

## G-Band Fixed Attenuator

WR-5.1/140-220GHz/30±2dB Attenuation

Model: TLFA-30-WR05

TLFA-30-WR05 is a 30 dB fixed attenuator that is used in millimeterwave systems and operates from 140 to 220 GHz. The input and output port configuration offers an inline structure with WR-5.1 waveguides and UG-387/U-M anticocking flanges. Other attenuation values are available under different model numbers as TLFA-XX-WR05, where XX is the desired attenuation value.

### Features:

- Full Band Coverage
- 1-35dB Available
- Good attenuation flatness
- Good Return Loss

### Applications:

- Test Equipment
- RF Over Fiber
- Communication Systems
- Radar Systems

### Electrical Characteristics:

| Parameter                 | Min | Typ | Max | Units |
|---------------------------|-----|-----|-----|-------|
| Frequency range           | 140 |     | 220 | GHz   |
| Attenuation Value         |     | 30  |     | dB    |
| Attenuation Flatness      |     | ±2  |     | dB    |
| Return Loss               |     | -20 |     | dB    |
| Power Handling            |     |     | 100 | mW    |
| Specification Temperature |     | +25 |     | °C    |

### Mechanical Specifications:

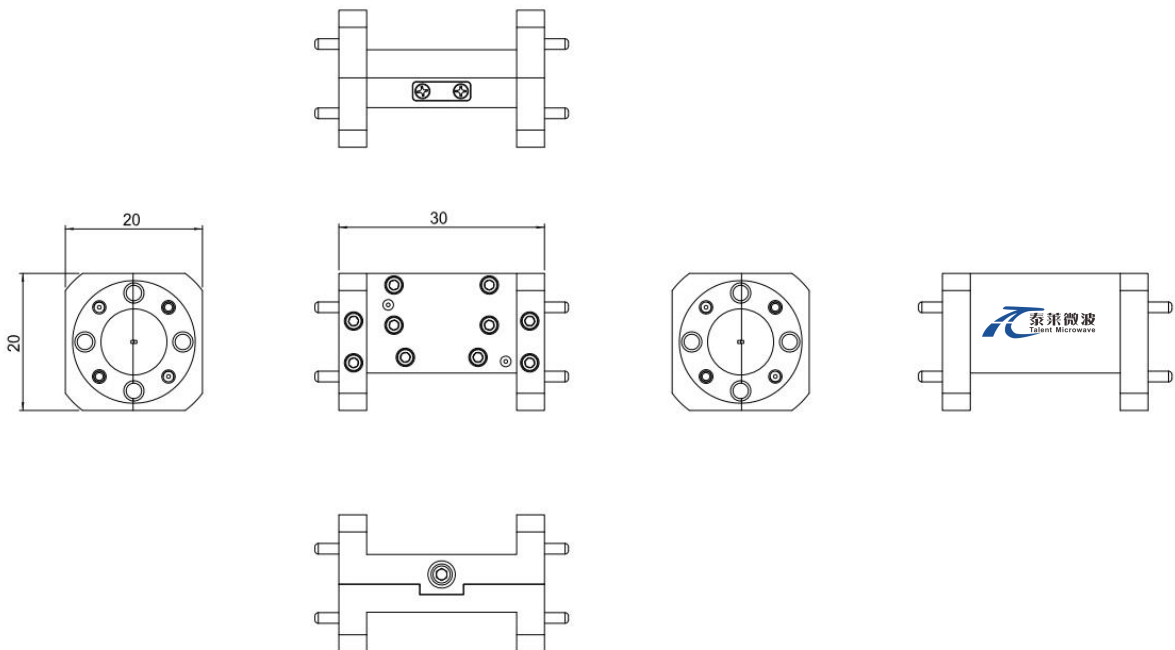
| Parameter               | Value             | Units |
|-------------------------|-------------------|-------|
| Input /Output Connector | WR-5.1/UG-387/U-M |       |
| Material                | Brass             |       |
| Finish                  | Gold Plated       |       |
| Size                    | 30*20*20          | mm    |

## Absolute Maximum Ratings:

| Parameter      | Value  |
|----------------|--------|
| RF Input Power | +20dBm |

## Outline Drawing:

Unit:mm; Tolerance:±0.1mm



## Environmental Conditions:

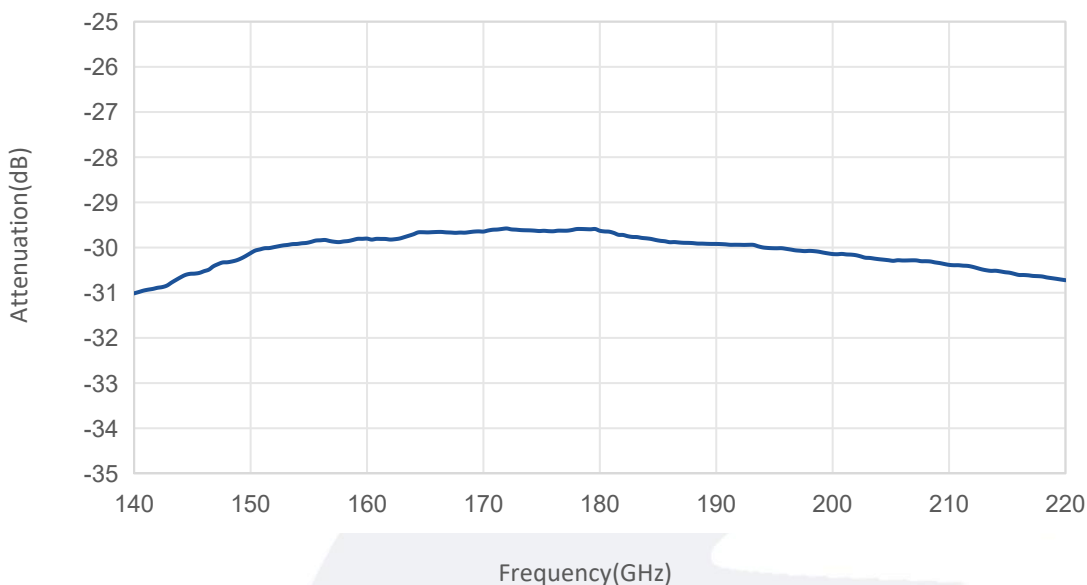
| Parameter                       | Min                                                 | Typ | Max | Units |
|---------------------------------|-----------------------------------------------------|-----|-----|-------|
| Operating Temperature           | -10                                                 |     | +65 | °C    |
| Non-operating Temperature       | -45                                                 |     | +85 | °C    |
| Relative humidity               |                                                     | 95  |     | %     |
| Altitude                        | 10,000                                              |     |     | feet  |
| Shock / Vibration(MIL-STD-810F) | 25g rms (15 degree 2KHz) endurance, 1 hour per axis |     |     |       |
| Shock(non operating)            | 20G for 11msc half sin wave,3 axis both directions  |     |     |       |

## Ordering Information:

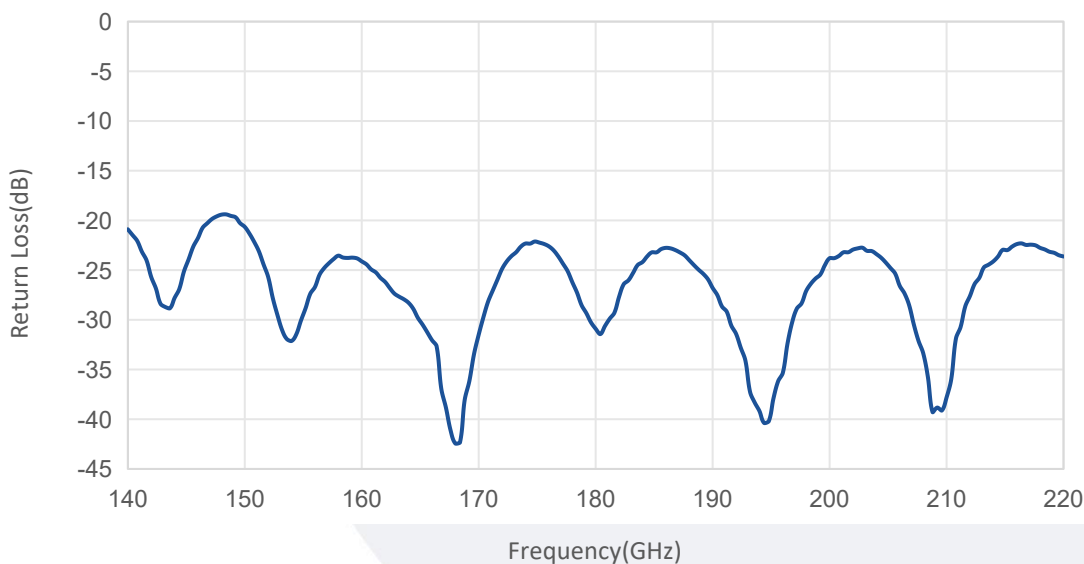
| Base Number  | Description                                                           | Revision |
|--------------|-----------------------------------------------------------------------|----------|
| TLFA-30-WR05 | WR-5.1 Waveguide Fixed Attenuators;<br>140-220GHz, 30±2dB Attenuation | Rev.1.0  |

## Typical Performance Data:

### Attenuation vs Frequency



### Return Loss vs Frequency



Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.