

**Model: TLVE-110170-N5**
**D-band VNA Frequency Extender  
 110-170 GHz, WR-06**
**Feature:**

- Ultra Wide Band: 110-170 GHz
- Port Output Power (No Attenuation): -5dBm Typ
- Dynamic Range @ 10 Hz BW: 110dB Typ
- Unconditional stability

**Electrical Specifications:**

Parameter	Min	Typ	Max	Units
Frequency range	110		170	GHz
Port Output Power		-5		dBm
Input Power (Damage)			20	dBm
Output Power Attenuation (Option: Variable attenuators)	0		30	dB
Dynamic Range @10 Hz BW		110		dB
Directivity		25		dB
RF Input Frequency	9.16		14.17	GHz
RF Input Power	3	7	10	dBm
LO Input Frequency	9.16		14.17	GHz
LO Input Power	3	7	10	dBm
IF Frequency Range	10		1000	MHz
Multiplication Factor		12		
Stability @300Hz BW		±0.2		dB
Phase Stability @300Hz BW		4°		

**Mechanical Specifications:**

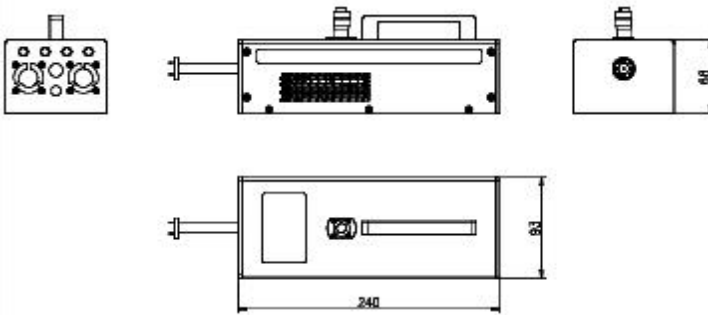
Parameter	Value
RF Input Connector	SMA Female
LO Input Connector	SMA Female
IF Input Connector	SMA Female
RF Output Connector	WR-06/UG-387
Power Supply Pin	FGG 0B 4 Core
Size	240*93*68mm

**Absolute Maximum Ratings:**

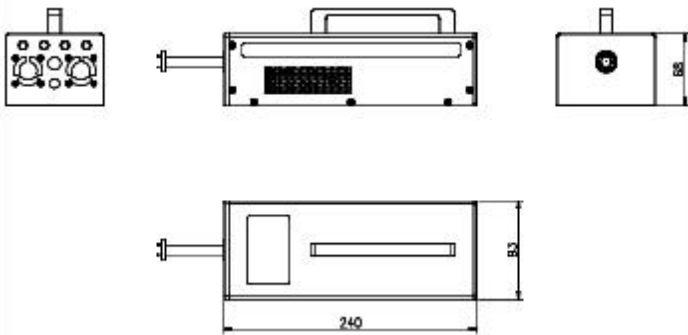
Parameter	Value
Supply Bias Voltage	240 V
RF Input Power	+20 dBm

**Outline Drawing:**

Unit: mm

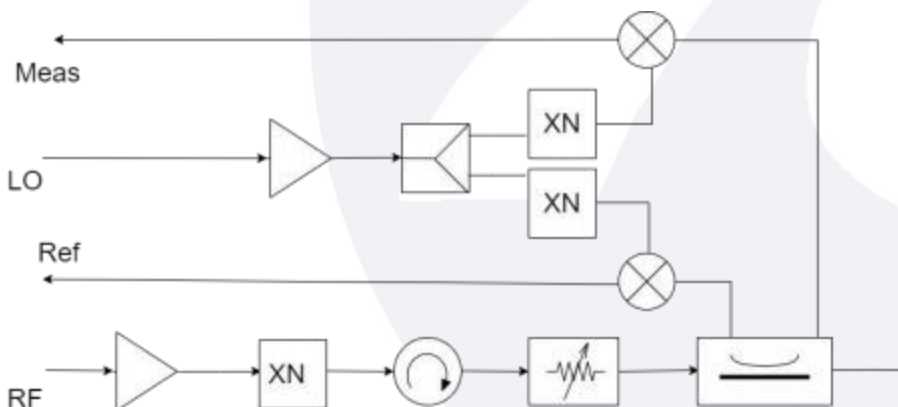


TLVE-110170-N5-A



TLVE-110170-N5

**Block Diagrams:**



**Environmental Conditions:**

Parameter	Min	Typ	Max	Units
Operating Temperature	0		+50	°C
Non-operating Temperature	-45		+125	°C
Relative humidity		95		%
Altitude	50,000			feet
Shock / Vibration(MIL-STD-810F)	20g,11ms,saw-tooth			
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

**Ordering Information:**

Part Number	Description	Revision
TLVE-110170-N5	D-band VNA Frequency Extender, 110-170 GHz, Output Power:-5 dBm typ., Dynamic Range:110 dB typ.,Magnitude Stability @ 300 Hz BW:±0.2dB,Phase Stability @ 300 Hz BW:4°	Rev.1.1
TLVE-110170-N5-A	D-band VNA Frequency Extender, 110-170 GHz, Output Power:-5 dBm typ., Dynamic Range:110 dB typ.,Magnitude Stability @ 300 Hz BW:±0.2dB,Phase Stability @ 300 Hz BW:4°,with Micrometer driven variable attenuators	Rev.1.1

**Components Included:**

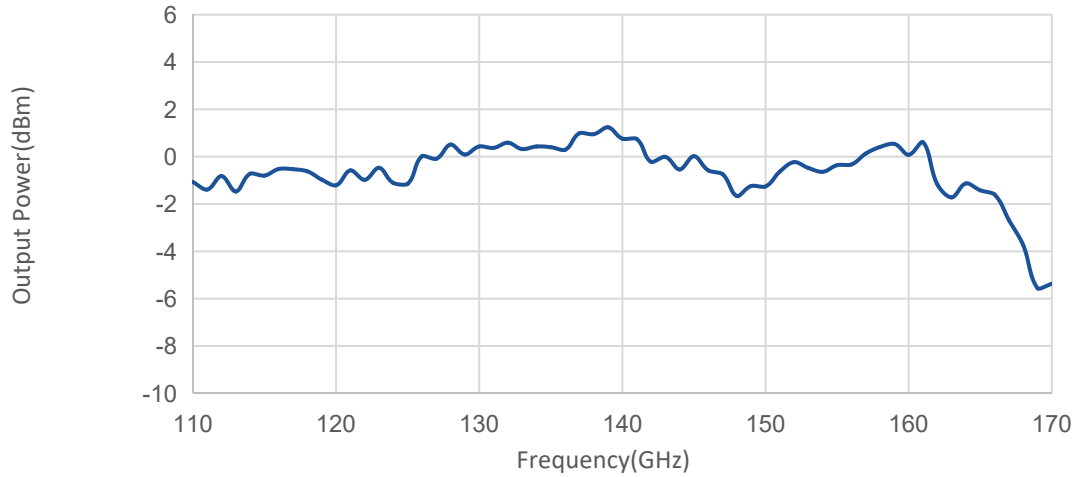
Part Number	Description	Quantity
S1-SMAMSMAM-1.2m	Coaxial Cable Assembly	4 PCS
TACTDC-22012	AC-to-DC Power Adapter	1 PCS

**Notes:**

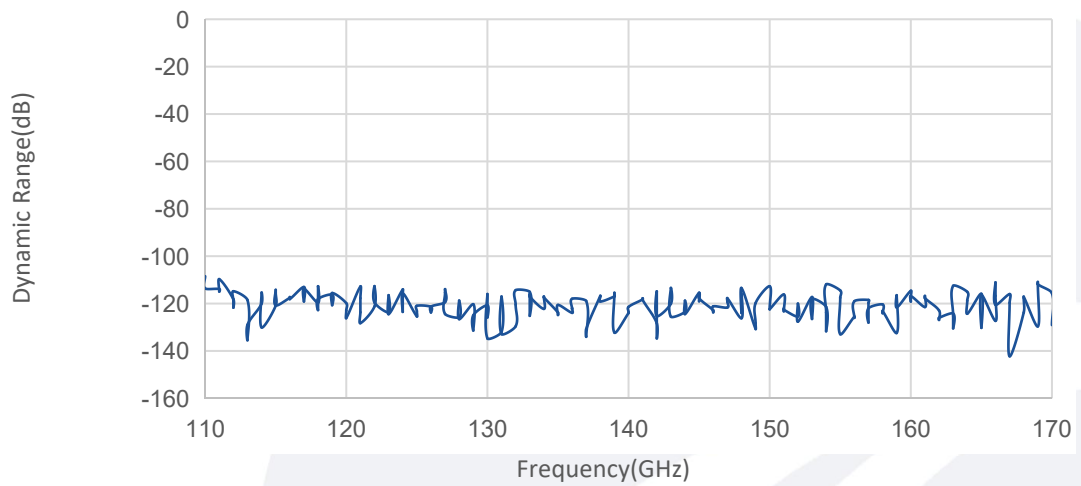
1. Dimensions and specifications may be changed without prior notice.
2. Standard Warranty:three years.

Typical Performance Data:

Output Power vs Frequency



Dynamic Range vs Frequency



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.