

## 50W Embedded Attenuator DC - 4GHz



### Product Description

RFSB50G4B is an embedded attenuator with a frequency range of DC to 4GHz.

The max average power handling for the attenuator is 50W. The max VSWR is 1.35:1.

The working temperature of this product is between - 40°C and + 85°C.

### Features

- Wide Frequency Band
- Low VSWR
- Multiple Attenuation Values Available

### Typical Applications

- Wireless Infrastructure
- Military and Aerospace Applications
- Test Instrumentation
- Radar Systems
- 5G Wireless Communications
- Microwave Radio Systems
- TR Modules
- Research and Development
- Cellular Base Stations

### Electrical Specifications (T<sub>A</sub>=+25°C)

| Parameter                                         | Min | Typ       | Max  | Units |
|---------------------------------------------------|-----|-----------|------|-------|
| Frequency Range                                   | DC  |           | 12.4 | GHz   |
| Attenuation Value & Accuracy                      | 3   | ±1.0      |      | dB    |
|                                                   | 6   | ±1.0      |      |       |
|                                                   | 10  | ±1.0      |      |       |
|                                                   | 20  | ±1.0      |      |       |
|                                                   | 30  | ±1.0      |      |       |
|                                                   | 40  | ±1.0      |      |       |
| VSWR                                              |     |           | 1.35 | : 1   |
| Average Power                                     |     |           | 50   | W     |
| Peak Power (5μs pulse width with 0.5% duty cycle) |     |           | 10   | KW    |
| Impedance                                         |     | 50        |      | Ω     |
| Weight                                            |     | 0.55      |      | lbs.  |
| Connectors                                        |     | SMA,N,TNC |      |       |

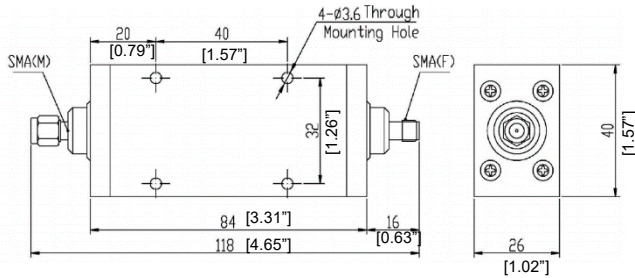
## Environmental Specifications and Test Standards

| Parameter                         | Description                                                                                                                                                                                                     |
|-----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operational Temperature           | -40°C to +85°C<br>(Case Temperature)                                                                                                                                                                            |
| Storage Temperature               | -55°C to +125°C                                                                                                                                                                                                 |
| Thermal Shock                     | -40°C → +85°C<br>(5 Cycles / 10 hours)                                                                                                                                                                          |
| **Random Vibration                | MIL-STD-202G<br>Table 214-I, Test Condition Letter C<br>1.5 Hours Per Axis                                                                                                                                      |
| High Temperature Burn In          | Temperature +125°C for 72 Hours                                                                                                                                                                                 |
| Shock                             | 1. Weight >20g, 50g half sine wave for 11ms, Speed variation 3.44m/s<br>2. Weight <=20g, 100g Half sine wave for 6ms, Speed variation 3.75m/s<br>3. Total 18 times (6 directions, 3 repetitions per direction). |
| Altitude                          | Standard: 30,000 Ft (Epoxy Sealed Controlled Environment)<br>Optional: Hermetically Sealed (60,000 ft. 1.0 PSI min)                                                                                             |
| Hermetically Sealed<br>(Optional) | MIL-STD-883 (For Hermetically Sealed Units)                                                                                                                                                                     |

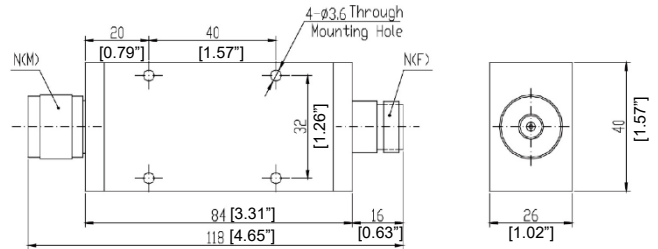
\*\*For vibration testing details please see additional information section.

**Outline Drawing**

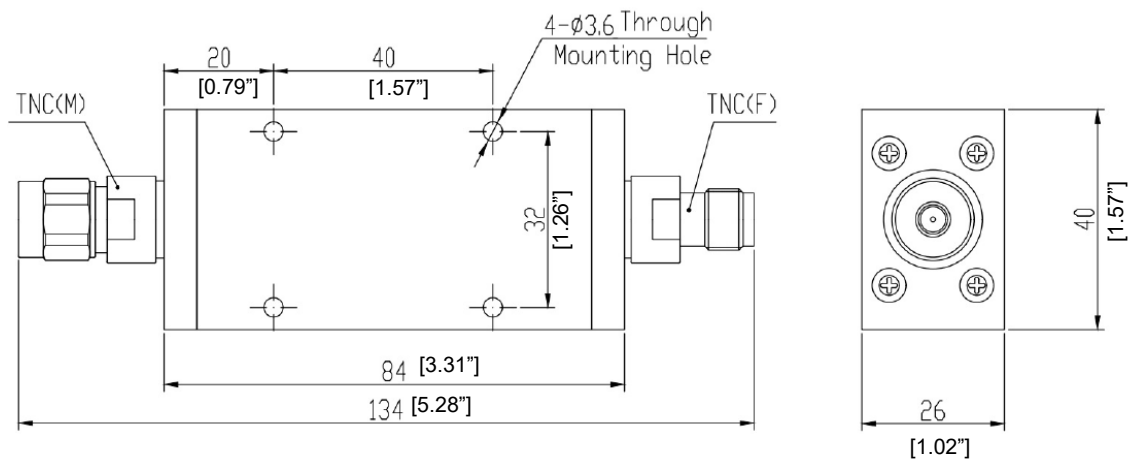
**SMA-Type Version**



**N-Type Version**

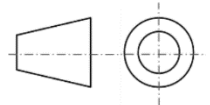


**TNC-Type Version**



**Notes:**

1. Housing: Aluminum
2. Finish: Connectors: Brass Nickel Plated; Male Pin: Brass Gold Plated; Female Pin: Beryllium Copper Gold Plated
1. All dimensions are in millimeters [inches].



**Additional Information**

**Documentation**

**Webpage**

ESD Policy

[https://rflambda.com/pdf/rflambda\\_esd\\_control.pdf](https://rflambda.com/pdf/rflambda_esd_control.pdf)

Connector Torque Specifications

[https://www.rflambda.com/pdf/Torque\\_Specifications.pdf](https://www.rflambda.com/pdf/Torque_Specifications.pdf)

Random Vibration Test Standard

[https://www.rflambda.com/pdf/rflambda\\_random\\_vibration\\_MIL-STD-202G.pdf](https://www.rflambda.com/pdf/rflambda_random_vibration_MIL-STD-202G.pdf)

Ordering Information

| Part Number | Modification | Description                 |
|-------------|--------------|-----------------------------|
| RFSB50G4B   | SMA,N,TNC    | DC-4GHz Embedded Attenuator |

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