

G-Band VNA Frequency Extender

140-220GHz /WR-5.1

Model: TLVE-140220-N3-S

TLVE-140220-N3-S frequency extenders are a dedicated Test & Measurement solution for extending the range of your Vector Network Analyzer (VNA) to 140-220 GHz.

Features:

- Ultra Wide Band: 140-220 GHz
- Port Output Power (No Attenuation): -3 dBm Min
- Dynamic Range @ 10 Hz BW: 100dB Min
- Unconditional stability

Applications:

- VNA Frequency Extension
- Antenna measurements
- Material characterisation

电气特性 Electrical Characteristics:

参数 Parameter	Min	Typ	Max	单位 Units
频率范围 Frequency range	140		220	GHz
测试端口输出功率 Test Port Output Power	-3			dBm
未校准的原始端口回波 Uncalibrated raw port Return Loss	10			dB
动态范围 Dynamic Range @ 10Hz BW	100			dB
原始方向性 Directivity	10			dB
射频输入频率 RF Input Frequency	11.66		18.33	GHz
射频输入功率 RF Input Power	3	5	7	dBm
RF倍频次数 RF Multiplication Factor		12		
本振输入频率 LO Input Frequency	11.66		18.33	GHz
本振输入功率 LO Input Power	3	5	7	dBm
LO倍频次数 LO Multiplication Factor		12		
中频频率范围 IF Frequency Range	1		1000	MHz
幅度稳定度 Stability @ 300 Hz BW(12H)			±0.2	dB
相位稳定度 Phase Stability @ 300 Hz BW(12H)			±3	°
有效方向性 Effective Directionality@10Hz BW	30			dB
有效负载匹配 Payload Matching@10Hz BW	40			dB

反射追踪 ReflectionTracking@10Hz BW			±0.2	dB
传输追踪 Transmission Tracking@10Hz BW			±0.05	dB
端口输出谐波抑制Output harmonic suppression	10			dB
功耗 Power Consumption			10	W

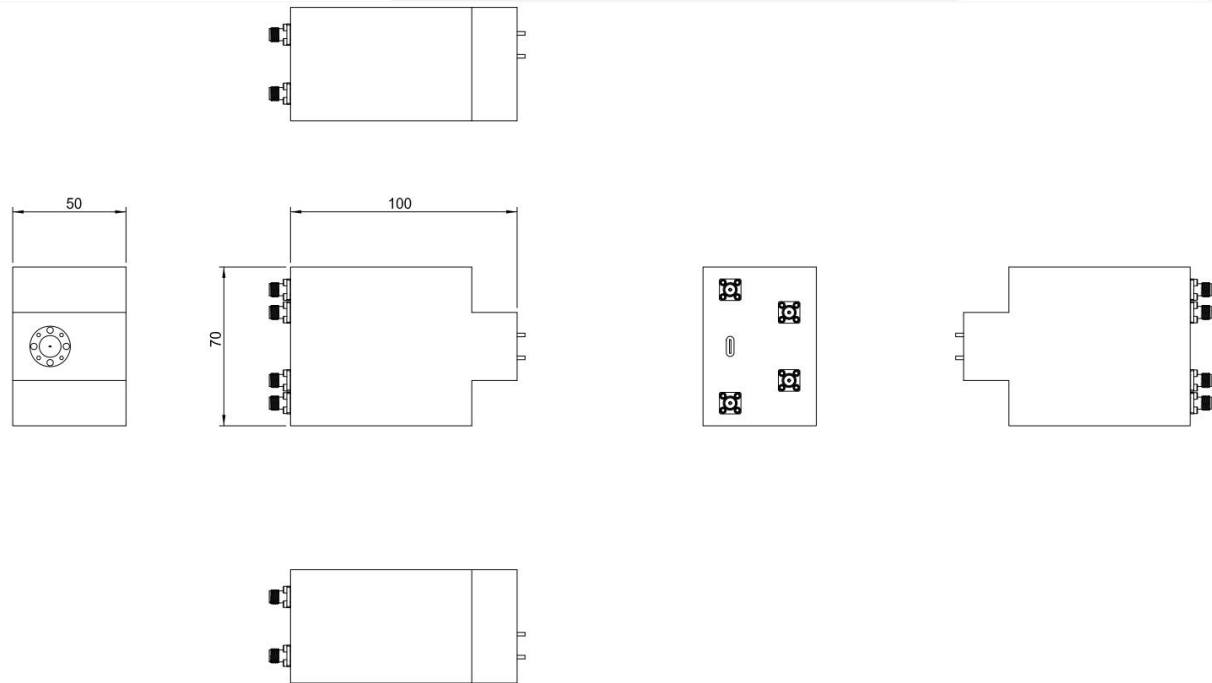
机械特性 Mechanical Specifications:

参数 Parameter	指标 Value
RF/LO输入接口 RF/LO Input Connector	SMA Female
MEA/REF IF输出接口 MEA/REF IF Output Connector	SMA Female
测试端口 Test Port Connector	WR-5.1/UG-387/U
供电 Power Supply Pin	Type C
尺寸 Size	100x70x50mm

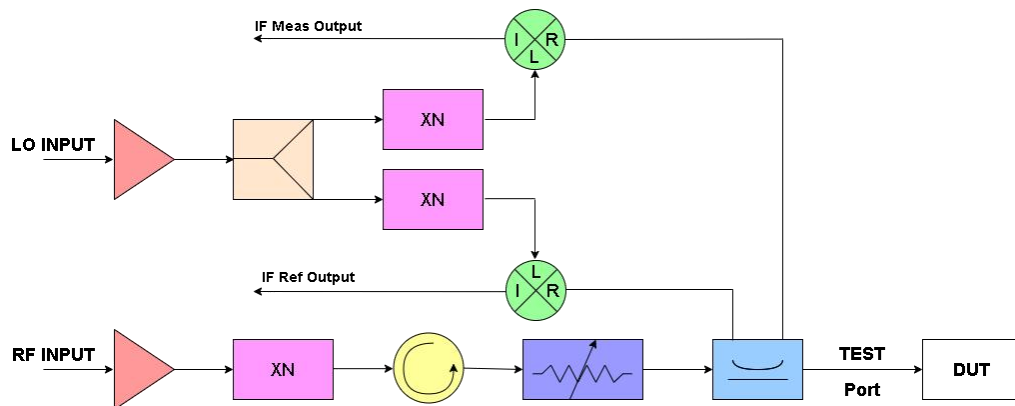
绝对最大值 Absolute Maximum Ratings :

描述 Description	参数 Parameter	单位 Units
RF/LO端损坏等级 RF/LO Port Damage Level	+10	dBm
ESD灵敏度 ESD sensitivity (HBm)	Class 0, passed 150V	

外形图 Outline Drawing: Unit:mm



原理框图 Block Diagrams:



环境和物理特性 Envrionmental And Physical

描述 Description	参数 Parameter	单位 Units
操作温度 Operating Temperature	0 To +45	°C
存储温度 Storage Temperature	-55 to +125	°C
材质 Material	Al	
表面处理 Finish	Gray spray paint	

订货信息 Ordering Information:

标准型号 Part Number	描述 Description	版本号 Revision
TLVE-1402200-N3-S	G-band VNA Frequency Extender, 140-220GHz, Output Power:-3dBm Min., Dynamic Range:100 dB Min.,Magnitude Stability @ 300 Hz BW:±0.2dB(12H),Phase Stability @ 300 Hz BW:±3°(12H)	Rev.1.1

随货配件 Components Included:

标准型号 Part Number	描述 Description	数量 Quantity
S1-SMAMSMAM-1.2m	COAXIAL CABLE ASSEMBLY	4 PCS
TL-Type C	AC-to-DC Power Adapter	2 PCS
Calibration kit	WR05	1PCS