

## WRD180 Waveguide Fixed Attenuator 18GHz-40GHz



Note: The photo is for illustration purposes only.  
Please refer to the outline drawing.

### Features

- Waveguide Attenuator
- High power up to 200CW
- Multiple attenuation values available

### Product Description

RFWAT180W200 is a waveguide WRD180 attenuator frequency range of 18 to 40GHz.

The maximum input power of the attenuator is 200W.

The waveguide type is WRD180.

### 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)

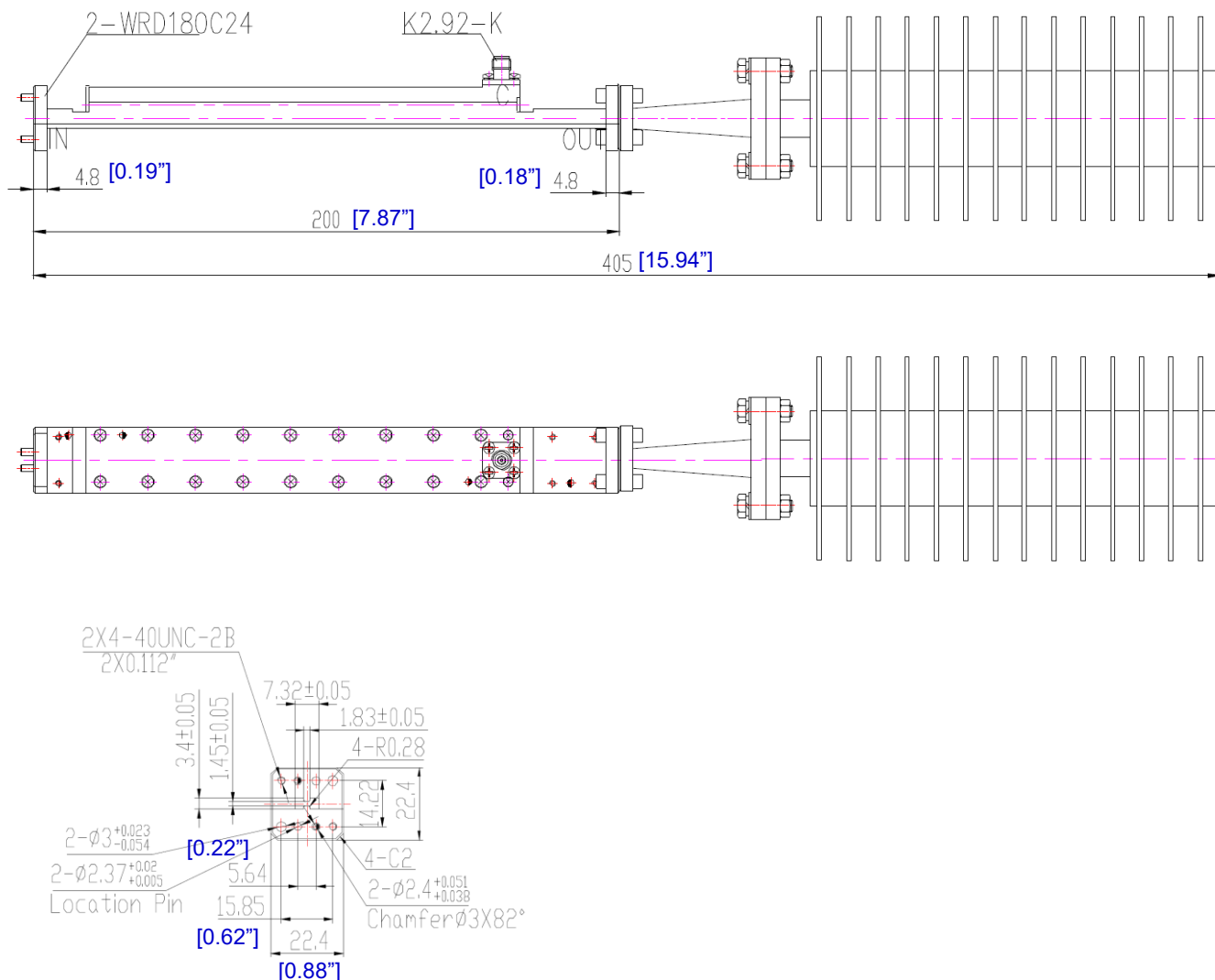
| Parameter            | Min | Typ           | Max  | Units |
|----------------------|-----|---------------|------|-------|
| Frequency Range      |     | 18-40         |      | GHz   |
| VSWR                 |     |               | 1.25 | : 1   |
| Attenuation          |     | 6, 10, 20, 30 |      | dB    |
| Attenuation Flatness |     | ±1.5          |      | dB    |
| Power Handling (CW)  |     | 200           |      | W     |
| Waveguide            |     | WRD180C24     |      |       |
| Flange Type          |     | WRD180        |      |       |

## Environmental Specifications and Test Standards

| Parameter                         | Description                                                                                                                                                                                                     |
|-----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operational Temperature           | -40°C to +70°C<br>(Case Temperature)                                                                                                                                                                            |
| Storage Temperature               | -50°C to +105°C                                                                                                                                                                                                 |
| Thermal Shock                     | -40°C → +70°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 +70°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)                                                                                                                                                                     |

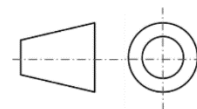
\*For vibration testing details please see additional information section.

**Outline Drawing**



**Notes:**

1. Material: Copper/Brass
2. Inside finish: Silver plating. Outside finish: Corrosion protected with grey paint.
3. 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                      |
|-----------------|--------------|----------------------------------|
| RFWAT180W200-6  | 6dB          | 18GHz-40GHz Waveguide Attenuator |
| RFWAT180W200-10 | 10dB         | 18GHz-40GHz Waveguide Attenuator |
| RFWAT180W200-20 | 20dB         | 18GHz-40GHz Waveguide Attenuator |
| RFWAT180W200-30 | 30dB         | 18GHz-40GHz Waveguide Attenuator |

Important Notice

The information contained herein is believed to be reliable. RF-Lambda makes no warranties regarding the information contained herein. RF-Lambda assumes no responsibility or liability whatsoever for any of the information contained herein. RF-Lambda assumes no responsibility or liability whatsoever for the use of the information contained herein. The information contained herein is provided "AS IS, WHERE IS" and with all faults, and the entire risk associated with such information is entirely with the user. All information contained herein is subject to change without notice. Customers should obtain and verify the latest relevant information before placing orders for RF-Lambda products. The information contained herein or any use of such information does not grant, explicitly or implicitly, to any party any patent rights, licenses, or any other intellectual property rights, whether with regard to such information itself or anything described by such information.

RF-Lambda products are not warranted or authorized for use as critical components in medical, life-saving, or life sustaining applications, or other applications where a failure would reasonably be expected to cause severe personal injury or death.