

## G-Band Frequency Extender

### 140-220GHz/WR-05

**Model: TLSE-140220-0530-05**

TLSE-140220-0530-05 frequency extenders are a dedicated Test & Measurement solution for extending the range of your signal source to 140-220 GHz.

### Features:

- Frequency range: 140-220 GHz
- Output Power : 5dBm Typ
- Low power consumption

### Applications:

- Frequency Extension
- Antenna measurements
- Material characterisation

### Electrical Characteristics:

| Parameter                                         | Min  | Typ | Max   | Units |
|---------------------------------------------------|------|-----|-------|-------|
| Frequency range                                   | 140  |     | 220   | GHz   |
| Output Power                                      |      | 5   |       | dBm   |
| Dynamic Range<br>(Optional mechanical Attenuator) | 0    |     | 30    | dB    |
| Input Frequency                                   | 11.5 |     | 18.75 | GHz   |
| Input Power                                       | 3    | 5   | 7     | dBm   |
| Multiplication Factor                             |      | 12  |       |       |
| Harmonic Suppression                              |      | -20 |       | dBc   |
| Input VSWR                                        |      | 2   |       | :1    |
| Output VSWR                                       |      | 2   |       | :1    |
| Supply Voltage                                    | 100  | 220 | 240   | V     |

## Mechanical Specifications:

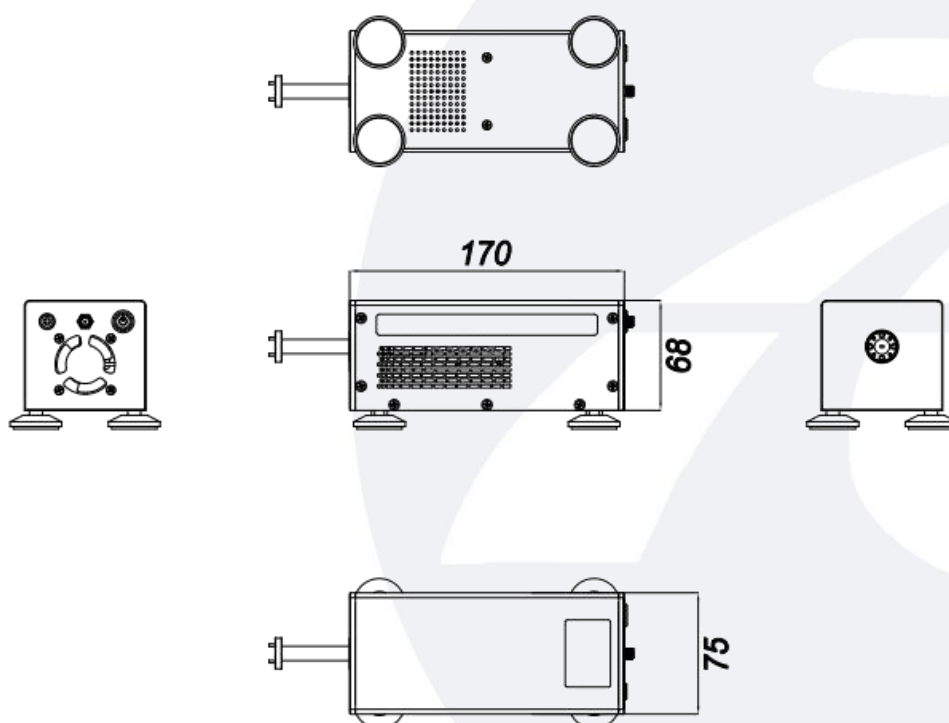
| Parameter        | Value                     | Units |
|------------------|---------------------------|-------|
| Input Connector  | SMA Female                |       |
| Output Connector | WR-05/UG-387/U            |       |
| DC Bias          | Power adapter: 100-240VAC |       |
| Size             | 170*75*68                 | mm    |

## Absolute Maximum Ratings:

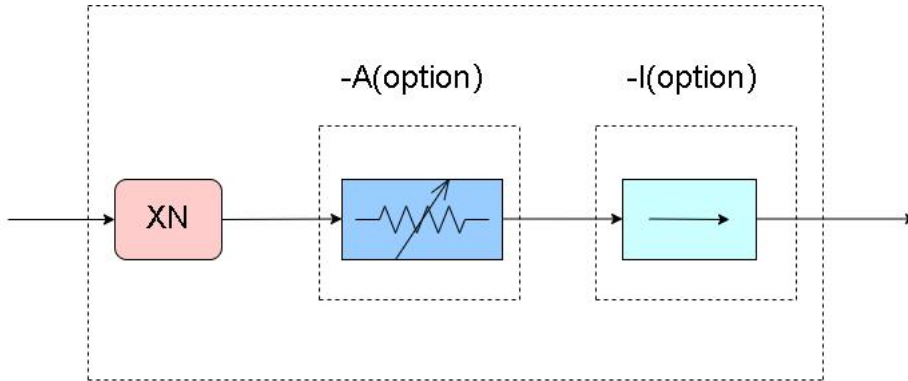
| Parameter             | Value                |
|-----------------------|----------------------|
| Supply Bias Voltage   | +240 V AC            |
| RF Input Power        | +10 dBm              |
| ESD sensitivity (HBm) | Class 0, passed 150V |

## Outline Drawing:

Unit:mm; Tolerance:±0.1mm



## Block Diagrams:



## 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:

| Part Number         | Description                                                   | Option                         |           | Revision |
|---------------------|---------------------------------------------------------------|--------------------------------|-----------|----------|
|                     |                                                               | Optional Mechanical Attenuator | Isolation |          |
| TLSE-140220-0530-05 | G-Band Frequency Extender,X12,140-220GHz, Output Power: 5 dBm | -A                             | -I        | Rev.1.2  |

## Components Included:

| Part Number   | Description            | Quantity |
|---------------|------------------------|----------|
| TLACTDC-22012 | AC-to-DC Power Adapter | 1 PCS    |