泰莱微波
Talent Microwave

Suzhou Talent Microwave,Inc
sales@talentmw.com
www.talentmw.com

# J–Band VNA Frequency Extender

## 220-330GHz/WR-3.4

## Model: TLVE-220330-N10-S

TLVE-220330-N10-S frequency extenders are a dedicated Test & Measurement solution for extending the range of your Vector Network Analyzer (VNA) to 220-330 GHz.

## Features:

- Frequency range: 220-330 GHz
- Port Output Power (No Attenuation): -10dBm Min
- Dynamic Range @10Hz BW: 90dB Min
- Unconditional stability

## Applications:

- VNA Frequency Extension
- Antenna measurements
- Material characterisation

## Electrical Characteristics:

| Parameter | Min | Typ | Max | Units |
|---|---|---|---|---|
| Frequency range | 220 | | 330 | GHz |
| Test Port Output Power | -10 | | | dBm |
| Uncalibrated raw port Return Loss | 10 | | | dB |
| Dynamic Range @10Hz BW | 90 | | | dB |
| Directivity | 10 | | | dB |
| RF Input Frequency | 12.22 | | 18.33 | GHz |
| RF Input Power | 3 | 5 | 7 | dBm |
| RF Multiplication Factor | | 18 | | |
| LO Input Frequency | 9.16 | | 13.75 | GHz |
| LO Input Power | 3 | 5 | 7 | dBm |
| LO Multiplication Factor | | 24 | | |
| IF Frequency Range | 1 | | 1000 | MHz |
| Amplitude Stability @300Hz BW | | | ±0.25 | dB |
| Phase Stability @300Hz BW | | | ±3.5 | ° |
| Effective Directionality@10Hz BW | 30 | | | dB |
| Payload Matching@10Hz BW | 40 | | | dB |

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## Electrical Characteristics:

| Parameter | Min | Typ | Max | Units |
|---|---|---|---|---|
| ReflectionTracking@10Hz BW | | | ±0.3 | dB |
| Transmission Tracking@10Hz BW | | | ±0.15 | dB |
| Output Harmonic Suppression | 10 | | | dB |
| Power Consumption | | | 15 | W |

## Mechanical Specifications:

| Parameter | Value |
|---|---|
| RF/LO Input Connector | SMA Female |
| MEA/REF IF Output Connector | SMA Female |
| Test Port Connector | WR-3.4/UG-387/U |
| Power Supply Pin | Type C |
| Size | 100x70x50mm |

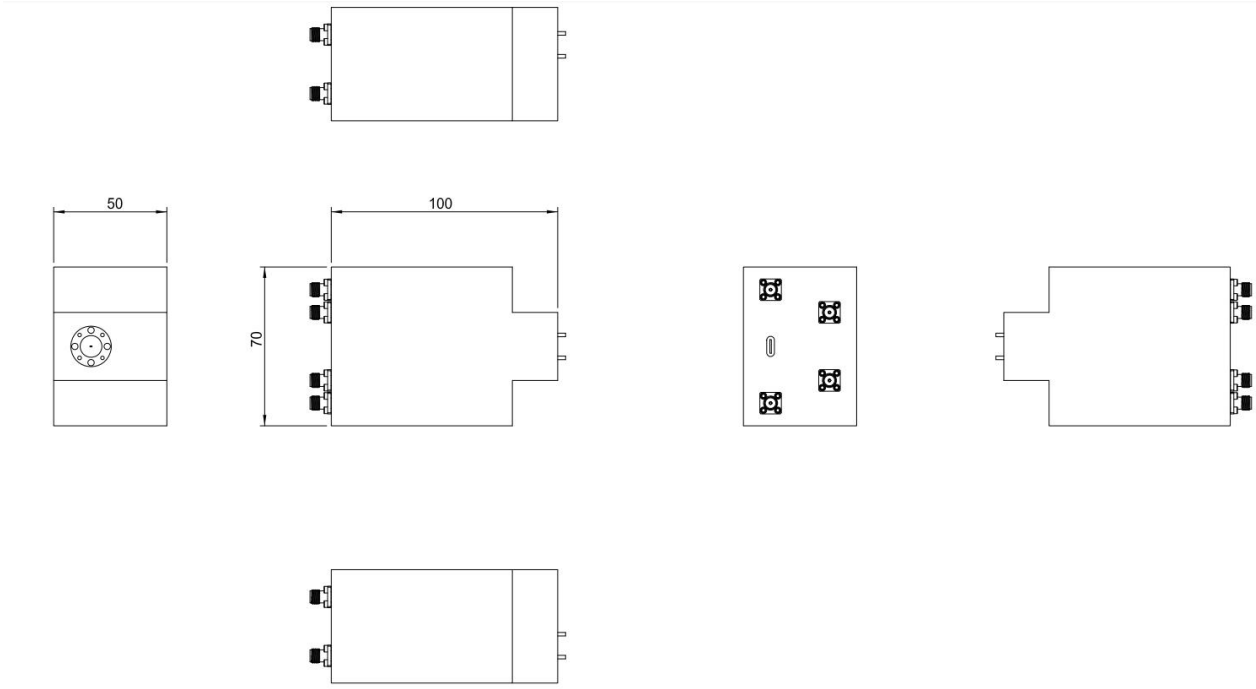
## Absolute Maximum Ratings :

| Parameter | Value | Units |
|---|---|---|
| RF/LO Port Damage Level | +10 | dBm |
| ESD sensitivity (HBm) | Class 0, passed 150V | |

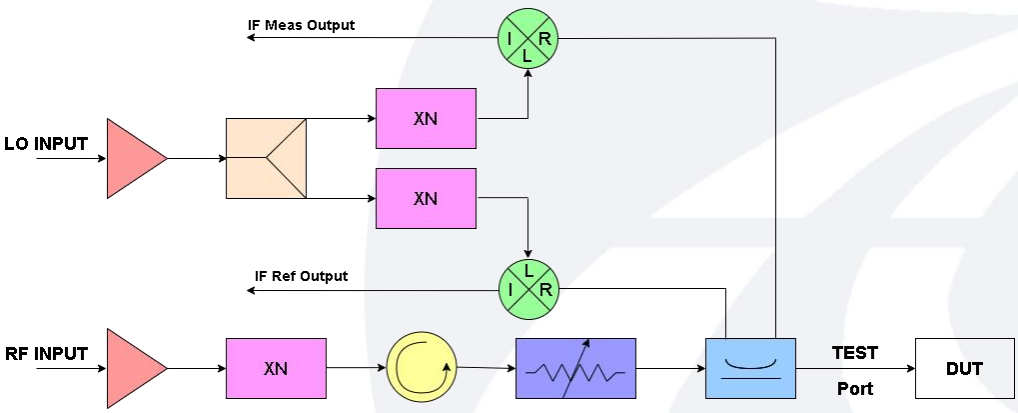
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## Outline Drawing:

Unit:mm; Tolerance:±0.1mm




## Block Diagrams:



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## Envrionmental And Physical Characteristics:

| Parameter | Value | Units |
|---|---|---|
| Operating Temerature | 0 to +45 | ℃ |
| Storage Temerature | -55 to +125 | ℃ |
| Material | Aluminum | |
| Finish | Gray spray paint | |

## Ordering Information:

| Part Number | Description | Revision |
|---|---|---|
| TLVE-220330-N10-S | J-band VNA Frequency Extender, 220-330GHz, Output Power: -10dBm Min., Dynamic Range: 90dB Min.,Magnitude Stability @300Hz BW:±0.25dB,Phase Stability @300Hz BW:±3.5° | Rev.1.1 |

## Components Included:

| Part Number | Description | Quantity |
|---|---|---|
| S1-SMAMSMAM-1.2m | COAXIAL CABLE ASSEMBLY | 4 PCS |
| TL-Type C | AC-to-DC Power Adapter | 2 PCS |
| Calibration kit | WR10 | 1PCS |