

U-Band VNA Frequency Extender

40-60GHz/WR-19

Model: TLTE-040060-13/TLRE-040060

TLTE-040060-13/TLRE-040060 frequency extenders are a dedicated Test & Measurement solution for extending the range of your Vector Network Analyzer (VNA) to 40-60 GHz.

Features:

- Frequency range: 40-60 GHz
- Port Output Power: 13dBm Typ
- Dynamic Range @ 10Hz BW: 130dB 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
Dynamic Range @ 10Hz BW	110	130		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			
Conversion Loss of Receiver		10		dB
IF Frequency Range	1		1000	MHz
Stability @ 300 Hz BW		±0.1		dB
Phase Stability @ 300 Hz BW		±2		°

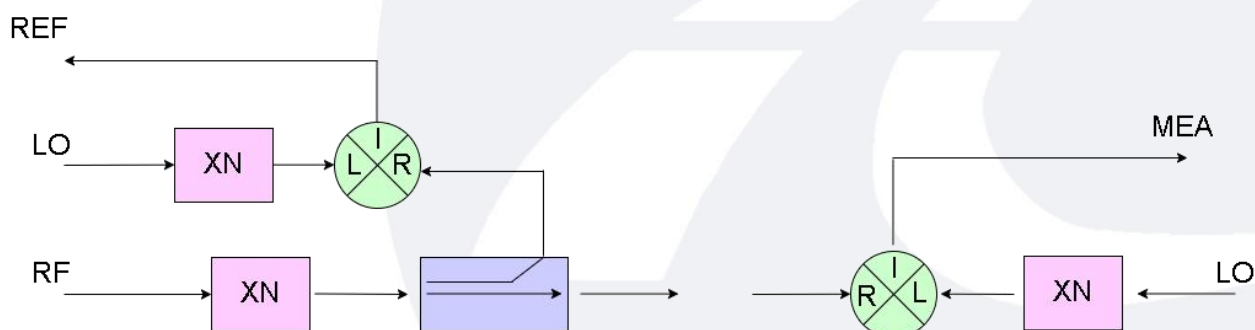
Mechanical Specifications:

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

Absolute Maximum Ratings :

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

Block Diagrams:



Envrionmental And Physical Characteristics:

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

Ordering Information:

Part Number	Description	Revision
TLTE-040060-13	U-band VNA Frequency Extender, 40-60GHz, Output Power: 13dBm typ, Dynamic Range: 130dB typ., Magnitude Stability @300Hz BW: $\pm 0.1\text{dB}$, Phase Stability @300Hz BW: $\pm 2^\circ$	Rev.1.1
TLRE-040060	U-band Receiver Module, 40-60GHz, Conversion Loss: 10 dB typ.	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.