

TURVE-140220N3 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): 0 dBm Typ
- Dynamic Range @ 10 Hz BW: 110dB Typ
- Unconditional stability

Applications:

- VNA Frequency Extension
- Antenna measurements
- Material characterisation

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency range	140		220	GHz
Test Port Output Power		0		dBm
Test Port Input Power (Damage)			10	dBm
Output Power Attenuation (Option:Variable attenuators)	0		30	dB
Dynamic Range @ 10Hz BW		110		dB
Directivity		20		dB
RF Input Frequency	11.66		18.33	GHz
RF Input Power	3	5	7	dBm
RF Multiplication Factor		12		
LO Input Frequency	11.66		18.33	GHz
LO Input Power	3	5	7	dBm
LO Multiplication Factor		12		
IF Frequency Range	1		1000	MHz

Mechanical Specifications:

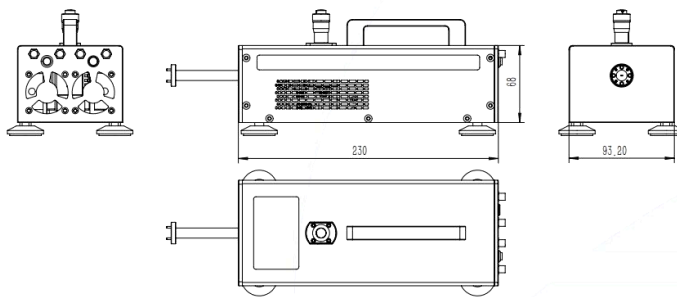
Parameter	Value
RF/LO Input Connector	SMA Female
MEA/REF IF Output Connector	SMA Female
Test Port Connector	WR-05/UG-387/U
Power Supply Pin	FGG 0B 4 Core
Size	230*93.2*68mm

Absolute Maximum Ratings :

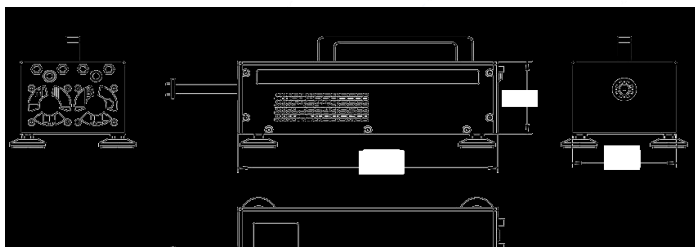
Description	Parameter	Units
Test Port Input Power	+10	dBm
RF/LO Port Damage Level	+10	dBm
Supply Bias Voltage	+240 V AC	
ESD sensitivity (HBm)	Class 0, passed 150V	

Outline Drawing:

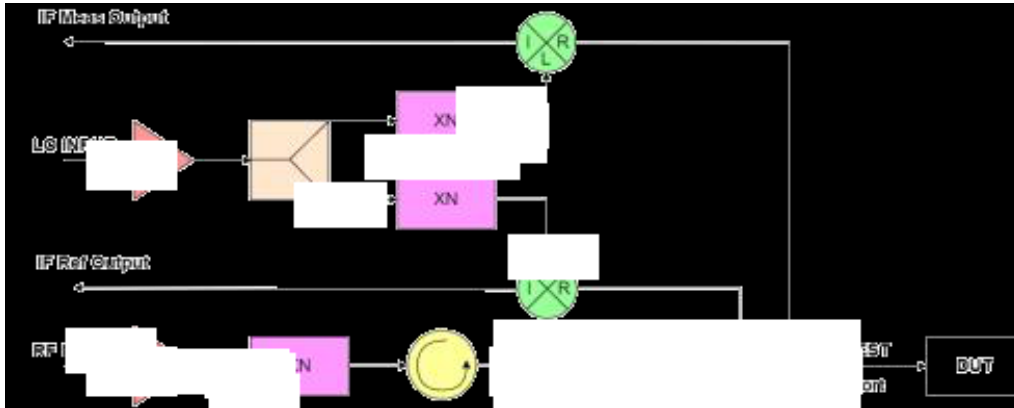
Unit:mm



TURVE-140220N3 A



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:

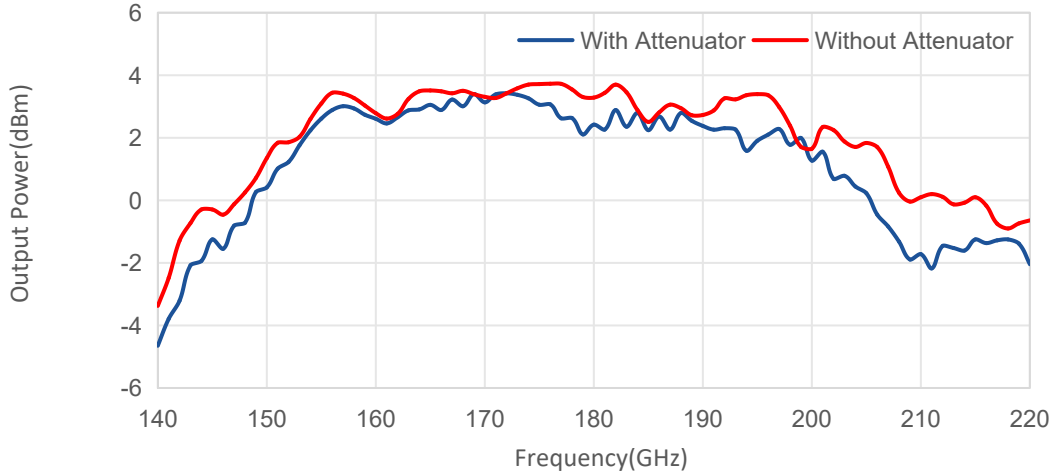
Part Number	Description	Revision
TURVE-140220N3	G-band VNA Frequency Extender, 140-220 GHz, Output Power:0 dBm typ., Dynamic Range:110 dB typ.,Magnitude Stability @ 300 Hz BW:±0.2dB,Phase Stability @ 300 Hz BW:±6°	Rev.1.1
TURVE-140220N3 A	G-band VNA Frequency Extender, 140-220 GHz, Output Power:0 dBm typ., Dynamic Range:110 dB typ.,Magnitude Stability @ 300 Hz BW:±0.2dB,Phase Stability @ 300 Hz BW:±6°,with Micrometer driven variable attenuators	Rev.1.1

Components Included:

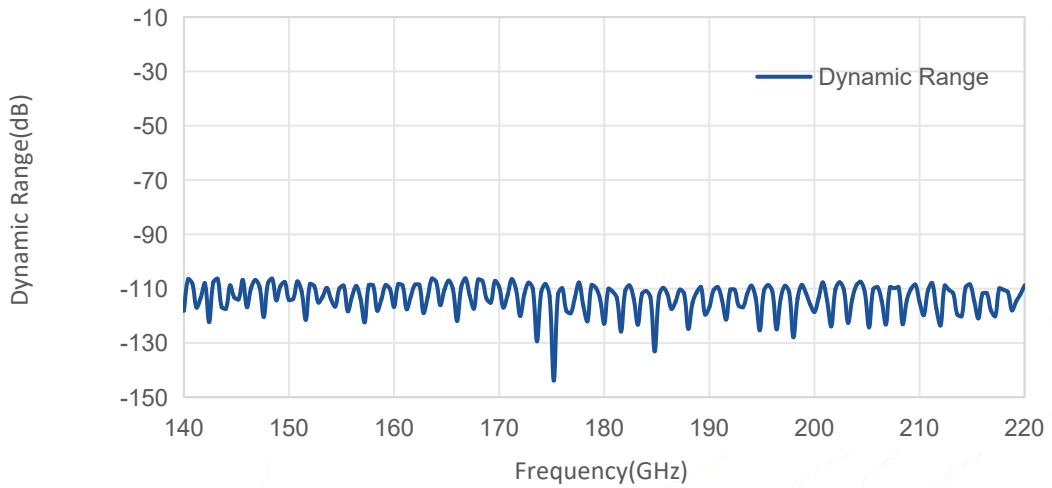
Part Number	Description	Quantity
S1-SMAMSMAM-1.2m	COAXIAL CABLE ASSEMBLY	4 PCS

Typical Performance Data:

Output Power vs Frequency



Dynamic Range vs Frequency



Stability vs Frequency

