



SHENZHEN SUPERLINK TECHNOLOGY CO.,LTD.

Address: NO.11,The 5th Industrial Park,Xiacun,Gongming
Guangming District,Shenzhen,Guangdong,China,518106

Website: www.slkcorp.com

E-mail: sales@slkcorp.com

T: +86 755-89814648

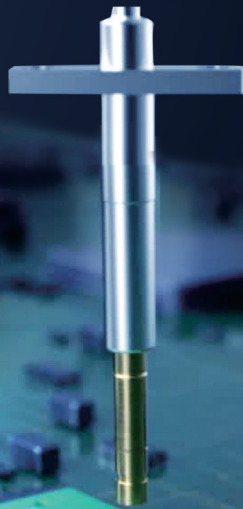
F: +86 755-29892599





RF TEST SOLUTION

Automation Production 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

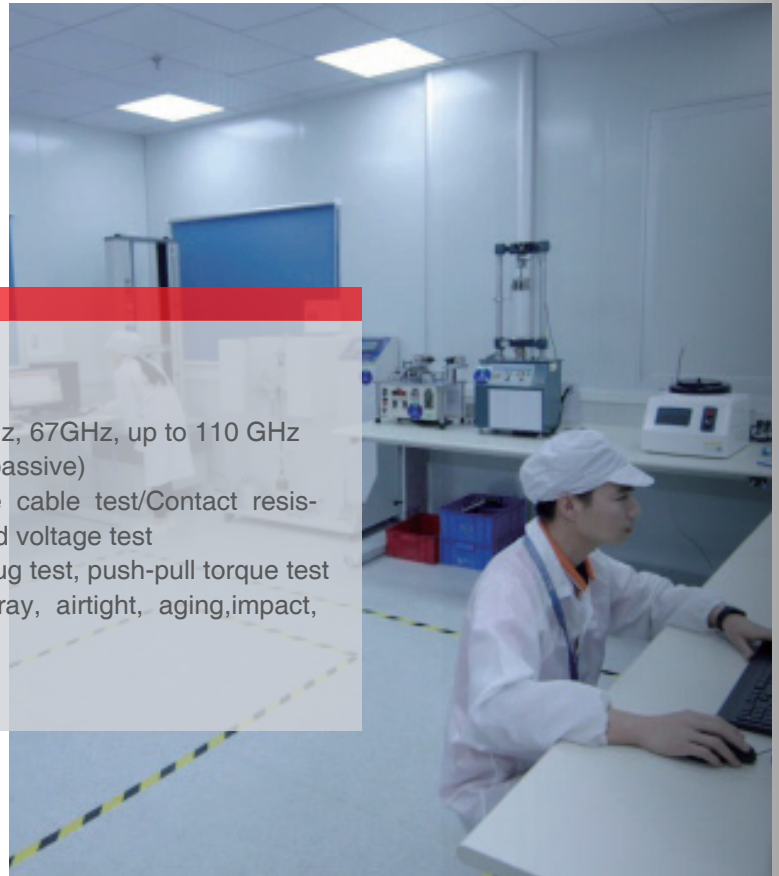
- Became a member of China Electronic Components Association

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

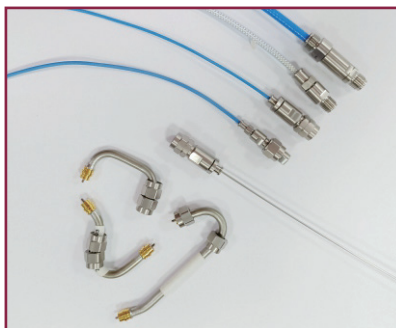
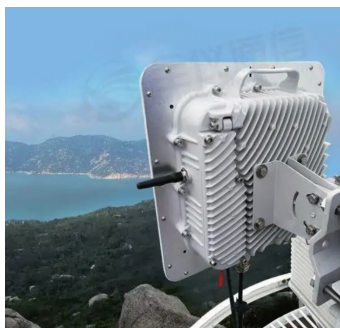


RF coaxial cable

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

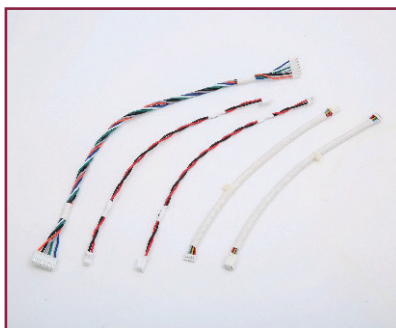


SLK PRODUCTS LIST



RF Cable assemblies

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



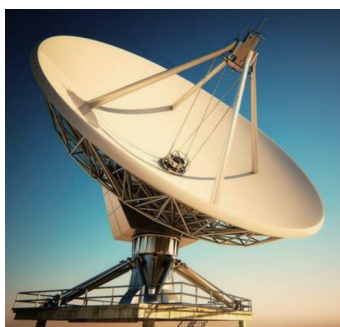
Custom wiring harness

- 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



APPENDIX

Company Profile	01
Intelligent Device RF Testing Solution	11
Intelligent terminal RF test scenario	12
Products introduction	14
RF Probe Test Result	14
Test leads	23
Multi-Channel RF BTB Test Solution	25

Provide The Most Effective Interconnect Solutions

Intelligent Device RF Testing Solution >>>

SLK provides various micro RF SW test probes, micro RF socket test probes, multi-channel RF BTB connector test probes for mobile phones and intelligent devices.

Intelligent Terminal RF Test

Product and solutions

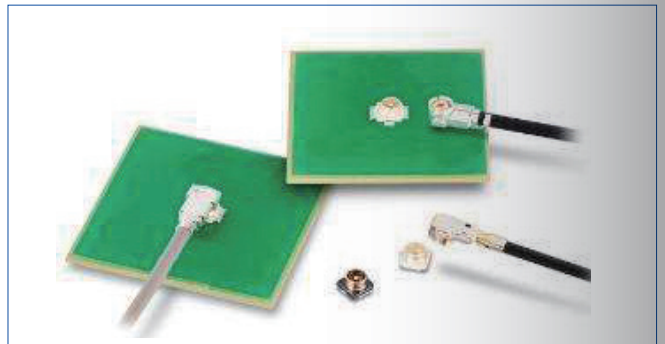
RF SW Test probe & calibration adapter

From the 1st generation to the 6th generation, covering the major manufacturers, we can quickly provide cost-effective products and solutions. Adapters, test leads, calibration gauges, etc.



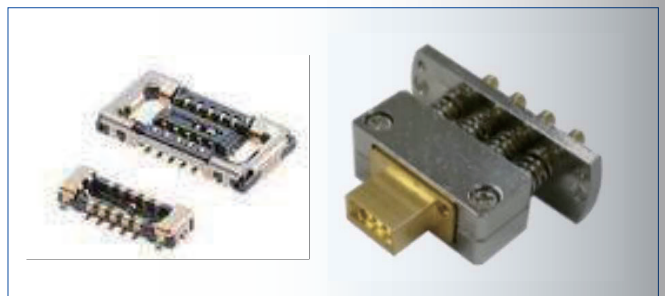
RF test probe

Mini RF receptacle and RF SW structure is different, we can provide strong compatibility of test products and solutions.



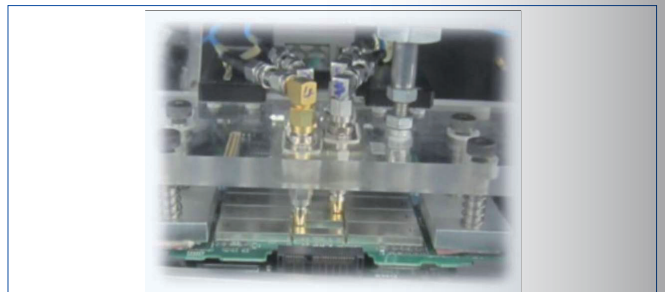
RF BTB microsocket test probe

Our unique and innovative RF BTB test probe solution can be customized for customers.



Test leads

It is recommended that the customer adopt TEFLEX RG405 test lead, which corresponds to our model NBEND400/260/180. The interface is customizable.



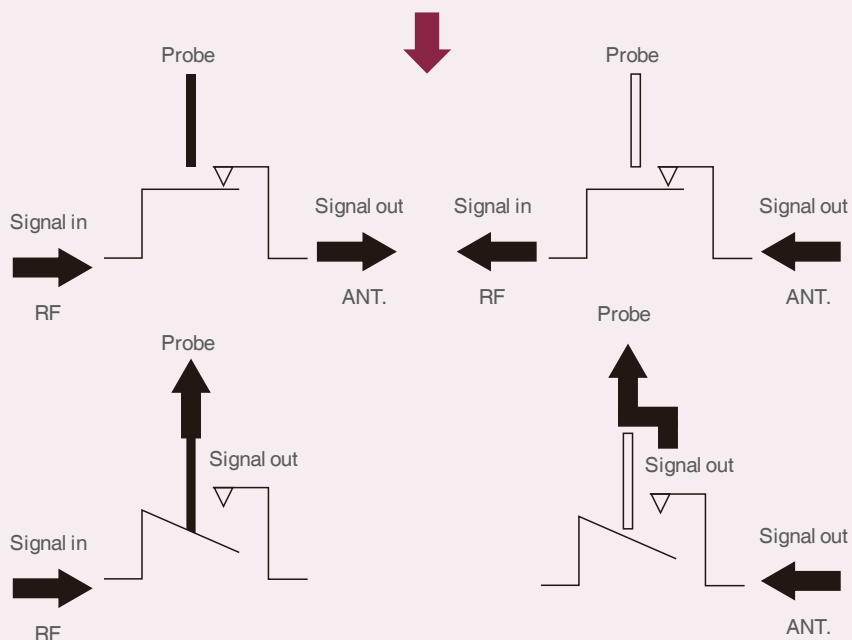
Intelligent Device RF Testing Solution

Application:

1. WiFi, NFC, RFID, GPS, Bluetooth and other communication module testing;
2. Automatic test of 4G/5G communication RF modules and smart phones.

<p>Scenario 1: WiFi/GPS module for electronic products</p>	<p>Scenario 2: Smart mobile terminal mass production line</p>	<p>Scenario 3: Smart Terminal Product Antenna Test</p>

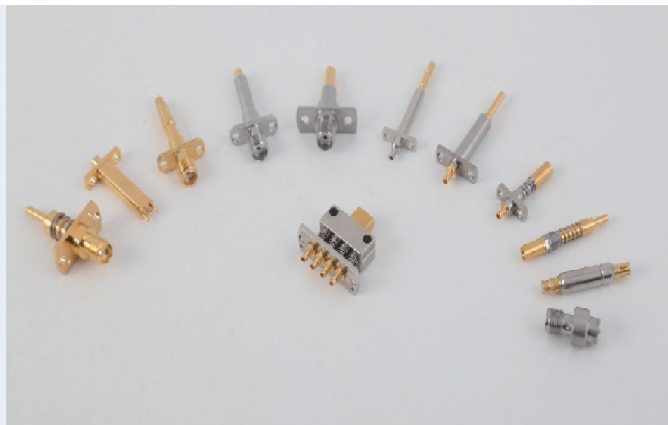
Schematic Diagram



Main tested end: RF connector interface with switch SWG,SWH,SWJ,MS-156,MS-180 &RF BTB....

RF Receptacle And RF SW Test Solutions

RF SW Roadmap	Receptacle	Test Diame-
Generation I	3.0*3.0*1.75mm	≤2.1mm
Generation II	2.5*2.5*1.4mm	≤2.1mm
Generation III	2.0*2.0*0.9mm	≤1.35mm
Generation IV	1.8*1.8*0.85mm	≤1.2mm
Generation V	1.6*1.6*0.7mm	≤1.1mm
Generation VI	1.4*1.2*0.65mm	≤1.0mm



Tips:

Major RF receptacle (U.fl) and switch (RF SW) suppliers have slightly different interface sizes, and each manufacturer does not accept the test results of matching. SUPERLINK can provide compatible RF test probe products and solutions, and can also customize the Calibration Adapter for users.

SLK RF Test Probe

Products List

		Type		
Interface	Series	Probe	Probe Calibration	Test leads
	SWG	√		
	SWH	√	√	√
	MS156	√	√	
	MS180	√		
	UFL 1	√		
	RF SWITCH 5	√		
	SWJ	√		

SWH Test Probe

SSMP male to SWH

SLK P/N: 5MPM06S-WHM
 VSWR: DC-3GHz <1.3
 3-6GHz <1.4

SSMP male to SWH(Floating)

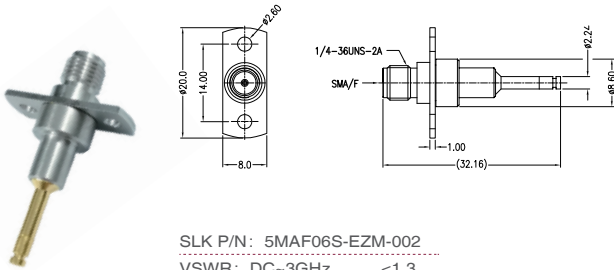
SLK P/N: 5MPM06S-WHM-001
 VSWR: DC-3GHz <1.3
 3-6GHz <1.4

DUT SWH (Only referece not SLK product)

SLK RF Test Probe

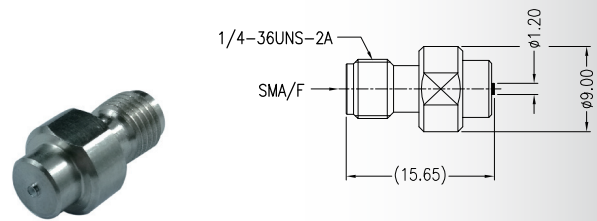
MS180 Test probe

SMA female to MS180 male



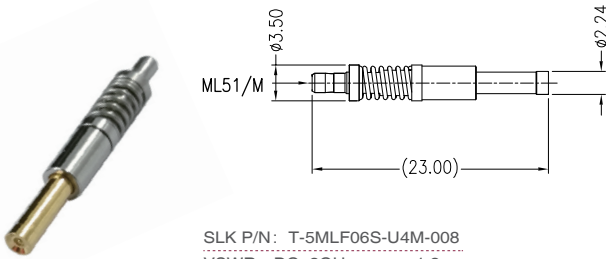
SLK P/N: 5MAF06S-EZM-002
 VSWR: DC-3GHz <1.3
 3-6GHz <1.4

SMA female to MS180 male(probe adapter)



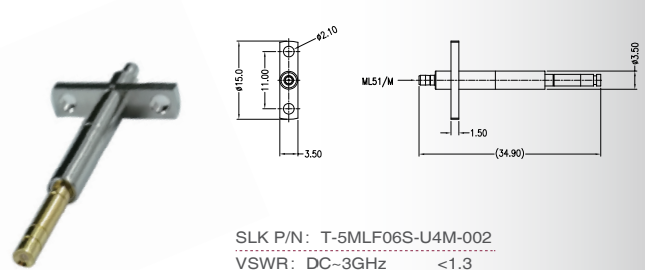
SLK P/N: 5MAF06S-MS180
 VSWR: DC-3GHz <1.3
 3-6GHz <1.4

ML 51 male to MS-180 male



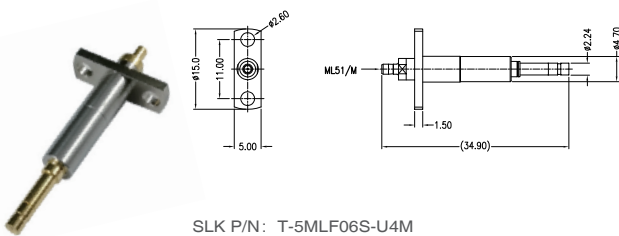
SLK P/N: T-5MLF06S-U4M-008
 VSWR: DC-3GHz <1.3
 3-6GHz <1.4

ML 51 male to MS-180 male



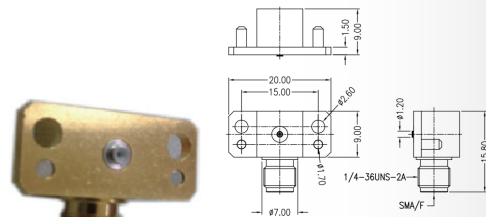
SLK P/N: T-5MLF06S-U4M-002
 VSWR: DC-3GHz <1.3
 3-6GHz <1.4

ML 51 male to MS-180 male



SLK P/N: T-5MLF06S-U4M
 VSWR: DC-3GHz <1.3
 3-6GHz <1.4

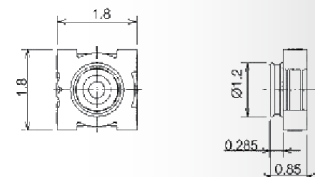
SMA female RA to MS-180



SLK P/N: 5MAF06S-QT0-002
 VSWR: DC-3GHz <1.3
 3-6GHz <1.4



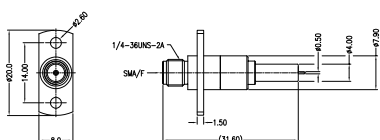
DUT:MS180(Only referece not SLK product)



SLK RF Test Probe

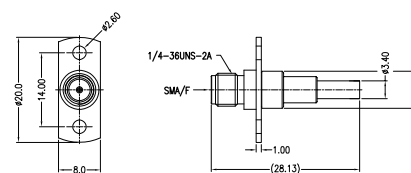
MS156 Test probe

SMA female to MS156C



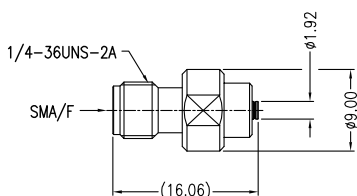
SLK P/N: 5MAF06S-UFM-025
 VSWR: DC-3GHz <1.3
 3-6GHz <1.4

SMA female to MS156C



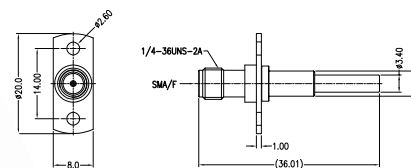
SLK P/N: 5MAF06S-EZM-008
 VSWR: DC-3GHz <1.3
 3-6GHz <1.4

SMA female to MS156C (probe adapter)



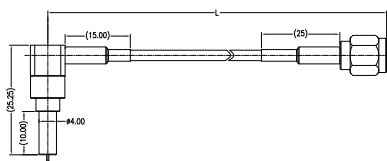
SLK P/N: 5MAF06S-MS156
 VSWR: DC-3GHz <1.3
 3-6GHz <1.4

SMA female to MS156C



SLK P/N: T-5EZM06S-MAF-007
 VSWR: DC-3GHz <1.3
 3-6GHz <1.4

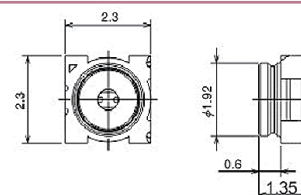
SMA female to MS156C male



SLK P/N: EZMRMAMS-240-XXXX-01
 VSWR: DC-3GHz <1.3
 3-6GHz <1.4



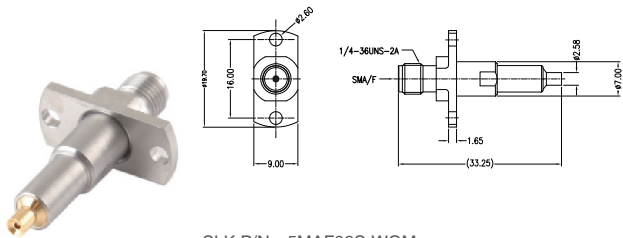
DUT MS156 (Only referece not SLK product)



SLK RF Test Probe

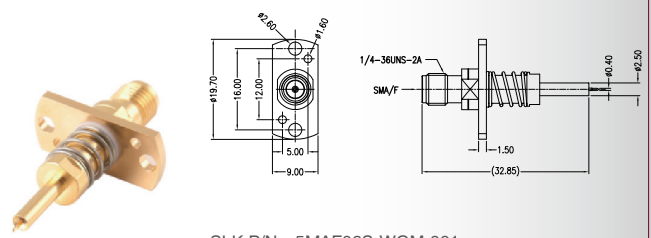
SWG Test Probe

SMA female to SWG



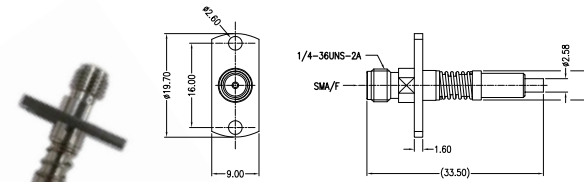
SLK P/N: 5MAF06S-WGM
 VSWR: DC-3GHz <1.3
 3-6GHz <1.4

SMA female to SWG(Floating)



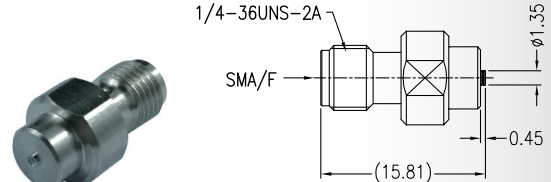
SLK P/N: 5MAF06S-WGM-001
 VSWR: DC-3GHz <1.3
 3-6GHz <1.4

SMA female to SWG



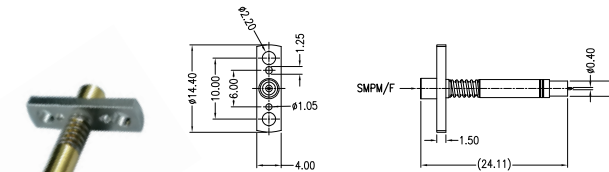
SLK P/N: T-5MAF06S-WGM-002
 VSWR: DC-3GHz <1.3
 3-6GHz <1.4

SMA female to SWG



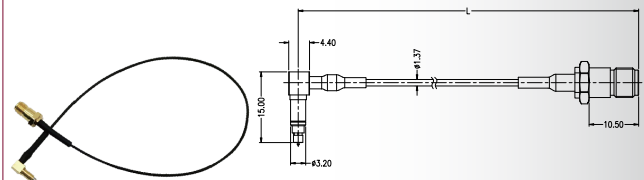
SLK P/N: T-5MAF06S-WGF
 VSWR: DC-3GHz <1.3
 3-6GHz <1.4

SSMP male to SWG



SLK P/N: 5EZM06S-MPF
 VSWR: DC-3GHz <1.3
 3-6GHz <1.4

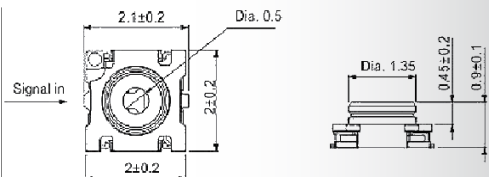
SSMP male to SWG



SLK P/N: T-MAFSWGMR077-XXXXXX
 VSWR: DC-8GHz <1.35



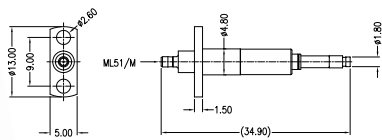
DUT: SWG (Only reference not SLK product)



SLK RF Test Probe

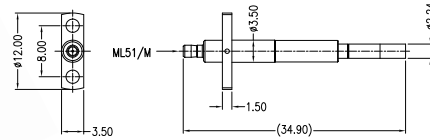
MI51 Male To RF SWITCH 5 Probe

MI51 male to RF SWITCH 5



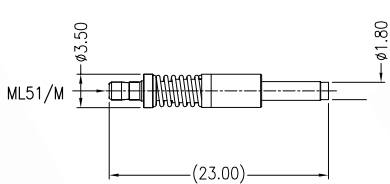
SLK P/N: 5MLF06S-U5M
 VSWR: DC-3GHz <1.3
 3-6GHz <1.4

MI51 male to RF SWITCH 5



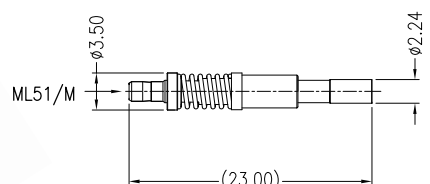
SLK P/N: T-5MLF06S-U5M-001
 VSWR: DC-3GHz <1.3
 3-6GHz <1.4

MI51 male to RF SWITCH 5



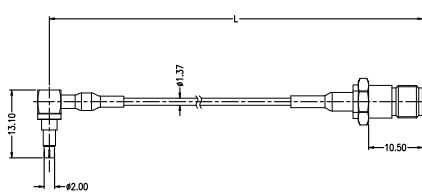
SLK P/N: T-5MLF06S-U5M-003
 VSWR: DC-3GHz <1.3
 3-6GHz <1.4

MI51 male to RF SWITCH 5

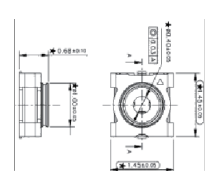


SLK P/N: T-5MLF06S-U5M-004
 VSWR: DC-3GHz <1.3
 3-6GHz <1.4

MI51 male to RF SWITCH 5



SLK P/N: T-MAFSFMR077-XXXXXX
 VSWR: DC-8GHz <1.35

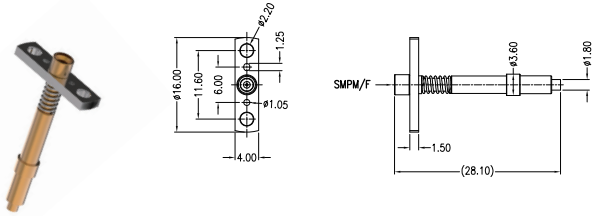


DUT:RF SWITCH 5 (Only referece not SLK product)

SLK RF test probe

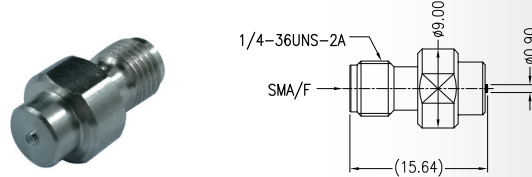
SWJ Probe

SSMP male to SWH male



SLK P/N: 5MPM06S-WHM-001
 VSWR: DC~3GHz <1.3
 3~6GHz <1.4

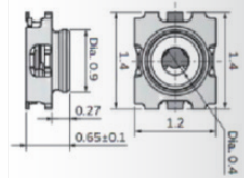
SMA female to SWG



SLK P/N: T-5MAF06S-SJM
 VSWR: DC~3GHz <1.3
 3~6GHz <1.4

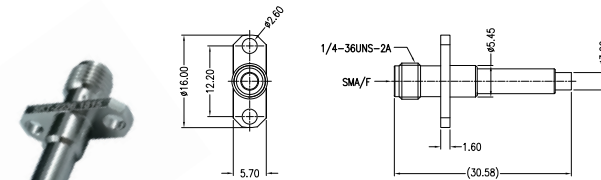


DUT Murata SWJ Switch (Only referece not SLK product)



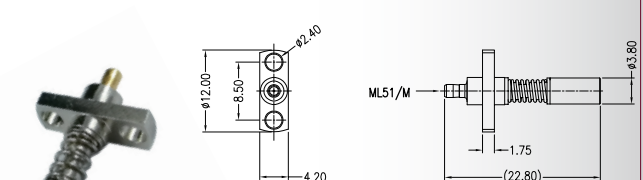
SWJ Probe

SMA female to UFL



SLK P/N: 5MAF06S-UFM-020
 VSWR: DC~3GHz <1.3
 3~6GHz <1.4

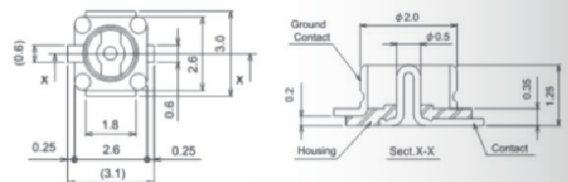
MI51 female to UFL



SLK P/N: 5EZM06S-UFM
 VSWR: DC~3GHz <1.3
 3~6GHz <1.4



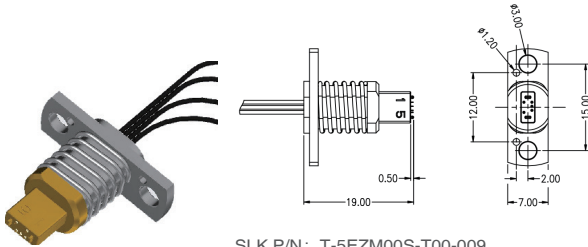
DUT UFL Gen1 Receptacle(Only referece not SLK product)



SLK RF Test Probe

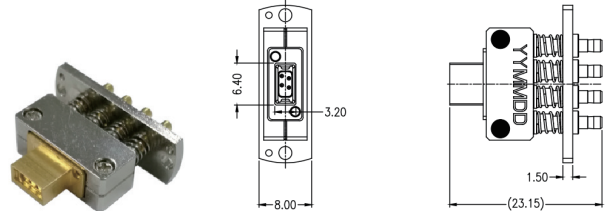
MI51 Male To BTB Probe

MI51 male to BTB adapter



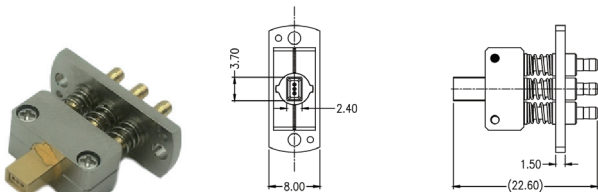
SLK P/N: T-5EZM00S-T00-009
VSWR: DC-6GHz <1.5

MI51 male to BTB adapter

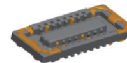


SLK P/N: T-5EZM00S-T00-009
VSWR: 3-6GHz <1.4

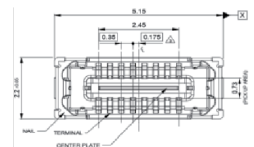
MI51 male to BTB adapter



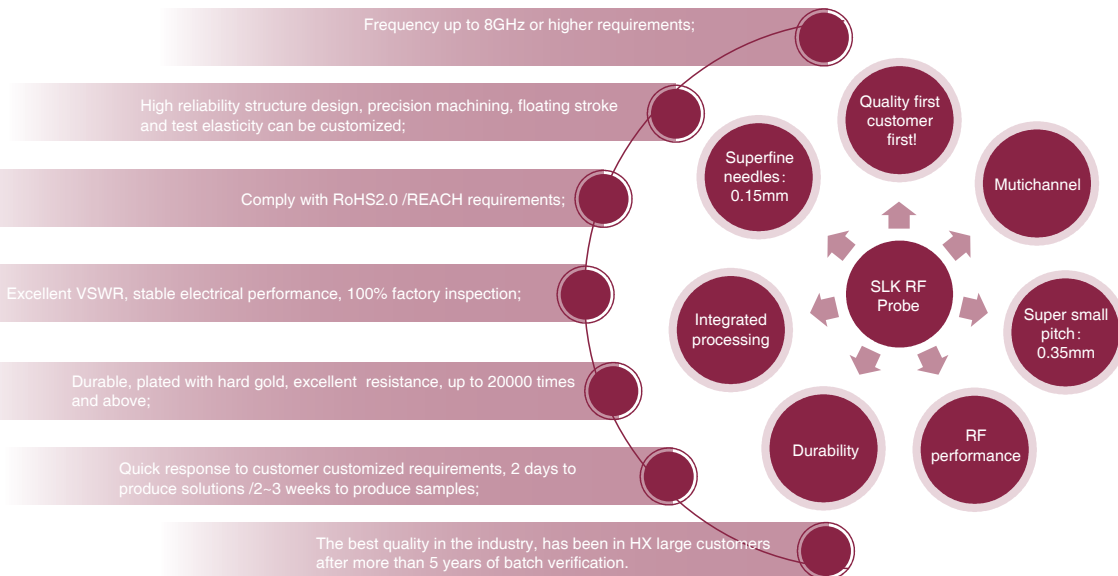
SLK P/N: T-5EZM00S-T00-008
VSWR: 0-6GHz <1.4



Multilayer connector-tested sample
(Only reference not SLK product)

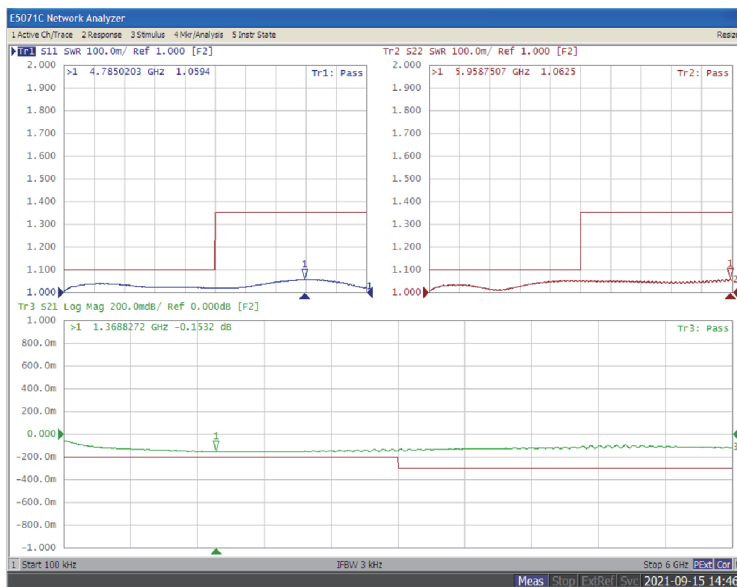


Product Introduction - Advantage of Superlink RF Probe Products

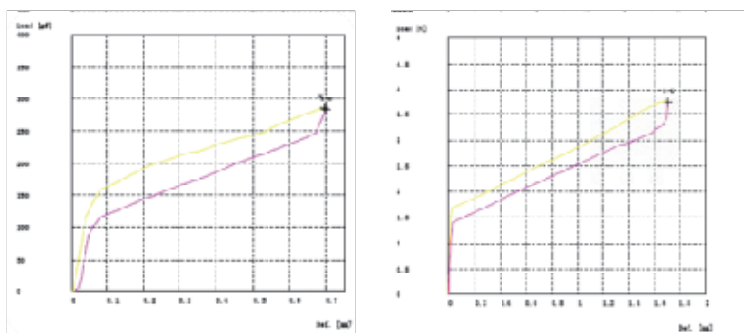


Product Introduction-SLK RF Probe Test Result

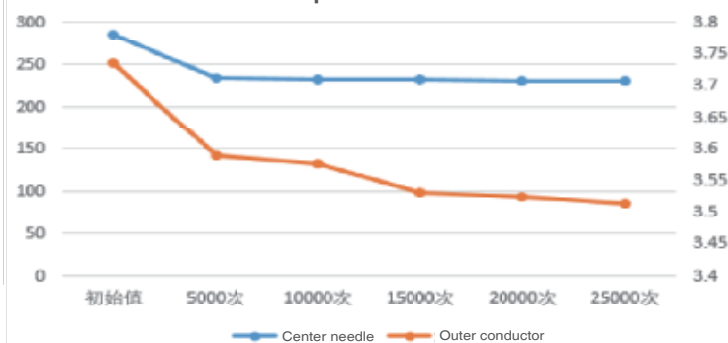
After the endurance test, the elastic values of the center pin and the outer conductor meet the specification requirements.



VSWR/IL Good Consistency



After the ultimate life test, the elastic values of the contact pin and outer conductor meet specification



Product Introduction-Benchmark Comparison

SLK(5EZM06S-MPF) and MM206417 have similar test indexes, and can be replaced equally.

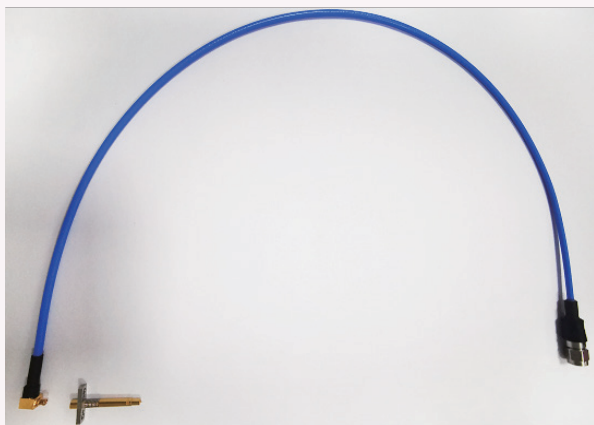
S/N	Parameter	Competing goods (SWG series)	SLK
1	Model	MM206417	5EZM06S-MPF
2	Overall Length	25.51	24.81
3	Flange hole spacing	10±0.1	10±0.1
4	Rated voltage	335V	335V
5	Characteristic impedance	50Ω	50Ω
6	Frequency range	DC~11GHz	DC~11GH
7	Operating temperature	-40~85℃	-40~85℃
Electrical performance parameter			
8	Insulation resistance	5000 MΩ	5000 MΩ
9	Contact resistance (inner conductor)	24	26
10	Contact resistance (outer conductor)	5.0	5.5
11	Standing wave ratio MAX (test in lab)	DC -3GHz 1.06 3GHz~6Ghz 1.08 6GHz~11Ghz 1.47	DC -3GHz 1.06 3GHz~6GHz 1.10 6GHz~11Ghz 1.28
12	Insertion loss MAX (test in lab)	DC -3GHz 0.25dB 3GHz~6GHz 0.28dB 6GHz~11Ghz 0.39dB	DC -3GHz 0.20dB 3GHz~11Ghz 0.21dB 6GHz~11Ghz 0.42dB
Mechanical performance parameter			
13	Frequency range	90±20gf	90±20gf
14	Working temperature	400±30gf	400+35\ -30gf

Product Introduction-Test leads

Used to connect test between PCBA baseband and chamber or chamber and radio tester.

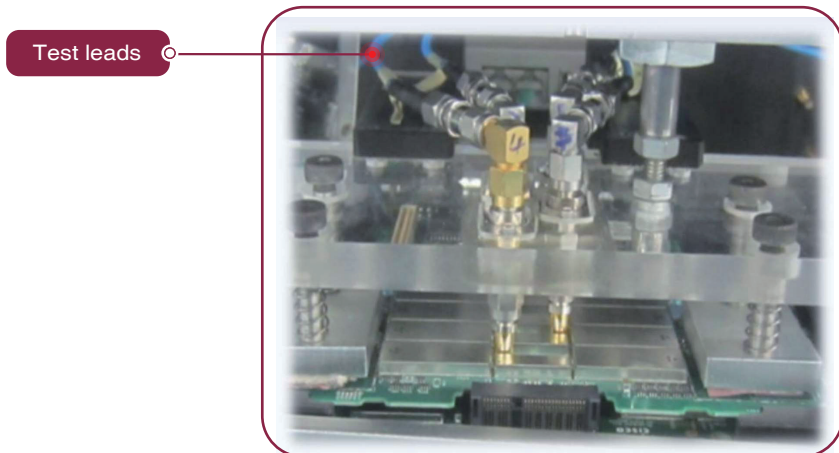
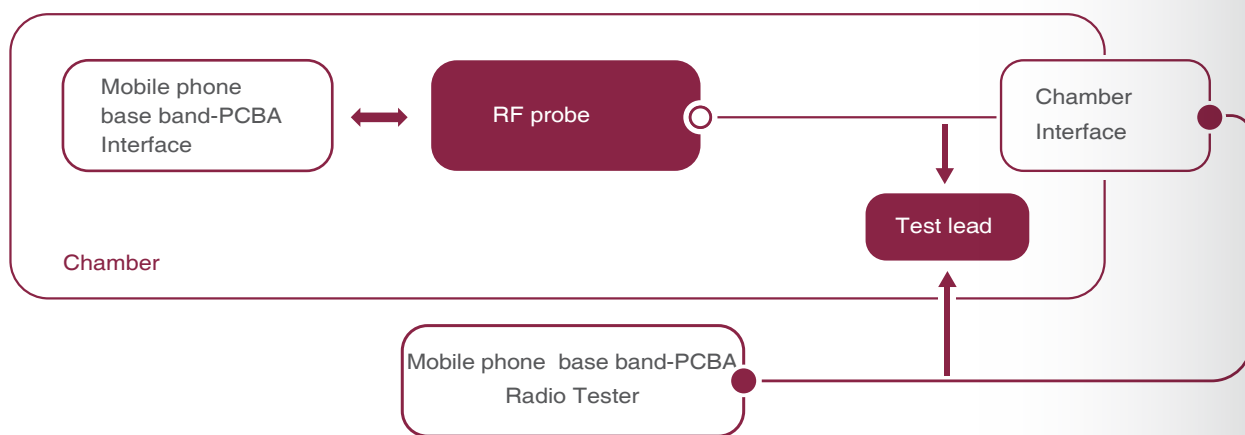
The interface is customizable.

Common interface : SMA,SSMP,ML51,etc.



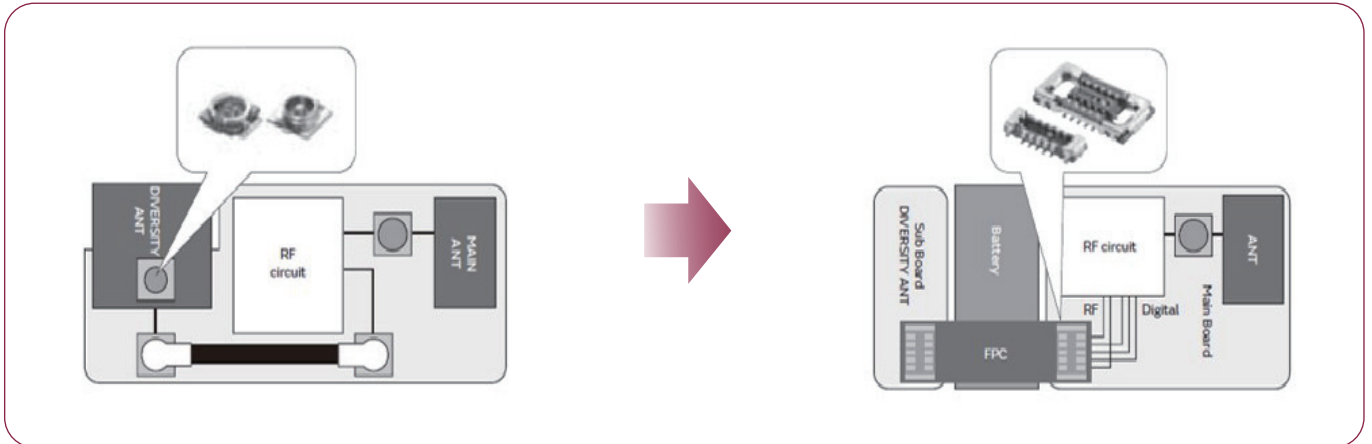
Production Features:

- Frequency: up to 18Ghz
- Bending phase(Typical/Max) : $\pm 2/\pm 5^\circ$
- Bending stability(Typical/Max) : $\pm 0.05/\pm 0.10\text{dB}$
- Low loss: 1.0dB/m @6Ghz
- Low VSWR: $<1.2@18\text{Ghz}$



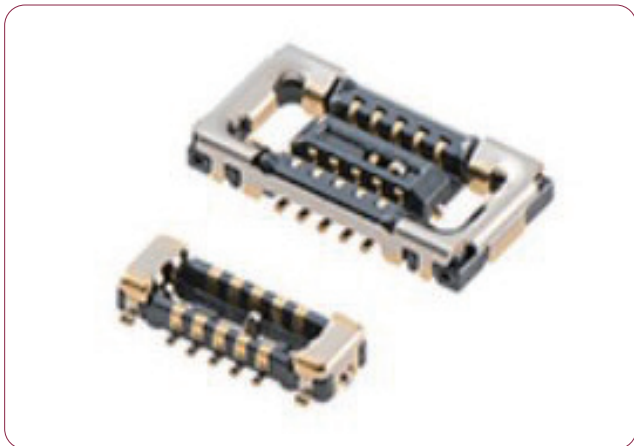
Intelligent terminal test scenario

Product Introduction -RF BTB Multi-channel Probe Test Solution

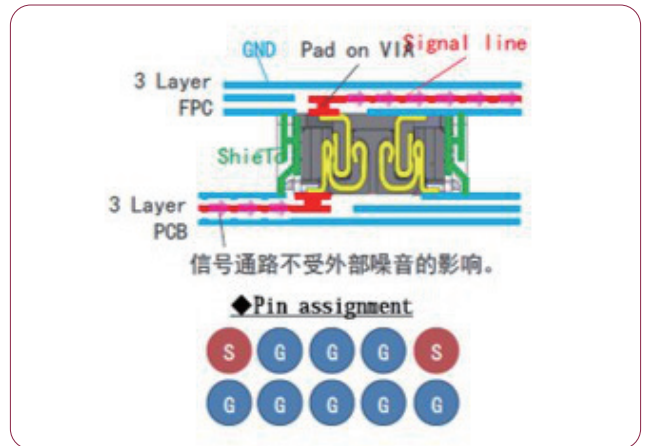


Single Channel receptacle application

RF BTB multi-channel connector application



RF BTB Connector



RF BTB recommended signal definition



SLK RF BTB Multi-channel probe Test solution





Shenzhen Superlink
Technology Co.,Ltd.