



Mountain Microwave

General Description:

MM-BPA-003180-37-31 is a broadband Power amplifier with a typical small signal gain of 37 dB, a nominal Psat of +31 dBm across the frequency range of 0.3 to 18.0 GHz. The DC power requirement for the amplifier is +12 VDC/0.8 A.

Features:

- Ultra Wide Band: 0.3-18.0 GHz
- Output Psat: 31 dBm
- 50 Ohm input and output match
- Internally regulated
- Unconditionally stable

Applications:

- Radar Systems
- Communication Systems
- Receivers Systems

Electrical Specifications (23° C):

| Parameter | Value | | | Units |
|-----------------|-------|-------|------|-------|
| | Min | Typ | Max | |
| Frequency Range | 0.3 | | 18.0 | GHz |
| Gain | | 37 | | dB |
| Gain Flatness | | ± 2.5 | | dB |
| Output P1dB | 30 | | | dBm |
| Output Psat | | 31 | | dBm |
| Noise Figure | | 5.5 | | dB |
| Second Harmonic | | -15 | -13 | dBc |
| Spurious | | -60 | | dBc |
| Input VSWR | | 2.0 | | :1 |
| Output VSWR | | 2.0 | | :1 |
| DC Voltage | | +12 | | V |
| DC Current | | 0.8 | 0.9 | A |

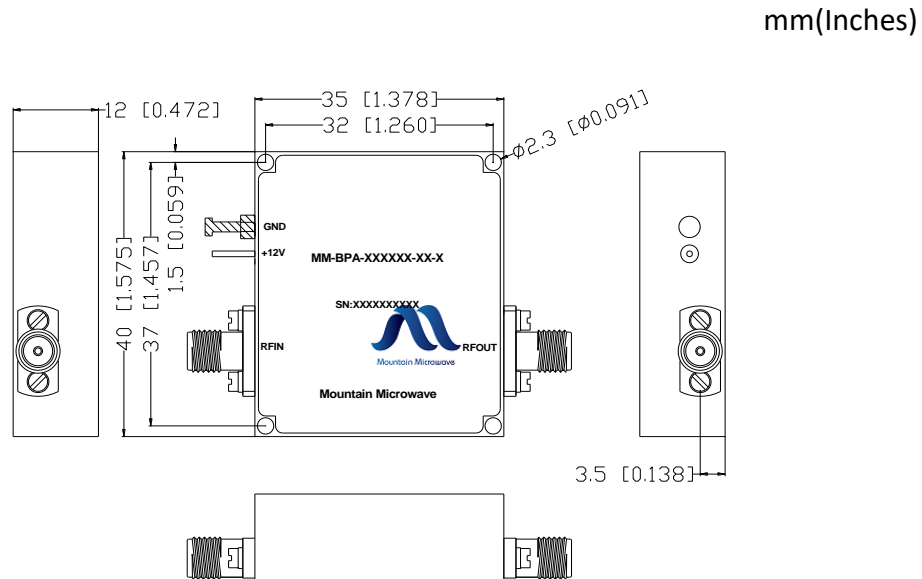
Absolute Maximum Ratings:

| Condition | Value |
|-------------------------|----------------------|
| DC Voltage | +15 V |
| Maximum Input Power(CW) | 0 dBm |
| ESD sensitivity (HBm) | Class 0, passed 150V |

Mechanical Specifications:

| Parameter | Value |
|--------------|------------|
| Length | 40 mm |
| Width | 35 mm |
| Height | 12 mm |
| RF Connector | SMA Female |

Outline Drawing:



Environmental Conditions:

| Parameter | Standard | Description |
|-------------------------|-------------------------------------|-------------------------------|
| Operational Temperature | | -45°C~+85°C |
| Storage Temperature | | -55°C~+125°C |
| Random Vibration | MIL-STD-883K, Method 2026, Cond. IB | 50 - 2000 Hz, 7.3 Grms |
| Humidity | MIL-STD-202, Method 103B, Cond. B | 100% RH at 35c, 95%RH at 40°C |
| Altitude | MIL-STD-883K, Method 1001, Cond. C | 50,000 feet |

Caution:

- Exceeding absolute maximum ratings shown will damage the device.
- The device is static sensitive. Always follow ESD rules when working with the device.
- Heat Sink required during operation.