

## W-Band VNA Frequency Extender

67-110GHz /WR-10

Model: TLVE-67110-10-A/TLVE-67110-10

TLVE-67110-10 frequency extenders are a dedicated Test & Measurement solution for extending the range of your Vector Network Analyzer (VNA) to 67-110 GHz.

### Features:

- Frequency range: 67-110 GHz
- Port Output Power (No Attenuation): 8dBm Typ
- Dynamic Range @10Hz BW: 110dB Typ
- Unconditional stability

### Applications:

- VNA Frequency Extension
- Antenna measurements
- Material characterisation

### Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency range	67		110	GHz
Test Port Output Power		8		dBm
Test Port Input Power (Damage)			20	dBm
Output Power Attenuation (Option:Variable attenuators)	0		30	dB
Dynamic Range @ 10Hz BW	100	110		dB
RF Input Frequency	11.16		18.33	GHz
RF Input Power	0	1	3	dBm
RF Multiplication Factor		6		
LO Input Frequency	11.16		18.33	GHz
LO Input Power	0	1	3	dBm
LO Multiplication Factor		6		
IF Frequency Range	1		1000	MHz
Effective Directionality@10Hz BW	35	40		dB
Payload Matching@10Hz BW	45	60		dB
ReflectionTracking@10Hz BW		±0.03	±0.1	dB
Transmission Tracking@10Hz BW		±0.03	±0.1	dB
Amplitude stability @300 Hz BW		±0.1		dB
Phase Stability @300 Hz BW		±1	±1.5	°

## Mechanical Specifications:

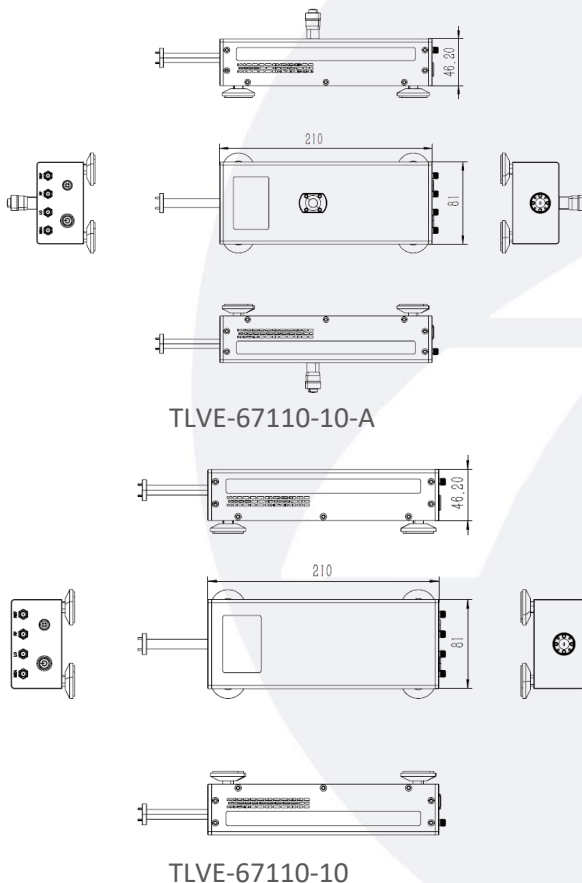
Parameter	Value
RF/LO Input Connector	SMA Female
MEA/REF IF Output Connector	SMA Female
Test Port Connector	WR-10/UG-387/U
Power Supply Pin	FGG 0B 4 Core
Size	210*81*46.2mm

## Absolute Maximum Ratings :

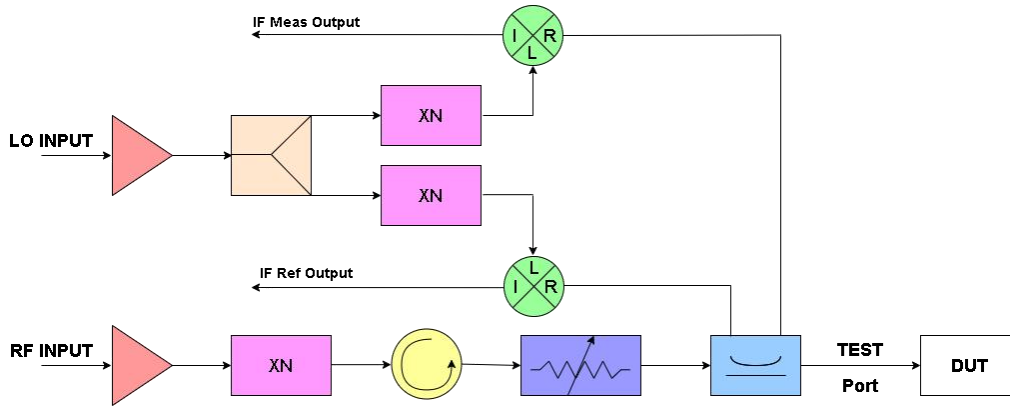
Description	Parameter	Units
Test Port Input Power	+20	dBm
RF/LO Port Damage Level	+10	dBm
Supply Bias Voltage	+240 V AC	
ESD sensitivity (Hbm)	Class 0, passed 150V	

## Outline Drawing:

Unit:mm



## Block Diagrams:



## Environmental And Physical Characteristics:

Description	Parameter	Units
Operating Temperature	0 To +45	°C
Storage Temperature	-55 to +125	°C
Material	Al	
Finish	Gray spray paint	

## Ordering Information:

Part Number	Description	Revision
TLVE-67110-10	W-band VNA Frequency Extender, 67-110 GHz, Output Power: 8dBm typ., Dynamic Range:110 dB typ. Magnitude Stability @300Hz BW:±0.1dB,Phase Stability @300Hz BW:±1°	Rev.1.1
TLVE-67110-10-A	W-band VNA Frequency Extender, 67-110 GHz, Output Power: 8dBm typ., Dynamic Range:110 dB typ. Magnitude Stability @300Hz BW:±0.1dB,Phase Stability @300Hz BW:±1°,with Micrometer driven variable attenuators	Rev.1.1

## Components Included:

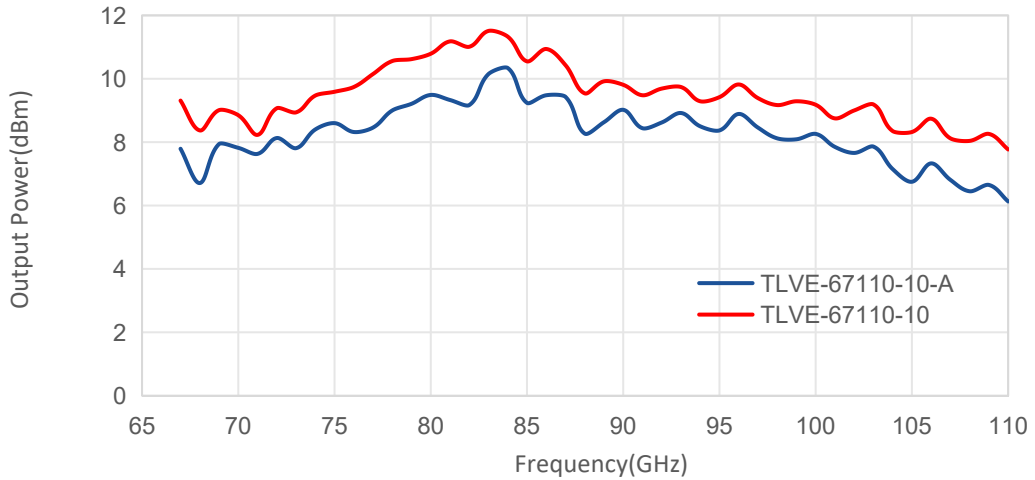
Part Number	Description	Quantity
S1-SMAMSMAM-1.2m	COAXIAL CABLE ASSEMBLY	4 PCS
TLACTDC-22012	AC-to-DC Power Adapter	1 PCS

### Notes:

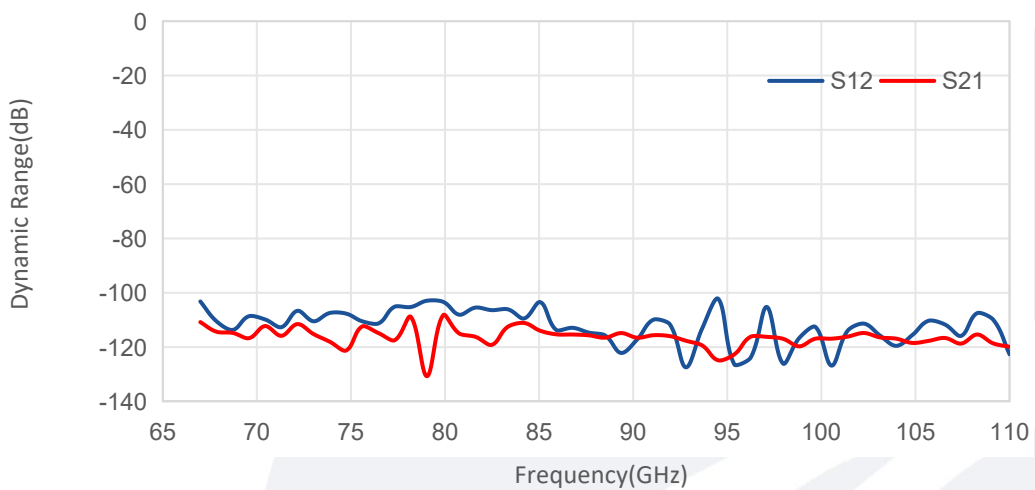
1. Dimensions and specifications may be changed without prior notice.
2. Standard Warranty:three years.

## Typical Performance Data:

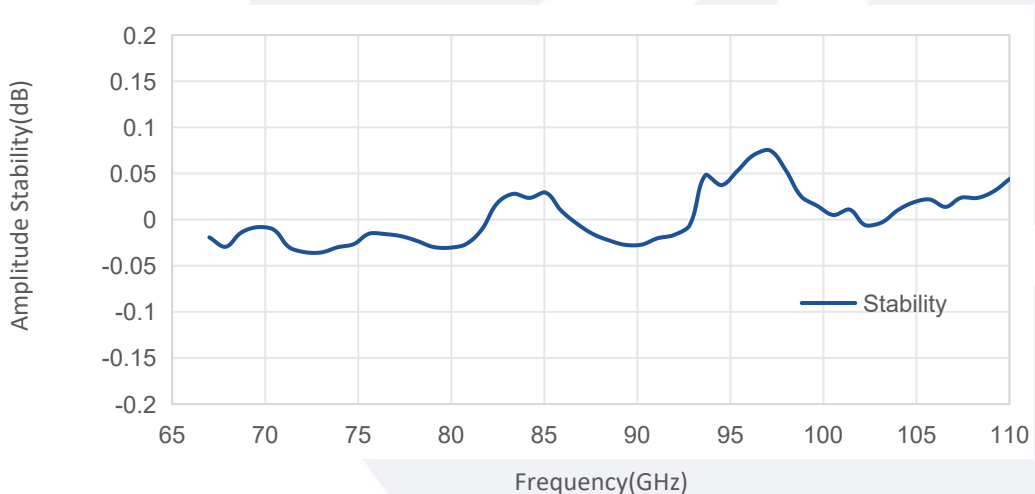
### Output Power vs Frequency



### Dynamic Range vs Frequency



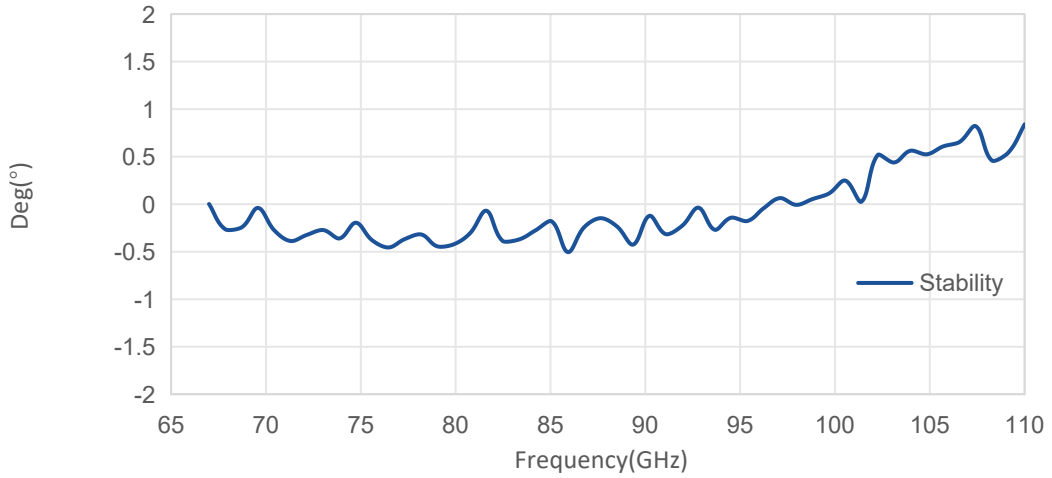
### Amplitude Stability vs Frequency



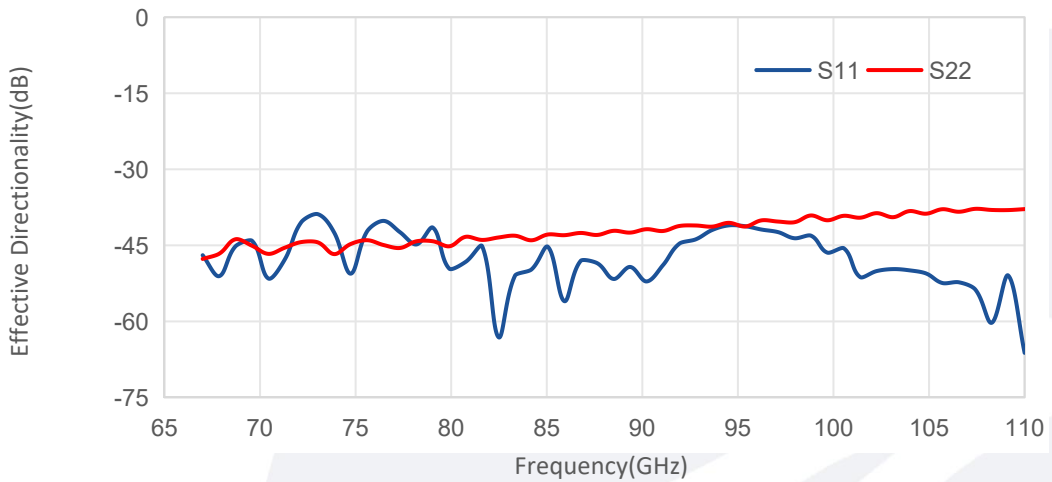
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

**典型曲线 Typical Performance Data:**

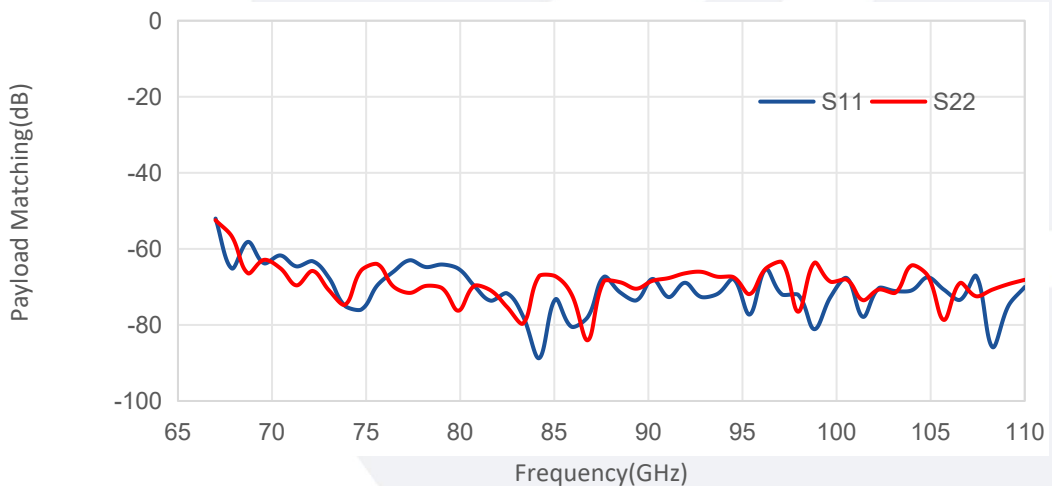
**Phase Stability vs Frequency**



**Effective Directionality vs Frequency**



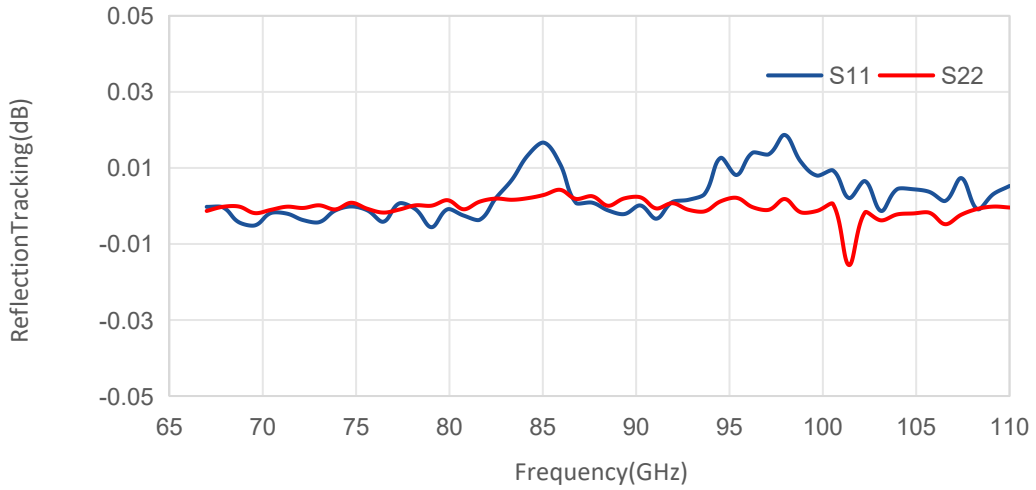
**Payload Matching vs Frequency**



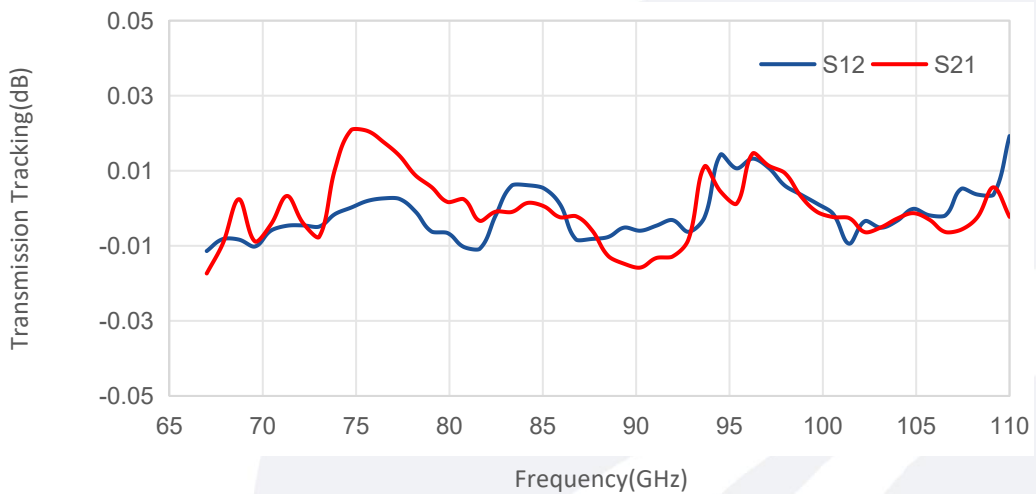
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

**典型曲线 Typical Performance Data:**

**Reflection Tracking vs Frequency**



**Transmission Tracking 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.