector(DSUB-9 Female):

| Pin | Name | Function |
|-----|----------|--|
| 1 | +28V | +26.0-30.0VDC |
| 2 | +28V | +26.0-30.0VDC |
| 3 | +28V | +26.0-30.0VDC |
| 4 | GND | Ground |
| 5 | GND | Ground |
| 6 | NC | Not connected |
| 7 | Over TEM | When the temperature of the case exceeds 85 °C, the power amplifier will turn off and this pin will be pulled high. If the temperature of case drops to 70 °C, the power amplifier will return to normal operation, and this pin will be pulled low. |
| 8 | NC | Not connected |
| 9 | EN | Amplifier Enable: TTL High (5V) (Internally Pulled-High) Amplifier Disable: Short to ground |

Ordering Information:

| Base Number | Description | Optional |
|-----------------|--|------------------|
| PA-30M-1G-20 | Power Amplifier,0.03-1GHz, Gain:43dB,Psat:20W,+28V DC | Without Heatsink |
| PA-30M-1G-20-HS | Power Amplifier,0.03-1GHz, Gain:43dB,Psat:20W,+28V DC | With Heatsink |