

## U-Band Fixed Attenuator

**WR-19/40-60GHz/20 $\pm$ 1.5dB Attenuation**

**Model: TLFA-20-WR19**

TLFA-20-WR19 is a 20 dB fixed attenuator that is used in millimeterwave systems and operates from 40 to 60 GHz. The input and output port configuration offers an inline structure with WR-19 waveguides and UG-383/U-M antickocking flanges. Other attenuation values are available under different model numbers as TLFA-XX-WR19, 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           | 40  |           | 60  | GHz   |
| Attenuation Value         |     | 20        |     | dB    |
| Attenuation Flatness      |     | $\pm 1.5$ |     | dB    |
| Return Loss               |     | -20       |     | dB    |
| Power Handling            |     |           | 100 | mW    |
| Specification Temperature |     | +25       |     | °C    |

### Mechanical Specifications:

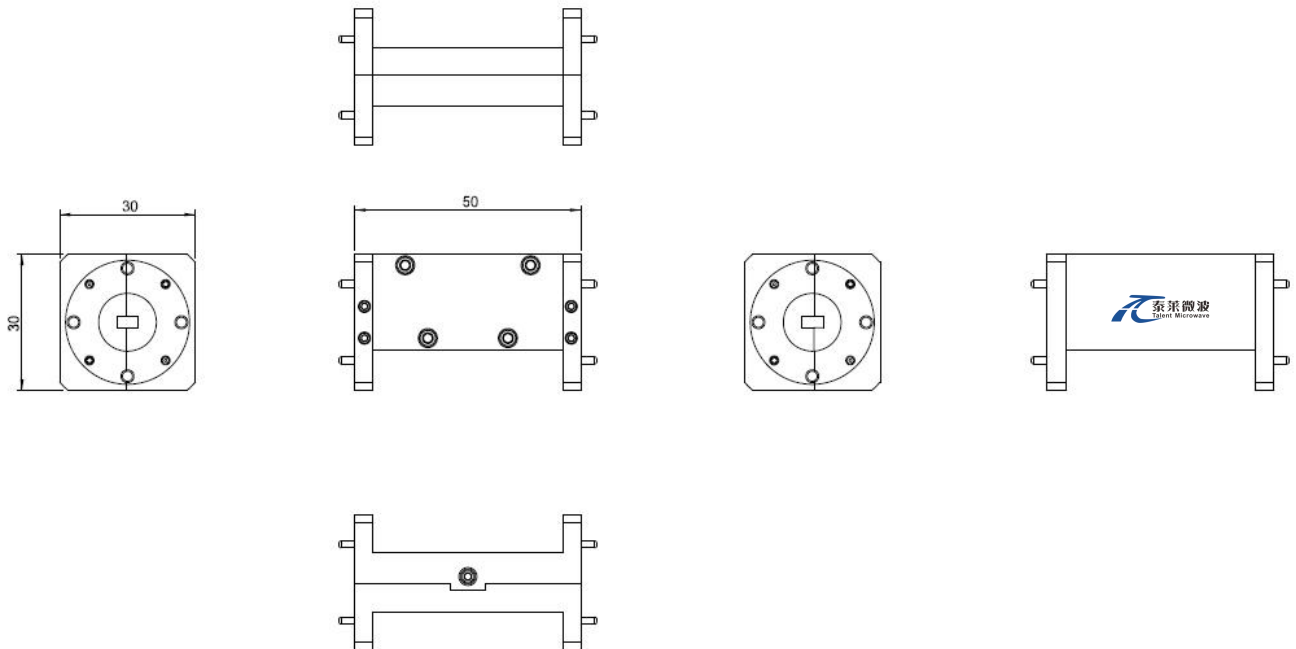
| Parameter               | Value            | Units |
|-------------------------|------------------|-------|
| Input /Output Connector | WR-19/UG-383/U-M |       |
| Material                | Aluminum         |       |
| Finish                  | Gold Plated      |       |
| Size                    | 50x30x30         | 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-20-WR19 | WR-19 Waveguide Fixed Attenuators;<br>40-60GHz, 20±1.5dB Attenuation | Rev.1.0  |