

## Waveguide WR42 50W Attenuator 17.6GHz–26.7GHz



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

### Product Description

RFWAT42W050 is a waveguide WR42 attenuator frequency range of 17.6 to 26.7GHz.

The average power of the attenuator is 50W. The attenuation range is 3 to 50dB.

The waveguide port is W42.

### Features

- Waveguide Attenuator

### 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)

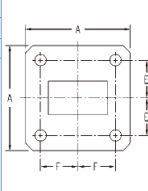
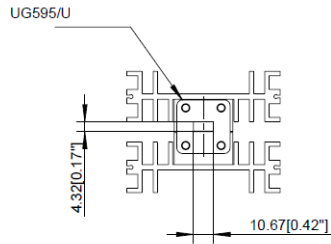
| Parameter         | Min | Typ         | Max | Units |
|-------------------|-----|-------------|-----|-------|
| Frequency Range   |     | 17.6 – 26.7 |     | GHz   |
| VSWR              |     | 1.20        |     | : 1   |
| Attenuation       | 3   |             | 50  | dB    |
| Average Power(CW) |     |             | 50  | W     |
| Peak Power        |     |             | 1   | KW    |
| Waveguide         |     | WR42        |     |       |
| Flange            |     | UG595/U     |     |       |

**Environmental Specifications and Test Standards**

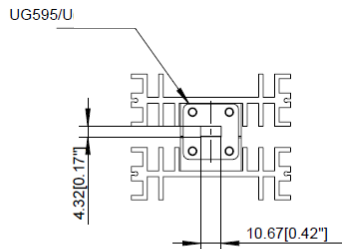
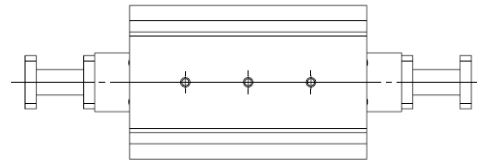
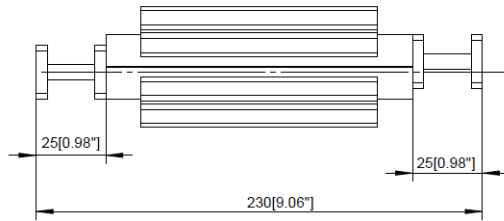
| Parameter                         | Description   |
|-----------------------------------|---|
| Operational Temperature           | -40°C to +85°C<br>(Case Temperature)  |
| Storage Temperature               | 60°C to +125°C  |
| Thermal Shock                     | -40°C → +85°C<br>(5 Cycles / 10 hours)  |
| **Random Vibration                | MIL-STD-202G<br>Table 214-I, Test Condition Letter C<br>1.5 Hours Per Axis  |
| High Temperature Burn In          | Temperature +85°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)   |

**Outline Drawing**

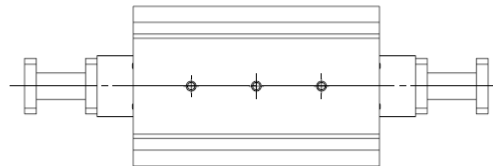
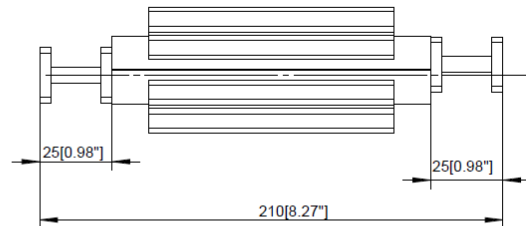
| WR42       | WG20               | R220  |
|------------|--------------------|-------|
| UG595/U    | UBR220             |       |
| Dimensions | inches             | mm    |
| A          | 0.875 <sup>1</sup> | 22.41 |
| E          | 0.335              | 8.51  |
| F          | 0.320              | 8.13  |
| Hole Dia.  | 0.116 <sup>2</sup> | 3.07  |

**10dB Attenuation**

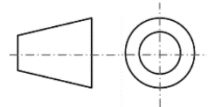


**40dB Attenuation**



**Notes:**

1. Material: Brass.
2. Finish: silver plating inside and black painting outside.
3. All dimensions are in millimeters [inches].
4. Other attenuations may have slightly different size. Please inquire.



**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                          |
|-------------|--------------|--------------------------------------|
| RFWAT42W050 | WR42         | 17.6GHz-26.7GHz Waveguide Attenuator |

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