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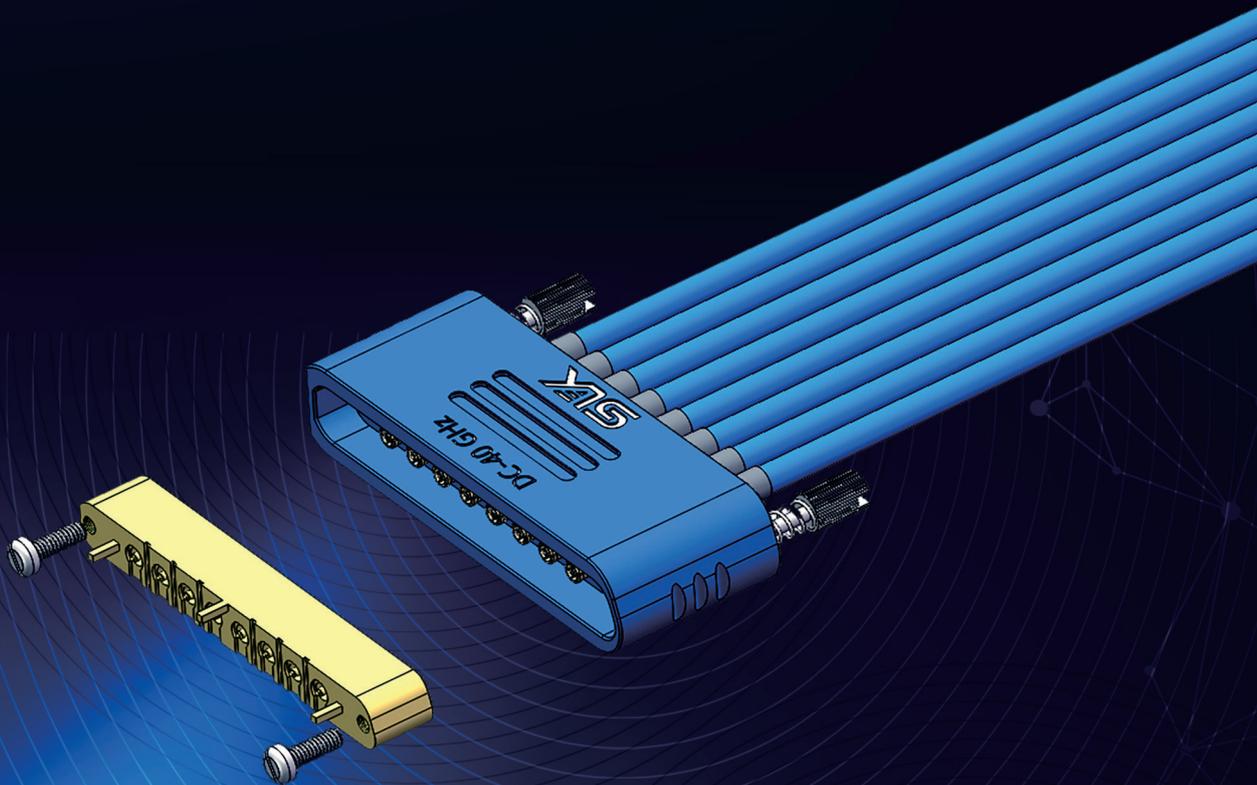
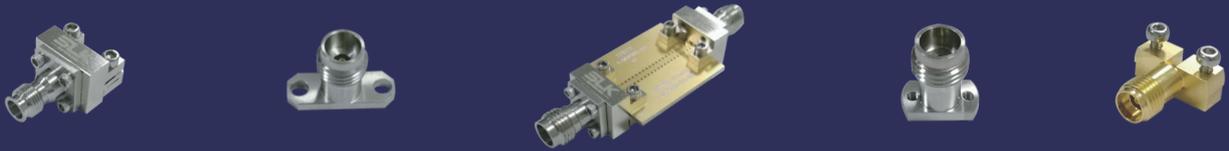
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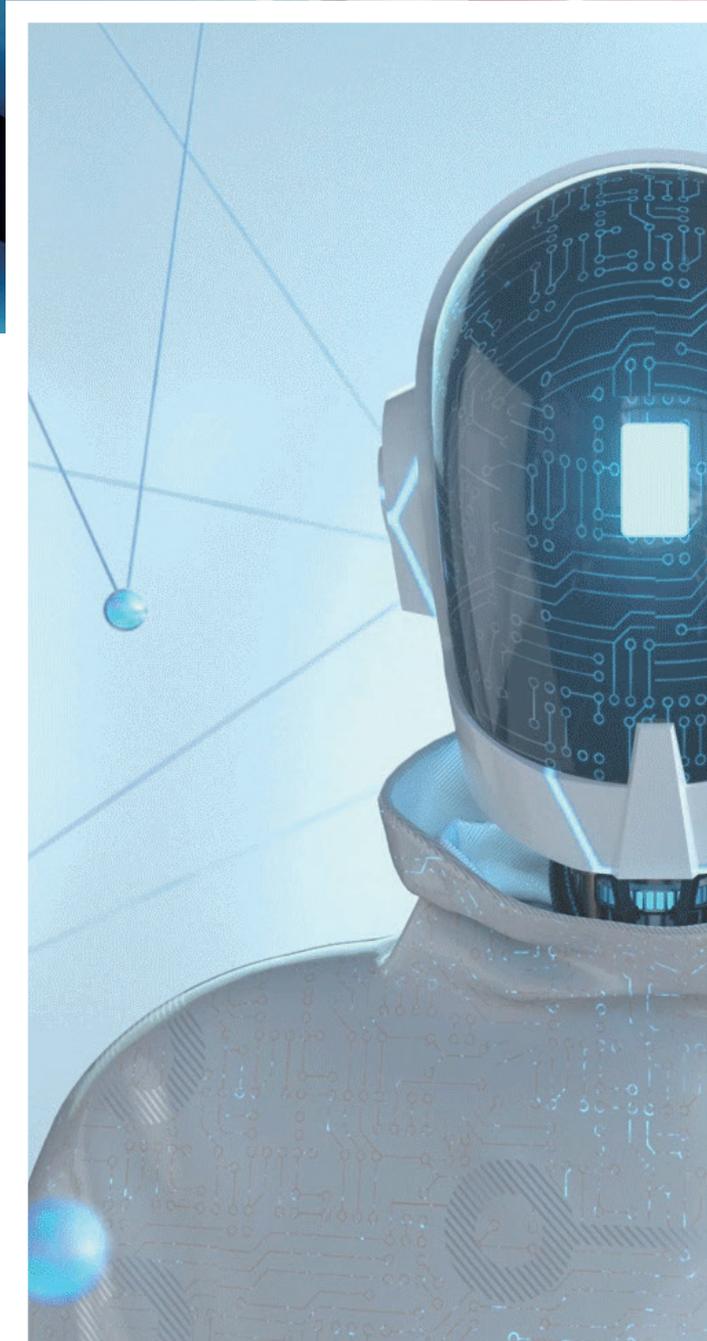


RF TEST SOLUTION

High-Speed Signal & Optical module Applications



SHENZHEN SUPERLINK TECHNOLOGY CO.,LTD.



Our Vision

Establish an international brand and continuously create value for social and human development



Our Mission

Provide value-added products and professional services to society through technology innovation and leadership



Our Core Values

Customer First
Keep Promise
Continuously Improve
Win-Win-Win Cooperation



Telecom



Health Care



Aerospace



Data
Communication



Test
Measurement



Industrial
Automation



Shenzhen Superlink Technology Co.,Ltd.

Is founded in 2008, specializing in the development, design and manufacture of interconnection products and solutions.

We own strong scientific research strength, precision equipments and professional management systems. With reliable and consistent quality, we have been recognized by many customers and established long-term strategic partners with many top fortune 500 enterprises globally.

We are professional to provide ODM, OEM and engineering customization services, our related products have been widely used in telecommunications, data communication, test and measurement, medical, industrial automation, military, semiconductor, aerospace and so on. With outstanding technical innovation and professional service as our mission, we provide to customers the most effective interconnection solutions.

Company Milestone

- **Founded** in Dongguan
- Passed ISO9001:2008

2008

- Produced RF cable assemblies
- Obtained UL & CUL certification
- Product frequency up to **20GHz**

2010

2009

- Factory moved to Shenzhen
- Became a strategic partner of Volex, Times
- Obtained the first patent

2013

- Passed medical certification:ISO13485:2003
- Passed ISO14001:2004
- Product reached **40GHz**

- Passed ISO14001:2004
- Became a member of special equipment

2015

2001:2004
Member of Shenzhen
Electronic Components Association

- Became an IPC member
- Established the TEMP BU
- Passed the national high-tech enterprise certification
- Products reach **67GHz**
- Established cable processing workshop

2017

2019

- Approved by Guangdong Province RF microwave passive components and system engineering technology research center
- Passed intellectual property management system certification GB/T29490-2017;
- Successfully developed semiconductor manufacturing and testing products

- Established clean assembly workshop and constant temperature and humidity machine processing workshop
- Product frequency reach **110GHz**

2020

- Obtained Shenzhen Science and Technology Innovation Commission technology center
- Passed IATF16949 :2016
- Obtained **100+** patent certifications

2021

2022

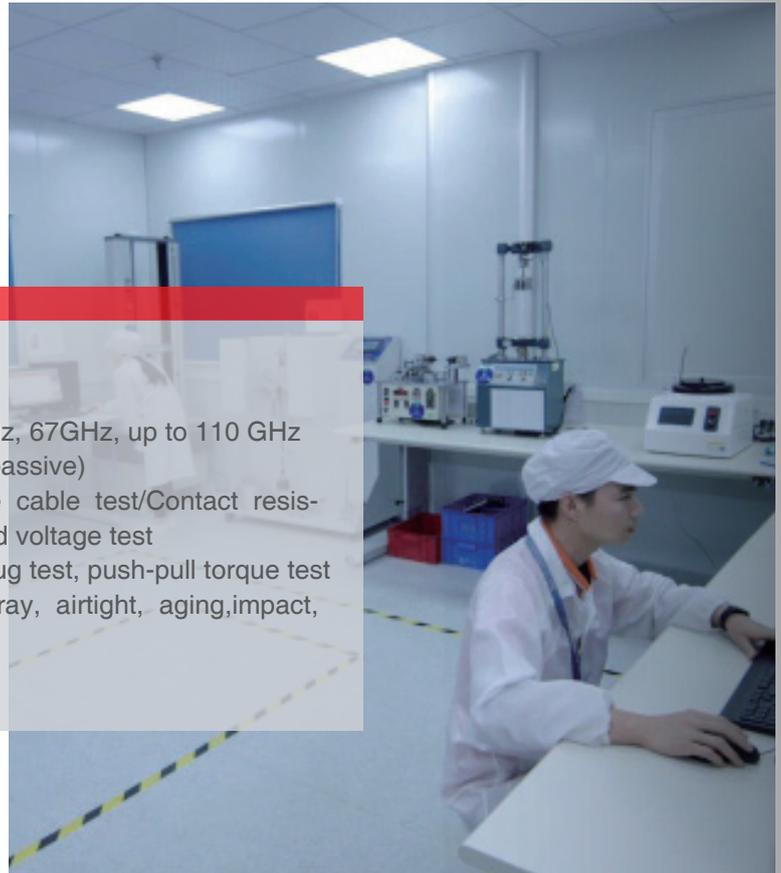
- Became a member of China Electronic Components Association

R&D CAPABILITY



Design Ability

- RF product frequency up to 110GHz
- PIM <-125 dBm
- Product life can be up to 100,000 times
- Air tightness
- Precision test requirement
- SI simulation test board & test fixture design
- Machining Parts & Mold Design



Software & Test Equipment

- Keysight network analysis, 26.5GHz, 40 GHz, 67GHz, up to 110 GHz
- Electrical Test: network analyzer test, 3rd (passive) intermodulation test (PIM), Comprehensive cable test/Contact resistance test/Insulation resistance test/withstand voltage test
- Mechanical test: Rockwell 2.0, automatic plug test, push-pull torque test
- Environment and reliability testing,salt spray, airtight, aging,impact, IP67/68 waterproof, Failure cause analysis
- Ansoft HFSS software

PRODUCTION CAPABILITY

Machining and Assembly Workshop

- The accuracy of STAR CNC from Japan reaches 0.002mm
- Has an automated semi-rigid cable bending machine that can make special 3D shapes
- Possess the welding ability of ultra-micro coaxial and low in termodulation radio frequency cable assemblies
- Heat treatment capacity up to 2500 C various encapsulation processes
- Special waterproof production capacity, IP68 airtight level



Cable Workshop

- The constant tension winding production line adopts German ZF hysteresis tension controller and Mitsubishi servo motor. I can wind the core wire in the range of 2-15mm, the pitch range is 0.5-20mm, and the winding head speed is 0-1000 rpm to ensure the cable in the winding process The consistency, reliability, and stability of performance.
- The knitting machine adopts advanced frequency conversion control (technology which has the characteristics of stepless speed regulation, high-speed knitting, fault alarm, low nose, high reliability, high precision and high strength. Ensure that the binding force and shielding properties of the product during processing meet the standard requirements, and there are no undesirable phenomena such as broken wires and loose weaving.



SLK PRODUCTS LIST >>>



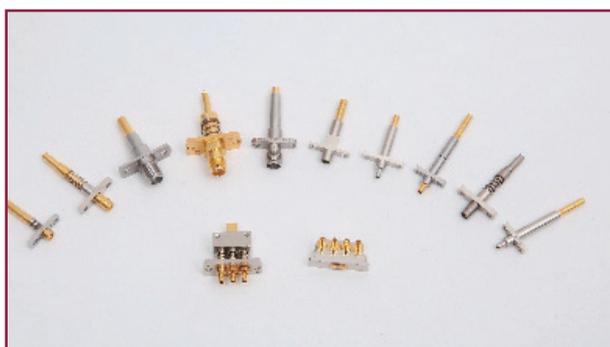
RF connector

- Type: 1.0mm, 1.35mm, 1.85mm, 2.92mm, 7/16 mm, BMA, BNC, MCX, MMCX, N, SMA, SMB, SMP, SSMP, TNC, UHF, etc
- Frequency: up to 110GHz



Test cable assemblies

- From durable to VNA high precision series, many kinds of adapters, meet all the requirements of switching test
- Frequency: up to 110GHz
- Application: network analyzer test, RF conductor test, mobile phone production line test



RF test probes

- Multi-channel series
- Customization series
- Reliable quality

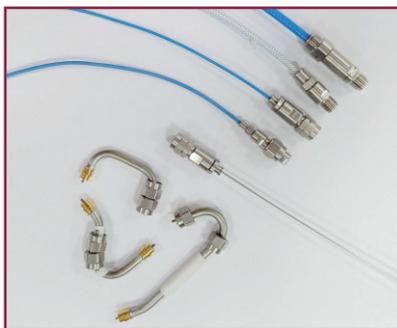


RF coaxial cable

- Main products: high frequency cable, amplitude and phase stable cable and test Railway cable etc.
- Frequency: 18GHz, 40GHz, 67GHz to 110GHz
- Support customization



SLK PRODUCTS LIST



RF Cable assemblies

- Phase match & Stable
- Hybrid & Microwave
- Flexible
- Semi-flex and Semi-rigid
- Corrugated



Custom wiring harness

- Medical
- Semi-conductor
- Aerospace
- Automotive
- Industrial



Industrial/military/mixed connector

- MIL -DTL- 38999 series connector
- MS hybrid module combination connector
- Industrial connectors: M12 and M16, etc
- Push and pull self-locking connector



Transient EM Pulse Protection

- DC PASS, DC Block, and TEMP comprehensive protection solutions
- Features: SLK TEMP protection core technology
- Applications: rail transit, radar, aircraft, military, wireless communications etc



SLX[®]



APPENDIX

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Provide The Most Effective Interconnect Solutions

High Speed Signal Test (Including Optical Module)

Products And Solutions

Superlink can provide products and solutions in the field of high speed signal testing, used to test the impedance, return loss, attenuation, eye Diagram, error code, Time delay and other S parameters.

SPC Test Cable

Superlink is one of the few vertical integration ability in world , We have connector & cable with intellectual property rights, innovation design, production and processing ability, high precision assembly, precision welding process, to provide customers with high performance, high reliable products.



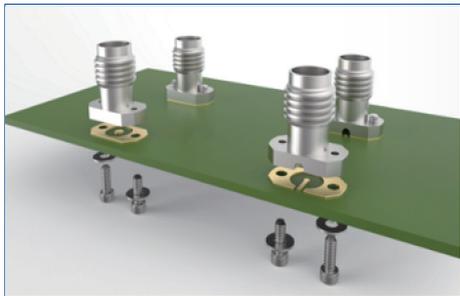
Test Leads

The self-innovated NBEND series can compete with the TFLEX series Mutiflex cable. Stable amplitude and phase, high cost performance,



PCB Solderless Connector

Vertical/End Launch RF Connector, HFSS simulation, support microstrip, coplanar waveguide, stripline RF PCB.

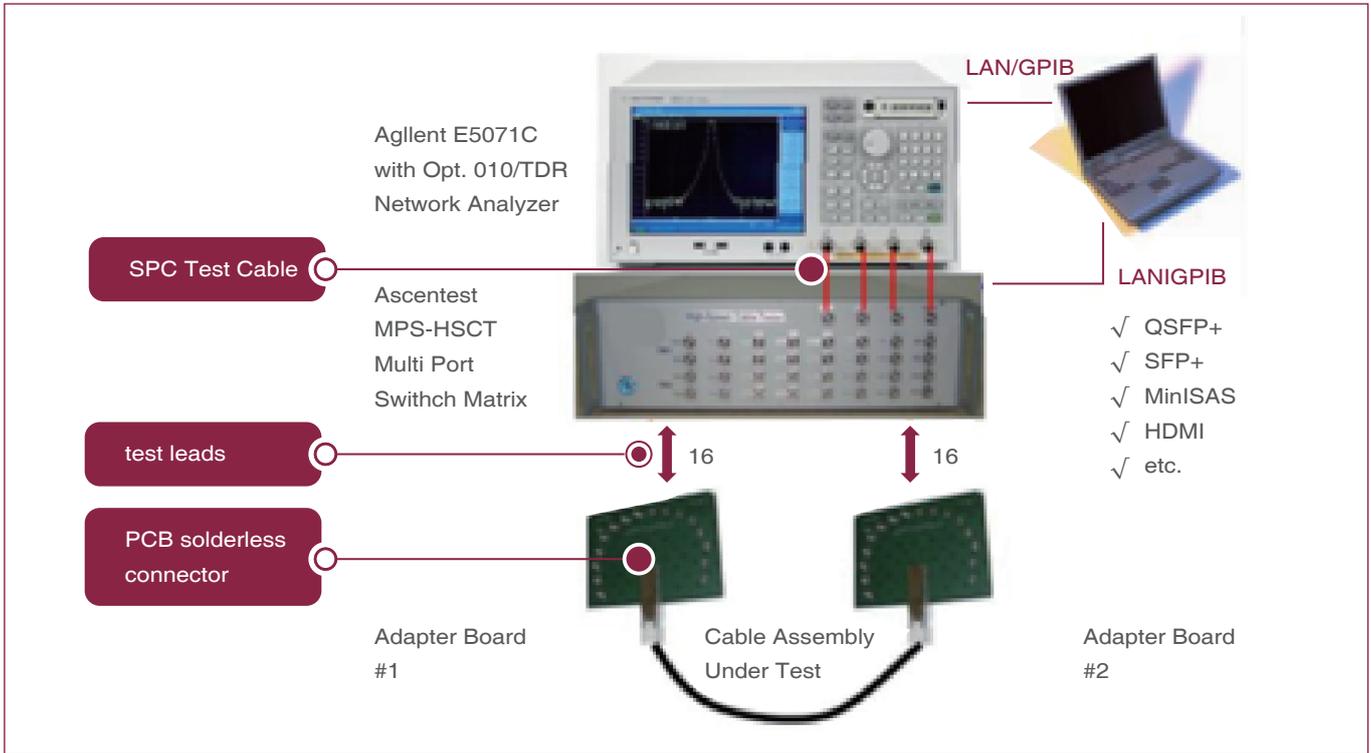


MRT Multi-channel Connector

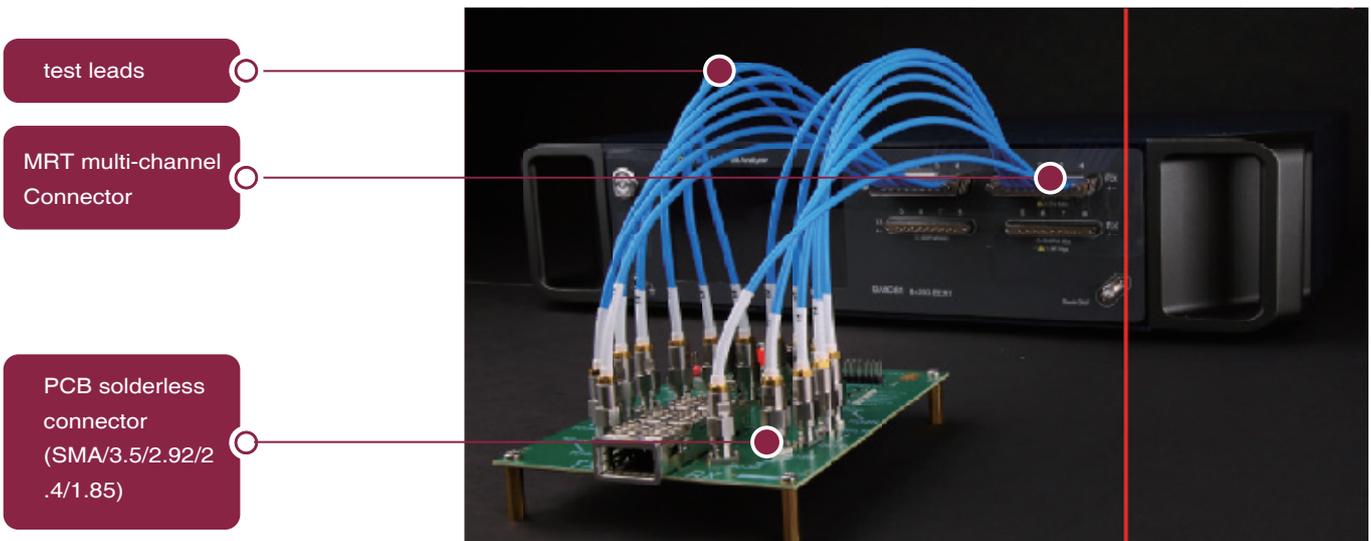
Self-developed innovative solution for high-speed signal testing, MRT multi-channel connector, frequency up to 67GHz; 1X4;2X4;1X8;2X8 standard series, solderless type, good isolation, low delay, return loss is better than competing products, can also be customized for customers



High Speed Signal Test Scenario



High-speed signal (DAC) test solution (SFP+/QSFP+/ QSFP-DD)



optical module test solution (SFP+/QSFP+/ QSFP-DD)

Product Introduction- SPC Test Cable

The interconnection between the measured parts (mainly passive devices) and the test equipment is applied in the laboratory environment.

The general requirements are steady amplitude and steady phase, low VSWR, repetitive operation, durability and other characteristics.



Product models number begin with VA

VA Series(with armor)

Up to 110GHz,
Benchmarking with Phase Flex Series (CX/CN)
The test life is more than 10000 times

Product models number begin with KN/K

KN Series (without armor)

K Series (with armor)

Up to 26.5 GHz,
Benchmark with Silverline Series;
KN test life is more than 10000 times
K series test life is more than 5000 times

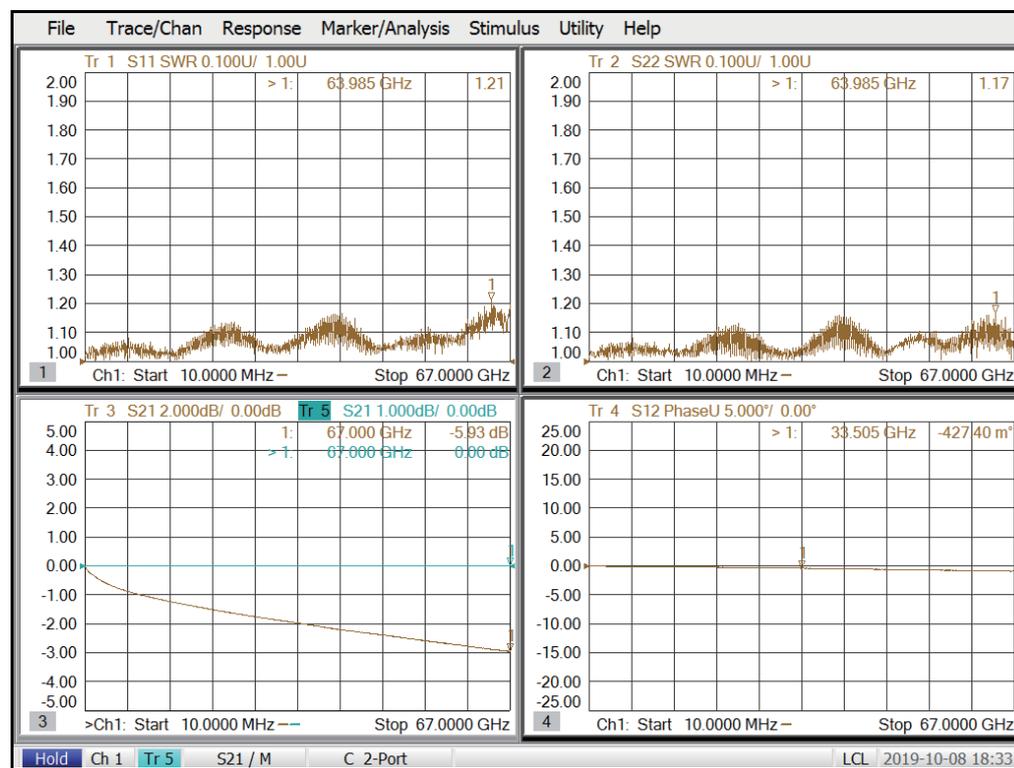


Product Introduction-SPC Test Cable

VA Products Feature:

1. Up to 110 GHz
2. Good bending flexibility
3. Stable amplitude and phase
4. Life up to 10,000 times

VA67 Test Result



VA Typical Specifications

VA (with armor)	VA26	VA40	VA50	VA67	VA110
MAX. Frequency	26.5GHz	40GHz	50GHz	67GHz	110GHz
recommend connector	SMA	2.92mm	2.4mm	1.85mm	1.0mm
armor diameter (mm)		6.0		5.0	4.0
Min. bending radius, static(mm)		25			17
Min. bending radius, repeated(mm)		60			25
Typical VSWR	1.12	1.2	1.22	1.25	1.30
MAX. VSWR	1.30	1.30	1.30	1.35	1.45
Typical Insertion Loss(dB/M)	2.34	2.91	3.28	6.02	13.8
Typical Phase Stability (degree)	±2°	±2.5°	±3°	±3°	±5°
MAX. Phase Stability (degree)	±5°	±5°	±6°	±5°	±8°
Typical Amplitude Stability (dB)	±0.02	±0.02	±0.03	±0.03	±0.05
MAX. Amplitude Stability (dB)	±0.05dB	±0.05dB	±0.05dB	±0.05dB	±0.10dB
Typical Flex Cycles		10000			

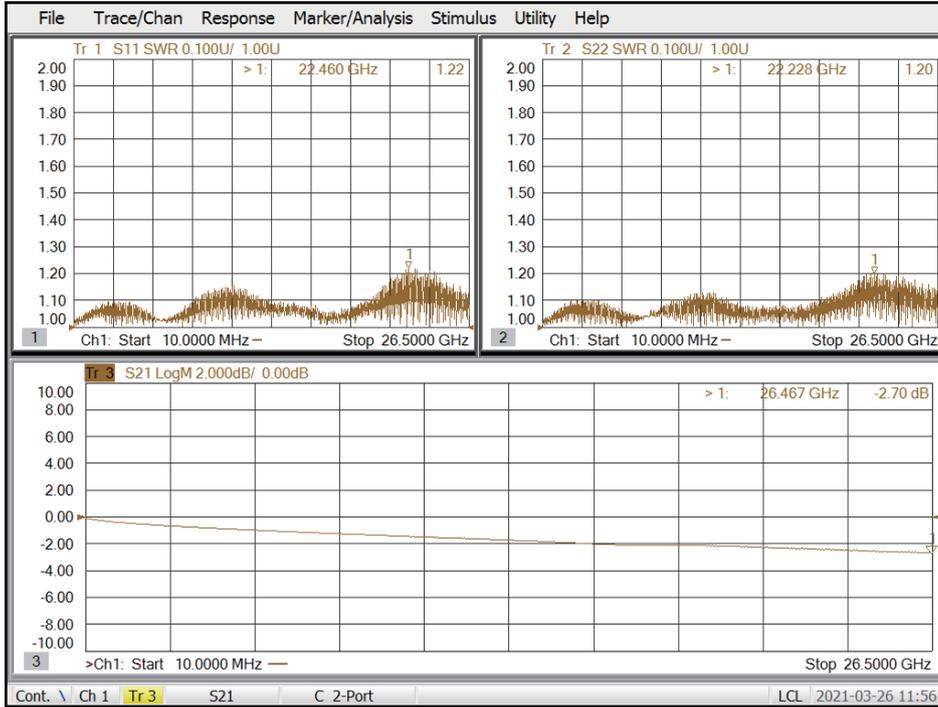
When bent ± 90° at a radius that is twice the minimum repeated bend radius, test assembly performs reliably through the stated flex cycles.

Product Introduction-SPC Test Cable

K Series Product Feature:

1. Up to 26.5GHz
2. Good bending flexibility
3. Stable amplitude and phase
4. Life up to 10,000 times

K Test Result



K Typical Specifications

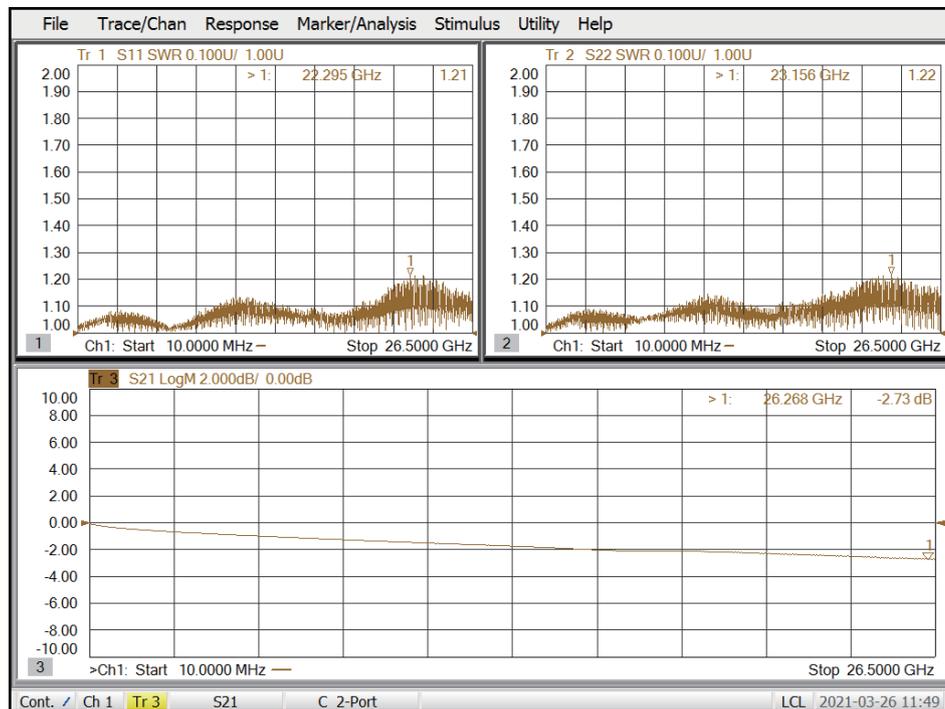
K(with armor)		
PVC ARMOR Diameter(mm)		11.0
PUR ARMOR Diameter(mm)		10.2
Stainless Steel ARMOR Diameter(mm)		10.0
Min. bending radius, static(mm)		54
Min. bending radius, repeated(mm)		108
MAX. Frequency(GHz)	18GHz	26.5HGz
recommend connector type	SMA / N	SMA / 3.5mm
Typical VSWR	1.15	1.25
MAX. VSWR	1.20	1.30
Typical Insertion Loss(dB/M)	2.24	2.90
Typical Phase Stability (degree)	±3°	±5°
MAX. Phase Stability (degree)	±5°	±8°
Typical Amplitude Stability (dB)	±0.05	±0.07
MAX. Amplitude Stability (dB)	±0.08dB	±0.10dB
Typical Flex Cycles	10000	
When bent ± 90° at a radius that is twice the minimum repeated bend radius, test assembly performs reliably through the stated flex cycles.		

Product Introduction-SPC Test Cable

KN Series Product Feature:

1. Up to 26.5GHz;
2. Good bending flexibility;
3. Stable amplitude and phase;
4. High performance-price ratio

KN Test Result



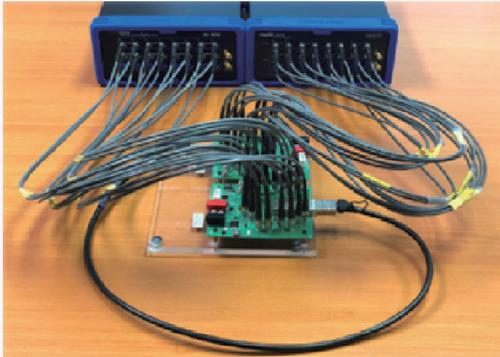
KN Typical Specifications

KN (without armor)		
diameter (mm)	4.9	
Min. bending radius, static(mm))	20	
Min. bending radius, static(mm)	50	
MAX. Frequency	18GHz	26.5GHz
recommend connector	SMA / N	SMA / 3.5mm
Typical VSWR	1.15	1.25
MAX. VSWR	1.20	1.30
Typical Insertion Loss(dB/M))	2.24	2.90
Typical Phase Stability (degree)	±3°	±5°
MAX. Phase Stability (degree)	±5°	±8°
Typical Amplitude Stability (dB)	±0.05	±0.07
MAX. Amplitude Stability (dB)	±0.08dB	±0.10dB
Typical Flex Cycles	5000	

When bent ± 90° at a radius that is twice the minimum repeated bend radius, test assembly performs reliably through the stated flex cycles.

Product Introduction-Test Leads

Used for interconnection between RF port of high speed signal PCB test fixture and test instrument, or interconnection of test system



Product Features:

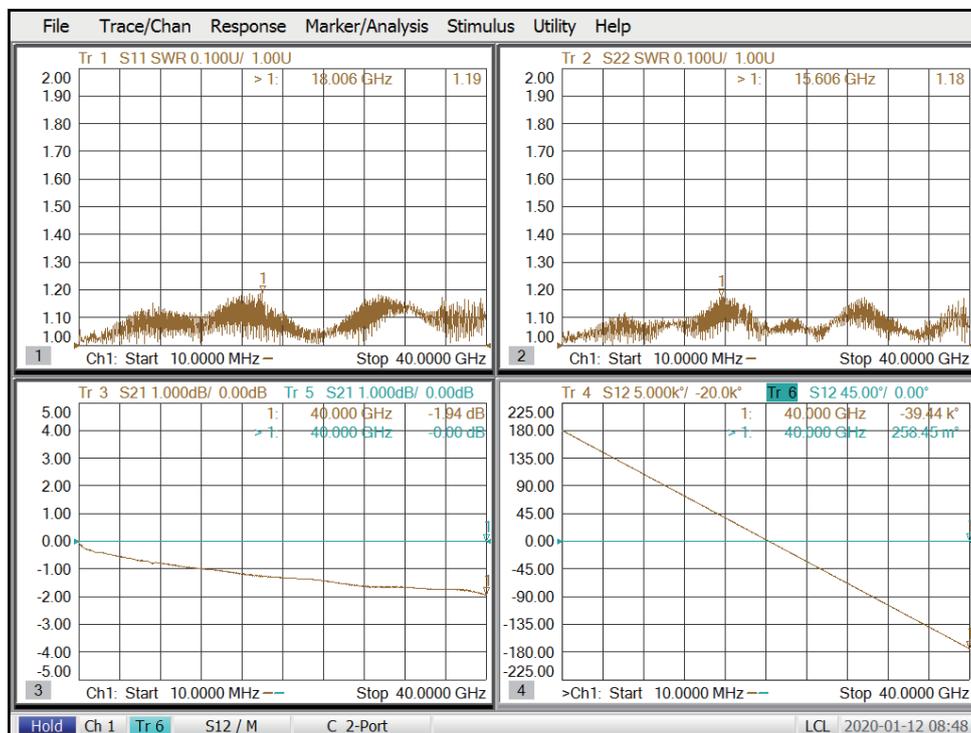
- Frequency: up to 67GHz
- Bending phase (typical/maximum) $\pm 2/\pm 5^\circ$
- Bending stability (typical/maximum) $\pm 0.03/\pm 0.10\text{dB}$
- Low loss 2.8dB/m @26.5GHz Nbend400)
- Low VSWR $< 1.2@40\text{GHz}$; $< 1.3@67\text{GHz}$



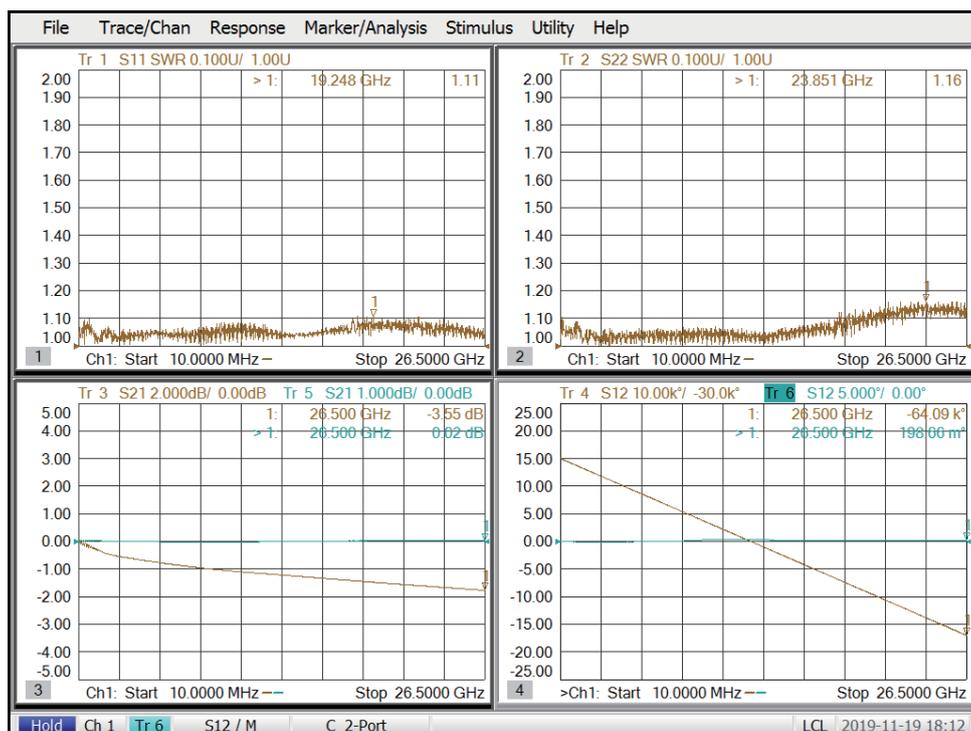
	Cable Type	TLL series	TLH series	Roadmap
Type	F(GHz)	26.5GHz	40GHz	
SMA Male	26.5	√	√	
SMA Female	26.5	√	√	
3.5mm Male	26.5	√	√	
3.5mm Female	26.5	√	√	
2.92mm Male	40		√	
2.92mm R/A Male	40		√	
2.92mm Female	40		√	
2.4mm Male	50			Roadmap(21Q4)
2.4mm Female	50			Roadmap(21Q4)
1.85mm Male	60/70			Roadmap(21Q4)
1.85mm Female	60/70			Roadmap(21Q4)

Product Introduction-Test Leads

TLH Series Test Result

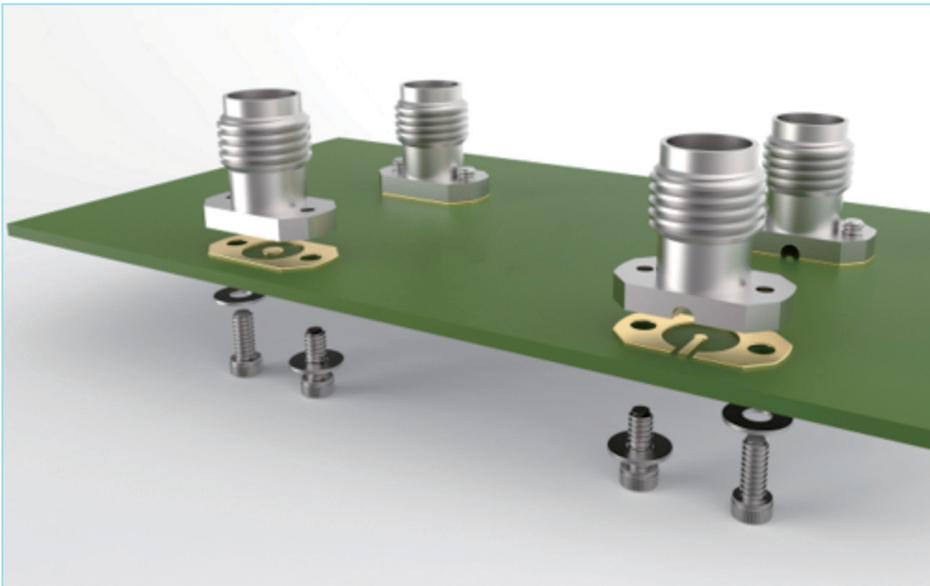


TLL Series Test Result



Note: Compared with the similar competing products (T-Flex-405/402/047, mutiflex series), the TLL, TLH series test leads has better bending resistance and stable amplitude and steady phase index

Product Introduction - PCB Solderless Connector

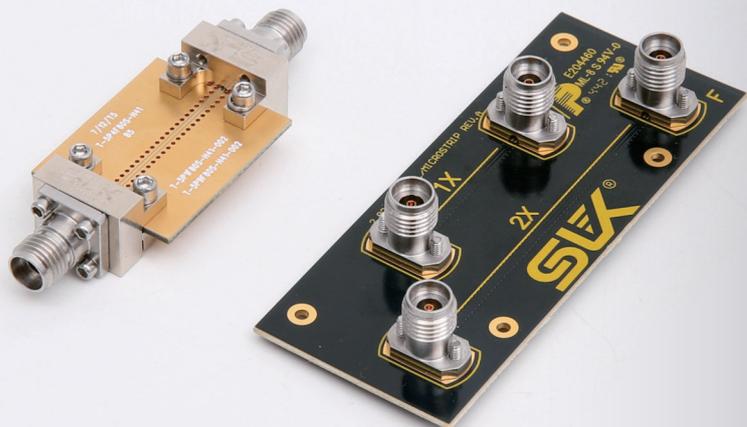


Applications:

- RF PCB signal test
- High speed digital signal test
- Stripe line, microstrip line, coplanar waveguide line signal testing.

Features:

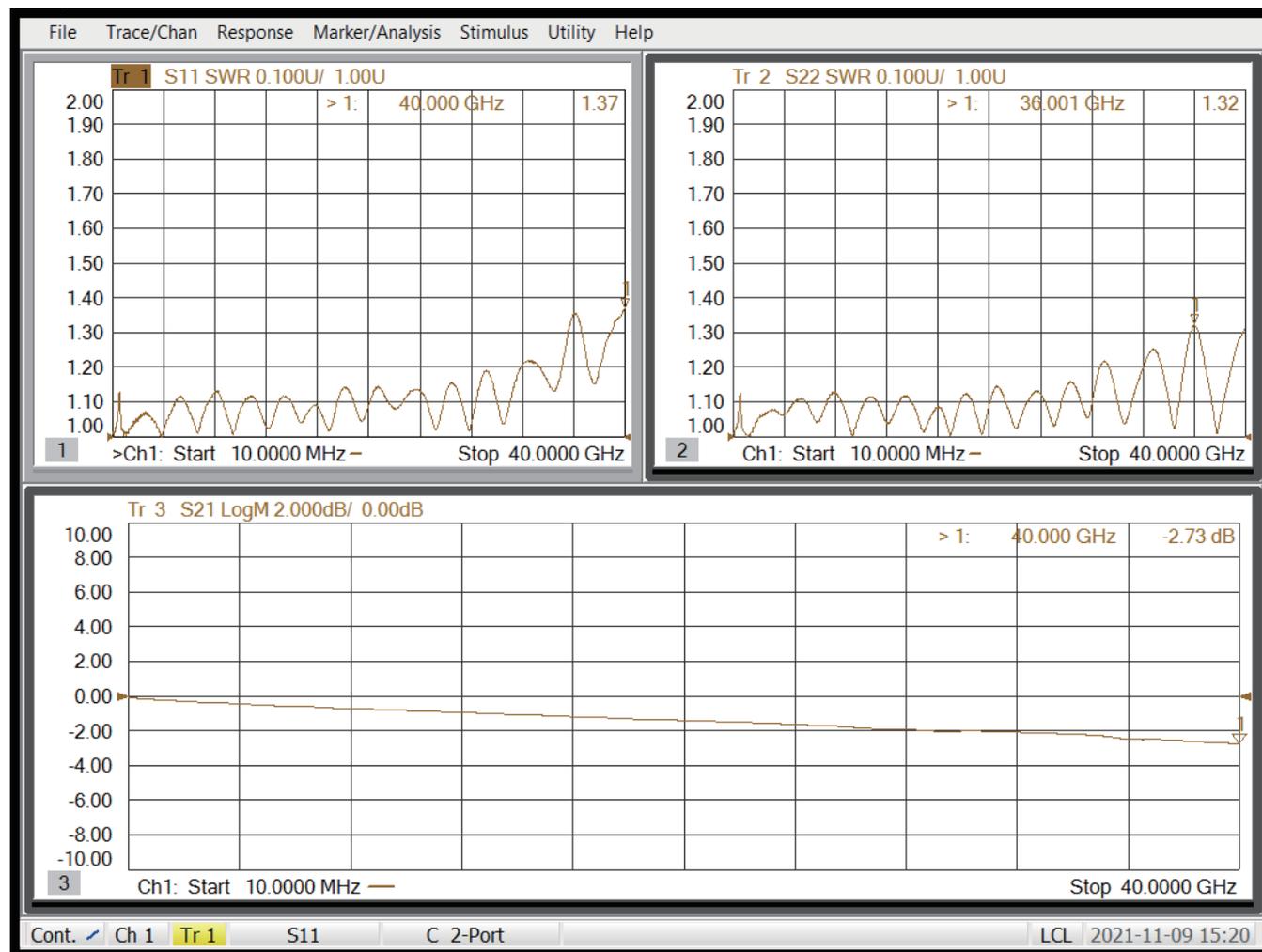
- Frequency up to 67GHz, Low VSWR, Low insertion loss;
- Solderless, simple installation, high efficiency test.
- Optional is Variety,
- SMA/2.92mm/2.4mm/1.85mm/1.35 mm;
- HFSS simulation optimization, can provide customers with simulation model and optimal footprint



Product Introduction- PCB Solderless Connector

Typical Product S Parameter DEMO Test

note:Based on industry experience, the VSWR of a single PCB connector is the square root of the test result of the carrier



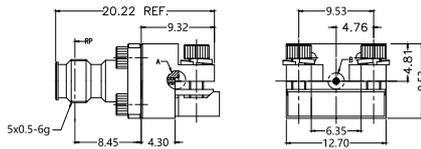
Typical Specification

Attributes	SMA		2.92mm		2.4mm		1.85mm	
	PLU	JAC	PLU	JAC	PLU	JAC	PLU	JACK
Frequency	G	26.5GK	G	40G K	G	50G K	G	67G
Impetance	50Ω(typical)							
Insertion loss	0.05√F		0.05√F		0.05√F		0.05√F	
VSWR typical /maximum	1.2		1.3		1.3		1.4	

Product Introduction

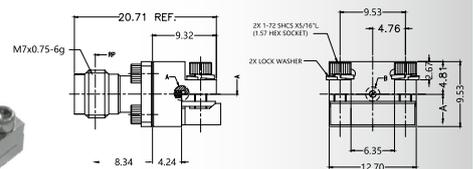
End Launch Connector

End Launch Connector



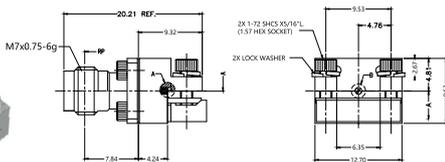
SLK P/N: T-5T2F80S-H41
 VSWR: <1.40(DC~67GHz)
 <1.45(36~90GHz)

End Launch Connector



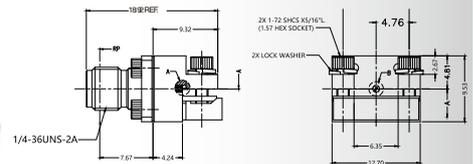
SLK P/N: T-5P1F80S-H41-002
 VSWR: <1.40(DC~67GHz)

End Launch Connector



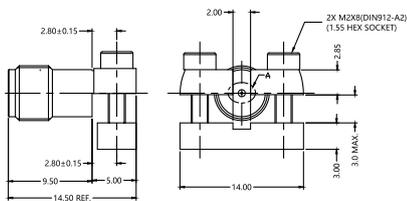
SLK P/N: T-5P4F80S-H41
 VSWR: <1.40(DC~50GHz)

End Launch Connector



SLK P/N: T-5P9F80S-H41-002
 VSWR: <1.30(DC~40GHz)

End Launch Connector



SLK P/N: 5P9F28S-P21-003
 VSWR: <1.50(DC~40GHz)

SLK RF Test Probe

Vertical Launch Connector

Vertical Launch Connector

SLK P/N: 5P1F87S-H21-001
 VSWR: <1.30(DC-67GHz)

Vertical Launch Connector

SLK P/N: 5P4F85S-H21-002
 VSWR: <1.30(DC-50GHz)

Vertical Launch Connector

SLK P/N: 5P9F25S-H21
 VSWR: <1.30(DC-40GHz)

Vertical Launch Connector

SLK P/N: 5MAF87S-H21-003
 VSWR: <1.3 (DC-27GHz)

Product Introduction- MRT Multichannel Connector

Application:

1. Automatic test equipment;
2. High-speed signal test and measurement field;
3. High-speed digital chip verification test
4. Laser module testing.



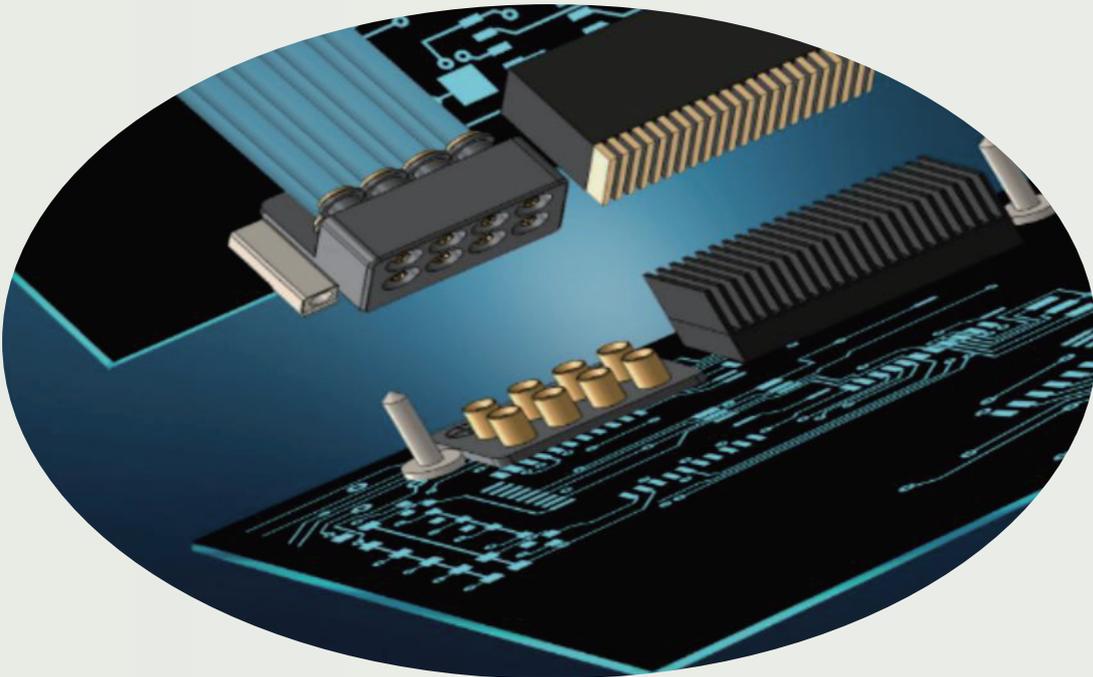
Features:

1. No soldering, simple installation, high efficiency testing;
2. High density pitch (2.54mm/ 4mm optional), 1X4, 2X4, 1X8,2X8 standard products;
3. High repeatability;
4. Match for .047 cable or 086 cable;
5. Frequency up to 67GHz, support 112Gbps high-speed signal test;
6. Each cable time delay is less than 2ps;
7. HFSS signal simulation optimization, VSWR excellent performance;
8. Compared with competing product, has high performance-price ratio

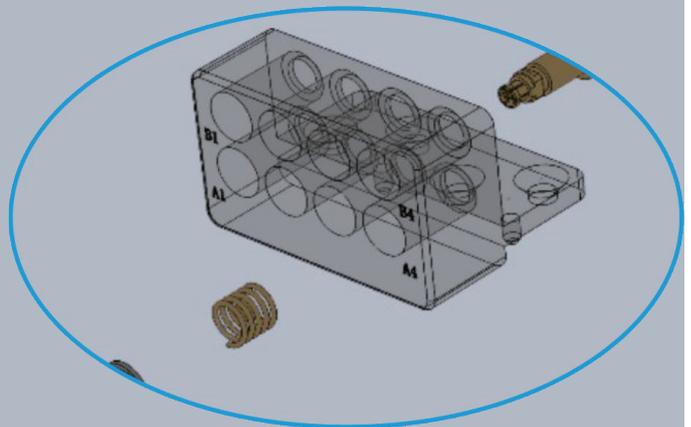
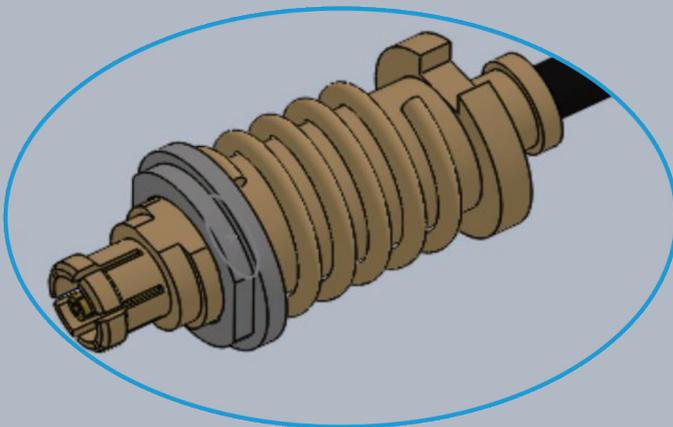


Product Introduction - MRT Multichannel Connector

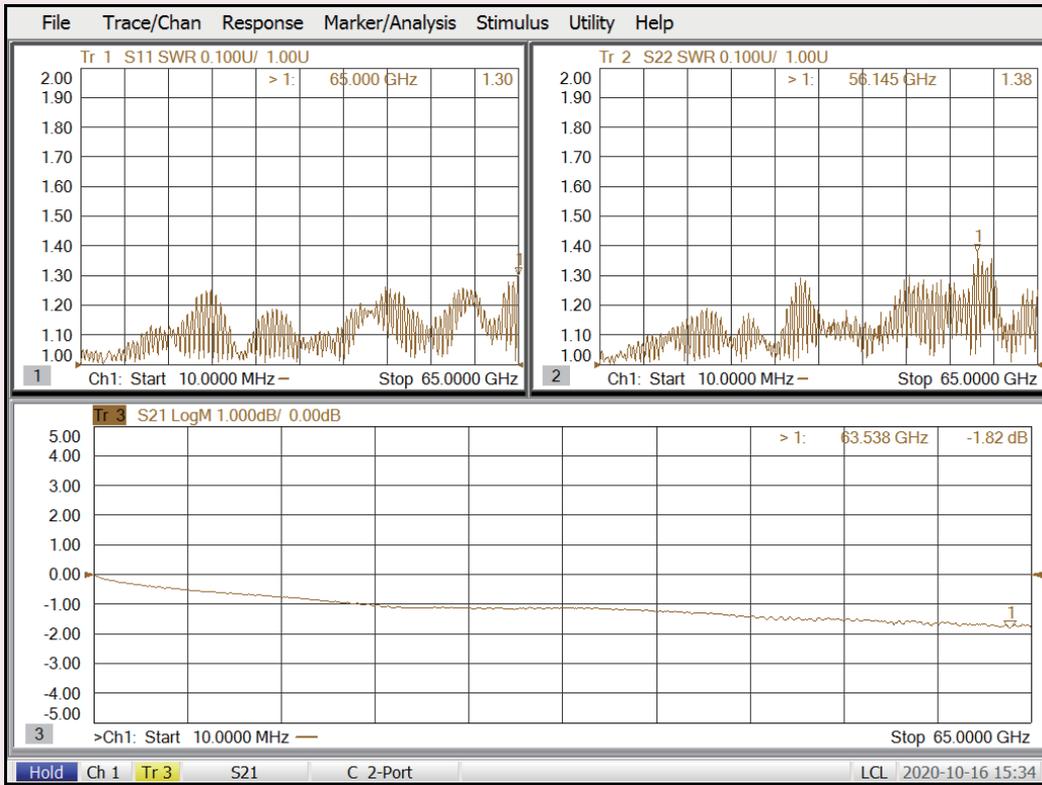
Mixed with power , signal
and others interfaces



Single channel removable



S Parameter Test Result



Eye Diagram Test Result





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