

TURVE-507516 frequency extenders are a dedicated Test & Measurement solution for extending the range of your Vector Network Analyzer (VNA) to 50-75 GHz.

Features:

- Ultra Wide Band: 50-75 GHz
- Port Output Power (No Attenuation): 12 dBm Typ
- Dynamic Range @ 10 Hz BW: 110dB Typ
- 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 | 50 | | 75 | GHz |
| 测试端口输出功率 Test Port Output Power | | 12 | | dBm |
| 测试端口输入功率 Test Port Input Power (Damage) | | | 20 | dBm |
| 输出功率衰减 Output Power Attenuation (Option:Variable attenuators) | 0 | | 30 | dB |
| 动态范围 Dynamic Range @ 10Hz BW | 100 | 110 | | dB |
| 射频输入频率 RF Input Frequency | 12.5 | | 18.75 | GHz |
| 射频输入功率 RF Input Power | 3 | 5 | 7 | dBm |
| RF倍频次数 RF Multiplication Factor | | 4 | | |
| 本振输入频率 LO Input Frequency | 12.5 | | 18.75 | GHz |
| 本振输入功率 LO Input Power | 3 | 5 | 7 | dBm |
| LO倍频次数 LO Multiplication Factor | | 4 | | |
| 中频频率范围 IF Frequency Range | 1 | | 1000 | MHz |
| 有效方向性 Effective Directionality@10Hz BW | | 50 | | dB |
| 有效负载匹配 Payload Matching@10Hz BW | | 60 | | dB |
| 反射追踪 ReflectionTracking@10Hz BW | | ±0.01 | | dB |
| 传输追踪 Transmission Tracking@10Hz BW | | ±0.02 | | dB |
| 幅度稳定度 Amplitude stability @300 Hz BW | | ±0.1 | | dB |

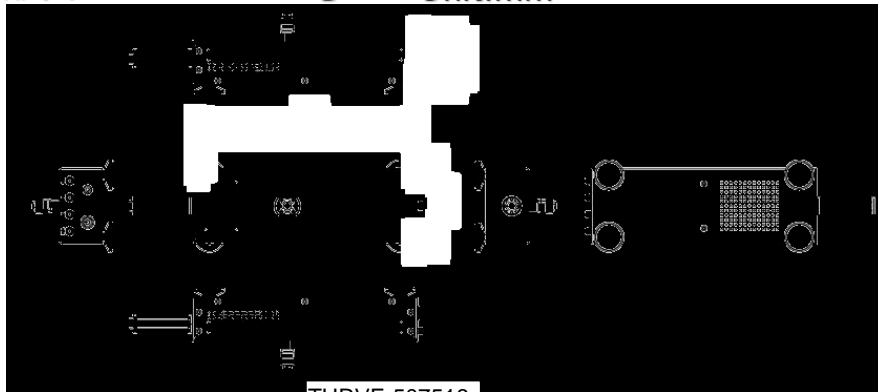
机械特性 Mechanical Specifications:

| 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-15/UG-385/U |
| 供电 Power Supply Pin | FGG 0B 4 Core |
| 尺寸 Size | 242*81*46.2mm |

绝对最大值 Absolute Maximum Ratings :

| 描述 Description | 参数 Parameter | 单位 Units |
|------------------------------------|----------------------|----------|
| 测试端输入功率 Test Port Input Power | +20 | dBm |
| RF/LO端损坏等级 RF/LO Port Damage Level | +10 | dBm |
| 供电偏置 Supply Bias Voltage | +240 V AC | |
| 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 Environmental 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:

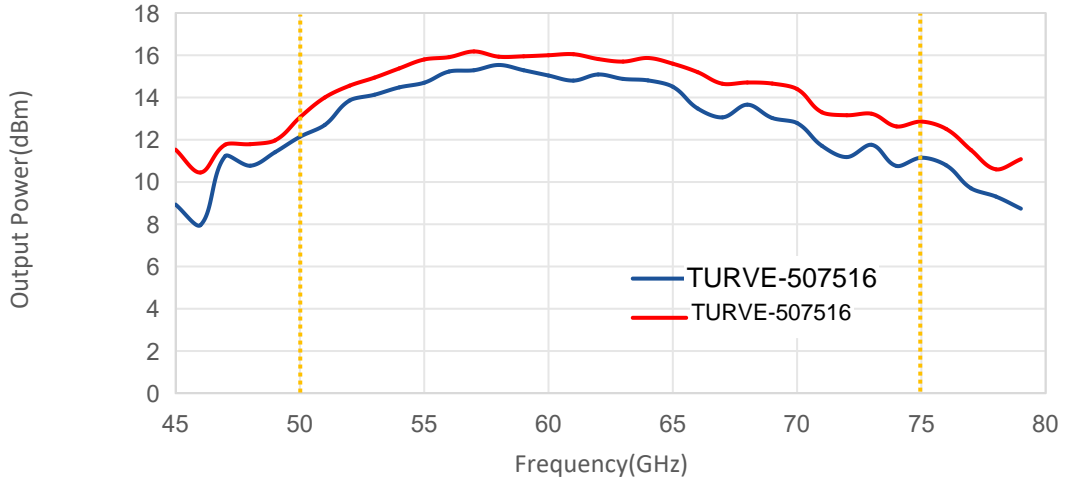
| 标准型号 Part Number | 描述 Description | 版本号 Revision |
|------------------|--|--------------|
| TURVE-507516 | G-band VNA Frequency Extender, 50-75 GHz, Output Power:12 dBm typ., Dynamic Range:110 dB typ.,Magnitude Stability @300 Hz BW:±0.1dB,Phase Stability @300 Hz BW:±2° | Rev.1.2 |
| TURVE-507516 A | G-band VNA Frequency Extender, 50-75 GHz, Output Power:12 dBm typ., Dynamic Range:110 dB typ.,Magnitude Stability @300 Hz BW:±0.1dB,Phase Stability @300 Hz BW:±2°,with Micrometer driven variable attenuators | Rev.1.2 |

随货配件 Components Included:

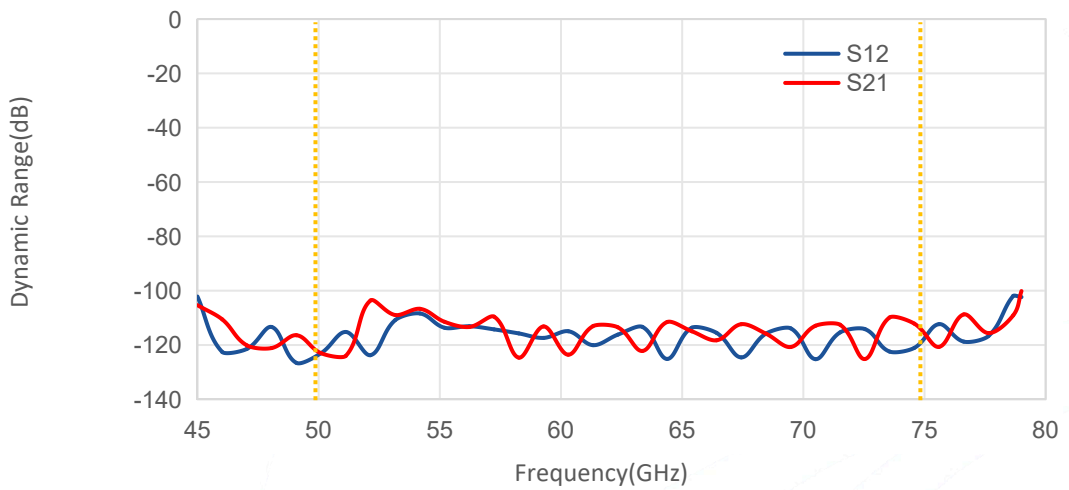
| 标准型号 Part Number | 描述 Description | 数量 Quantity |
|------------------|------------------------|-------------|
| S1-SMAMSMAM-1.2m | COAXIAL CABLE ASSEMBLY | 4 PCS |
| TLACTDC-22012 | AC-to-DC Power Adapter | 1 PCS |

典型曲线 Typical Performance Data:

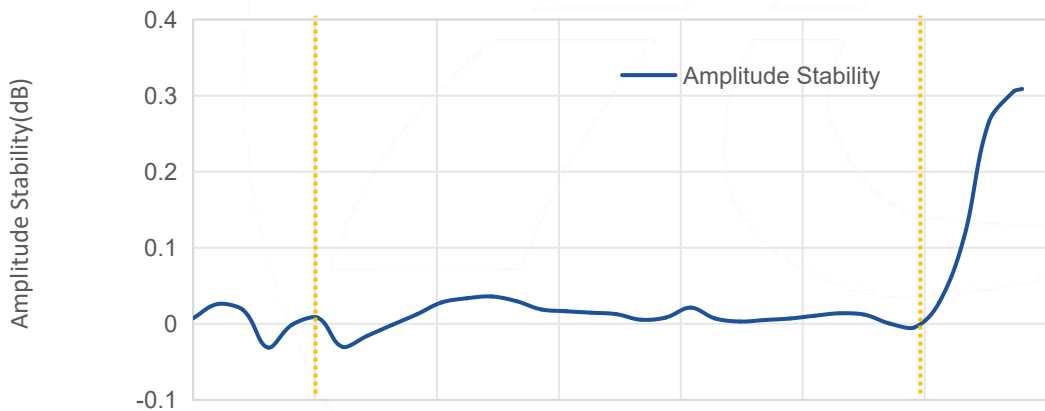
Output Power vs Frequency



Dynamic Range vs Frequency

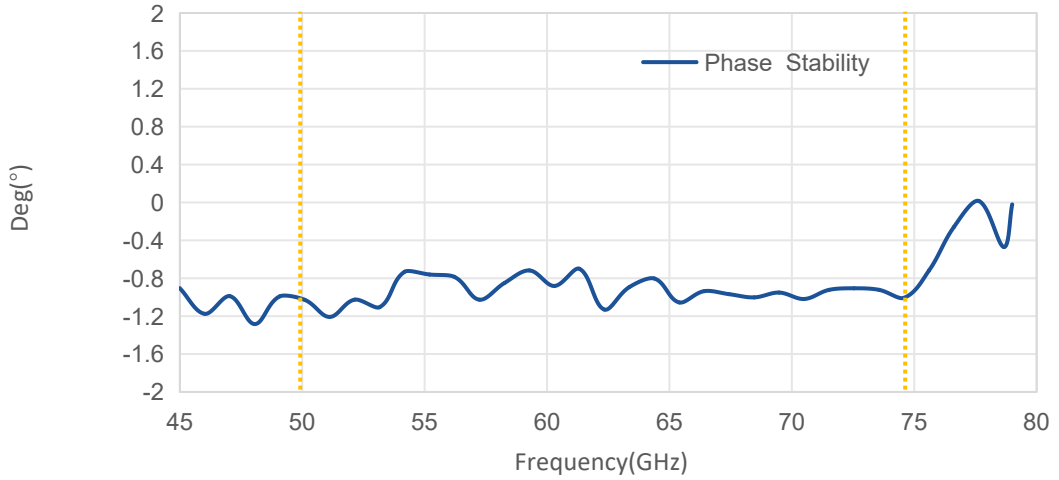


Amplitude Stability@1h vs Frequency

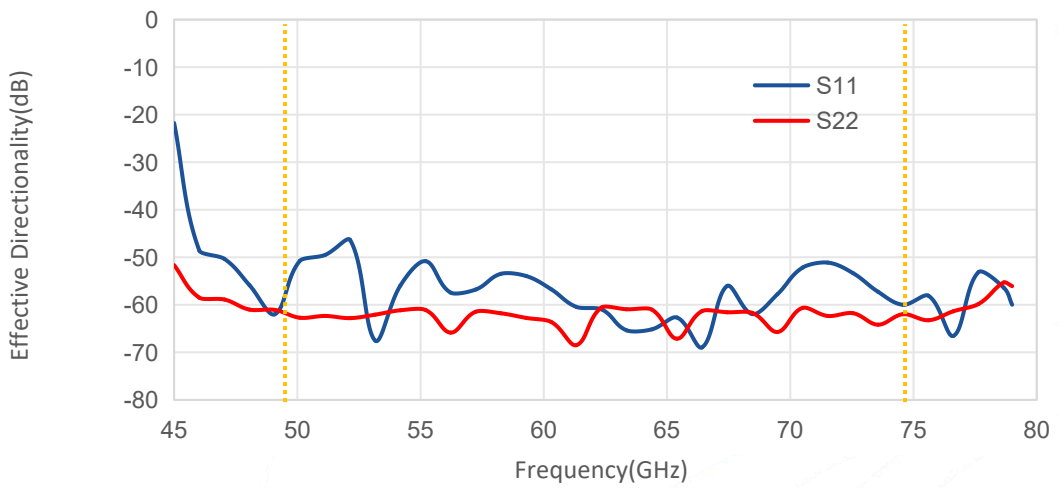


典型曲线 Typical Performance Data:

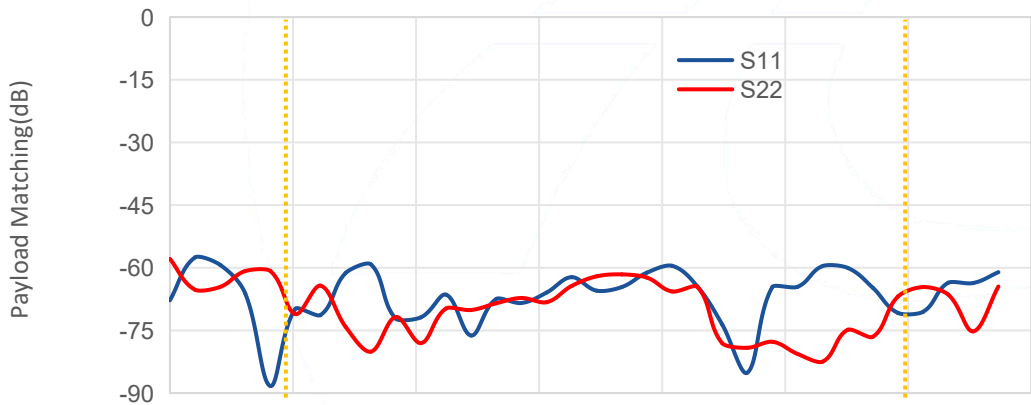
Phase Stability@1h vs Frequency



Effective Directionality vs Frequency

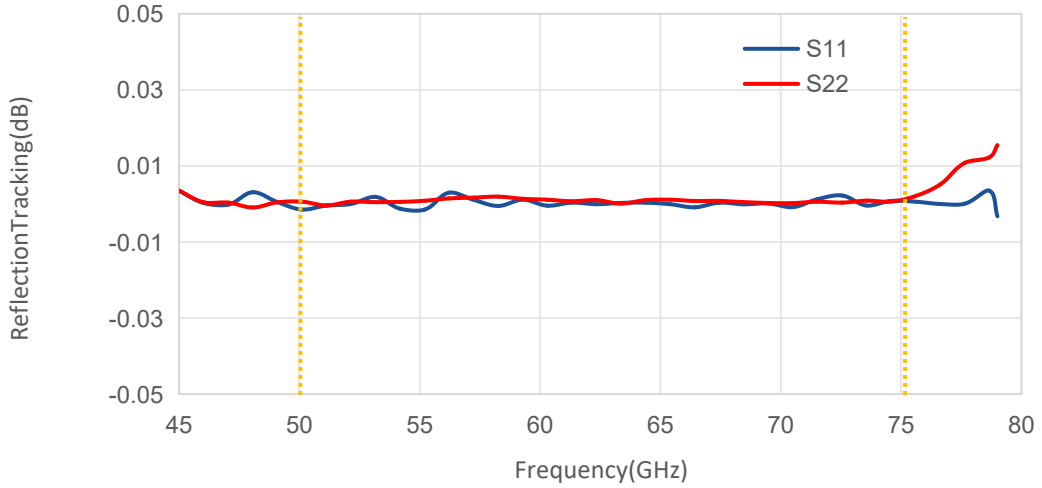


Payload Matching vs Frequency

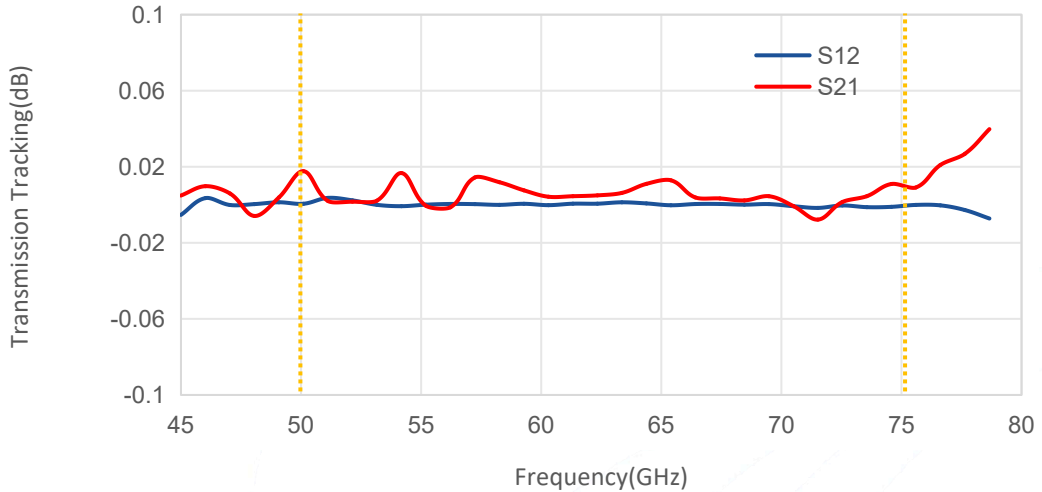


典型曲线 Typical Performance Data:

ReflectionTracking vs Frequency



Transmission Tracking 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.