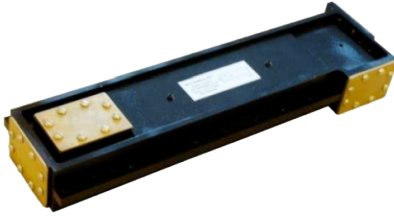


WR62 4-Port High Power Waveguide Circulator 16.5GHz-17.5GHz



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

Product Description

RFWC62D-16.5G17.5G is a WR62 4-Port high power waveguide circulator with a frequency range of 16.5 to 17.5GHz.

The circulator has a typical isolation of 21dB. The maximum insertion loss is 0.4dB. The circulator has good isolation performance.

The circulator waveguide type is WR62.

Features

- High power handling up to 375W
- Wide band operation
- High isolation within operational band
- Low Insertion Loss

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

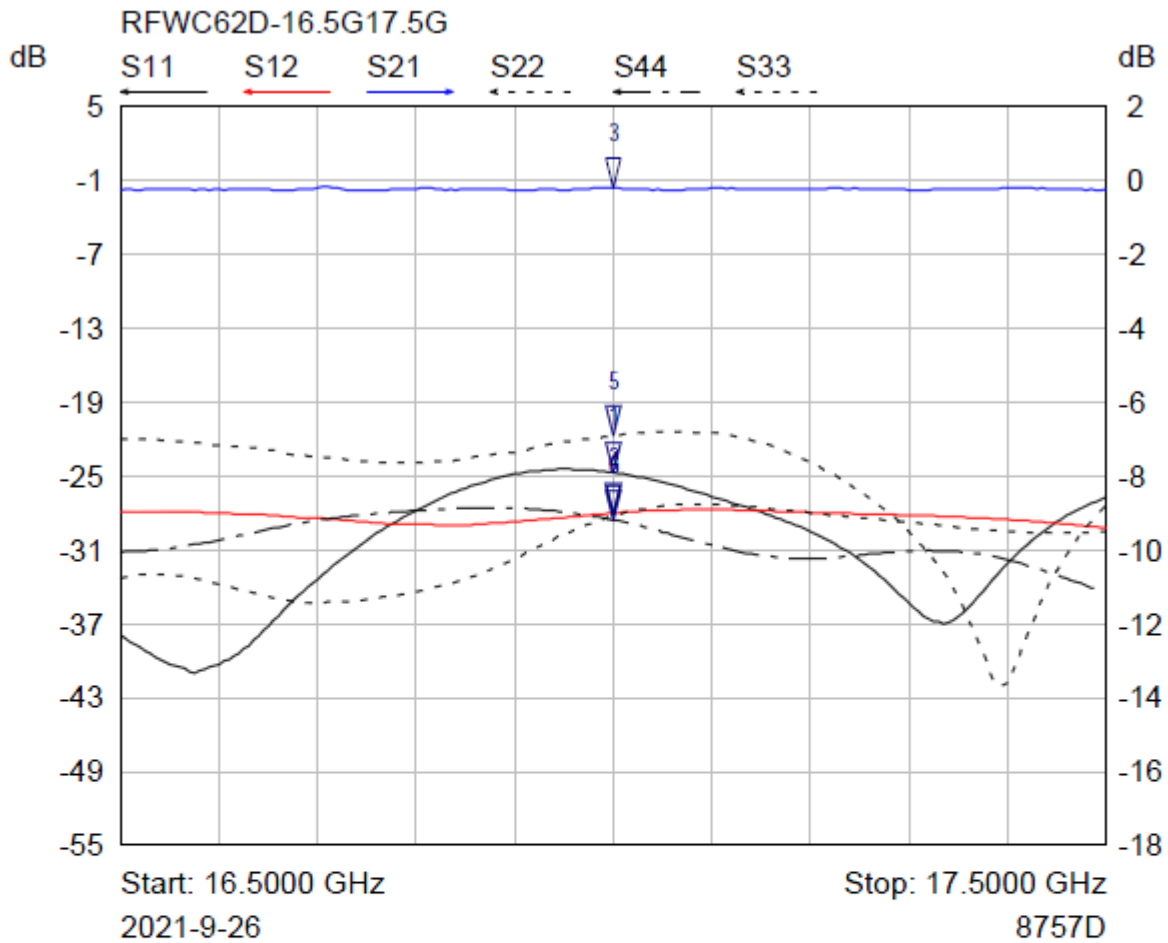
Electrical Specifications(T_A=25°C)

| Parameter | Min | Typ | Max | Units |
|-----------------|--|-----------|-----|-------|
| Frequency Range | | 16.5~17.5 | | GHz |
| Insertion Loss | | 0.3 | 0.4 | dB |
| Isolation | 21 | 20 | | dB |
| VSWR | | 1.1 | 1.2 | :1 |
| Power handling | 7.5KW (Duty Cycle: 5% max PW 50 μs max PRF 100 kHz max), 375W CW max | | | |
| | 100W CW max (For termination) | | | |
| Rotation | | Clockwise | | |
| Interface | | WR62 | | |
| Flange Type | | UG1655/U | | |

Environmental Specifications and Test Standards

| Parameter | Description |
|--------------------------------|---|
| Operational Temperature | -20°C to +50°C (should be taken to ensure the surface temperature should be less than 70°C) |
| Storage Temperature | -50°C to +105°C |
| Thermal Shock | -40°C → +85°C (5 Cycles / 10 hours) |
| **Random Vibration | MIL-STD-202G Table 214-I, Test Condition Letter C 1.5 Hours Per Axis |
| Shock | 1. Weight >20g, 50g half sine wave for 11ms, Speed variation 3.44m/s 2. Weight <=20g, 100g Half sine wave for 6ms, Speed variation 3.75m/s 3. Total 18 times (6 directions, 3 repetitions per direction). |
| Altitude | Standard: 30,000 Ft (Epoxy Sealed Controlled Environment) Optional: Hermetically Sealed (60,000 ft. 1.0 PSI min) |
| Hermetically Sealed (Optional) | MIL-STD-883 (For Hermetically Sealed Units) |

Typical Performance Plots

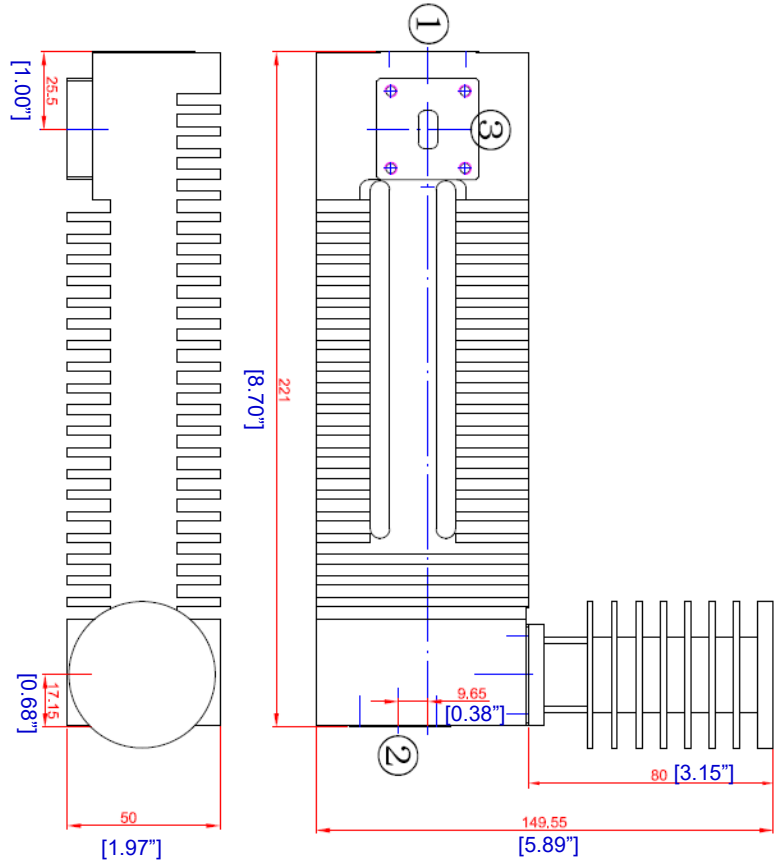
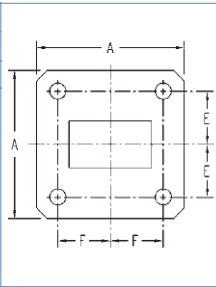


| Mkr | Trace | X-Axis | Value | Notes |
|-----|-------|-------------|-----------|-------|
| 1 ▾ | S11 | 17.0000 GHz | -24.71 dB | |
| 2 ▾ | S12 | 17.0000 GHz | -28.00 dB | |
| 3 ▾ | S21 | 17.0000 GHz | -0.21 dB | |
| 4 ▾ | S22 | 17.0000 GHz | -28.21 dB | |
| 5 ▾ | S33 | 17.0000 GHz | -21.71 dB | |
| 6 ▾ | S44 | 17.0000 GHz | -28.56 dB | |

SN:20210901

Outline Drawing

| WR62 | WG18 | R140 |
|------------|--------------------|-------|
| UG419/U | UBR140 | |
| Dimensions | inches | mm |
| A | 1.31 ¹ | 33.30 |
| E | 0.478 | 12.14 |
| F | 0.497 | 12.63 |
| Hole Dia. | 0.144 ² | 4.085 |



Notes:

1. Package Material: Aluminum Alloy or Copper
2. Plating: Conductive Oxide(not painted)
3. All dimensions are in millimeters [inches].
4. Tolerance $\pm 0.25[0.01]$. unless otherwise specified

Additional Information

| Documentation | Webpage |
|---------------------------------|---|
| ESD Policy | https://rflambda.com/pdf/rflambda_esd_control.pdf |
| Connector Torque Specifications | https://www.rflambda.com/pdf/Torque_Specifications.pdf |
| Random Vibration Test Standard | https://www.rflambda.com/pdf/rflambda_random_vibration_MIL-STD-202G.pdf |

Ordering Information

| Part Number | Modification | Description |
|--------------------|--------------|--|
| RFWC62D-16.5G17.5G | WR62 | 16.5~17.5GHz High Power Waveguide Circulator |

Important Notice

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