

## U-Band VNA Frequency Extender 40-60GHz /WR-19/

**Model: TLVE-4060-13**

TLVE-4060-13 frequency extenders are a dedicated Test & Measurement solution for extending the range of your Vector Network Analyzer (VNA) to 40-60 GHz.

### Features:

- Ultra Wide Band: 40-60 GHz
- Port Output Power (No Attenuation): 13 dBm Typ
- Dynamic Range @ 10 Hz BW: 120dB Typ
- Unconditional stability

### Applications:

- VNA Frequency Extension
- Antenna measurements
- Material characterisation

### Electrical Characteristics:

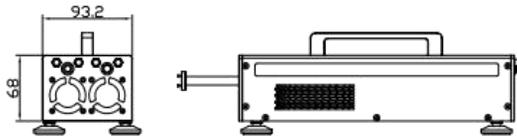
Parameter	Min	Typ	Max	Units
Frequency range	40		60	GHz
Test Port Output Power		13		dBm
Test Port Input Power (Damage)			20	dBm
Output Power Attenuation (Option:Variable attenuators)	0		30	dB
Dynamic Range @ 10Hz BW		120		dB
Directivity		40		dB
RF Input Frequency	10		15	GHz
RF Input Power	+3	+5	+7	dBm
RF Multiplication Factor		4		
LO Input Frequency	10		15	GHz
LO Input Power	+3	+5	+7	dBm
LO Multiplication Factor		4		
IF Frequency Range	1		1000	MHz

## Absolute Maximum Ratings :

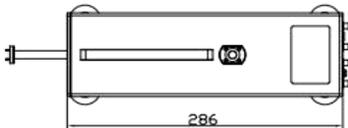
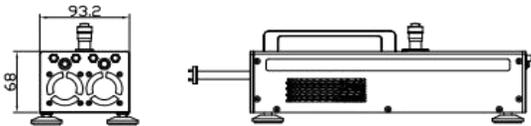
Description	Parameter	Units
Test Port Input Power	+20	dBm
RF/LO Port Damage Level	+10	dBm
ESD sensitivity (HBm)	Class 0, passed 150V	
Supply Bias AC Voltage	240	V

## Outline Drawing:

Unit:mm



TLVE-90140-N3



TLVE-90140-N3-A

## Block Diagrams:

Description	Parameter	Units
Operating Temperature	0 To +45	°C
Storage Temperature	-55 to +125	°C
Material	Al	
Finish	Gray spray paint	
Size	286*93.2*68mm	

### Connector Information:

Parameter	Value
RF Input Connector	SMA Female
LO Input Connector	SMA Female
IF Output Connector	SMA Female
Test Port Connector	WR-19/UG-383
Power Supply Pin	FGG 0B 4 Core

### Ordering Information:

Part Number	Description	Revision
TLVE-4060-13	VNA Frequency Extender, 40-60 GHz, Output Power:13dBm typ., Dynamic Range:120 dB typ., Magnitude Stability @ 300 Hz BW:±0.1dB,Phase Stability @ 300 Hz BW:2.5°	Rev.1.1
TLVE-4060-13-A	VNA Frequency Extender, 40-60GHz, Output Power:13dBm typ., Dynamic Range:120 dB typ., Magnitude Stability @ 300 Hz BW:±0.1dB,Phase Stability @ 300 Hz BW:2.5°,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