

RF COMPONENTS CATALOG





Main Products



RF Power Splitter/Combiner



RF Coaxial Cable Assembly



RF Coaxial Adapter



RF Coaxial Connector



RF Test Probe



RF Coaxial Attenuator



Power Amplifier



RF Termination Load





Application

Radar/Electronic Countermeasures

In the radar electronic countermeasures industry, devices are usually required to have high amplitude and phase consistency. Synergy provides high-performance power dividers, amplitude-stabilized phase-stabilized cable components, adapters, connectors and other devices in a variety of communication frequency.

Aviation/Navigation

In aviation and navigation, products are usually used in harsh environment, which requires high-quality, anti-salt spray, anti-corrosion and high-stability products. Synergy provides professional solutions for various RF and microwave devices.

National Defense

Synergy provides high mechanical stability, temperature stability and military grade power splitters, cables, adapters and other devices which suitable for harsh environment.





Test and Measurement Equipment

In the field of testing and measurement, Synergy provides customers with a variety of cost-effective RF and microwave components, such as amplitude and phase stability test cable, high performance power divider, combiner, adapter, bias tee, amplifier, RF switch, etc.

Wireless Communication

Wireless communication mainly covers the production, testing and using of wireless communication products. In the production of WIFI products, mobile phones, wireless Bluetooth and other products, it provides a wide range of product solutions for the test and measurement industry.

5G/ Millimeter Wave

Synergy millimeter wave interconnection products cover a wide range of high-end communication industry improving the appropriate solutions, adhering to the high quality policy, which help to cope with the harsh outdoor environment. We make high-speed communication possible by providing high quality RF power splitters, RF coaxial adapters and RF cable assemblies with outstanding electrical and mechanical properties. It can meet the needs of various customers and cooperate with the world's major communication companies to reduce the distance between people.



Product Classification

The main products of Synergy include RF power divider, RF coaxial cable assembly, precision RF adapter, precision RF test probe, precision RF connector, precision RF load, precision coaxial attenuator, microwave component and other RF microwave test devices.

RF Power Divider/Combiner



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RF Power Divider is a device which divides one input signal energy into two or more equal or unequal energy ways. Alternatively, multiple signal energy can be combined into one output, which is also called a RF Power Combiner.

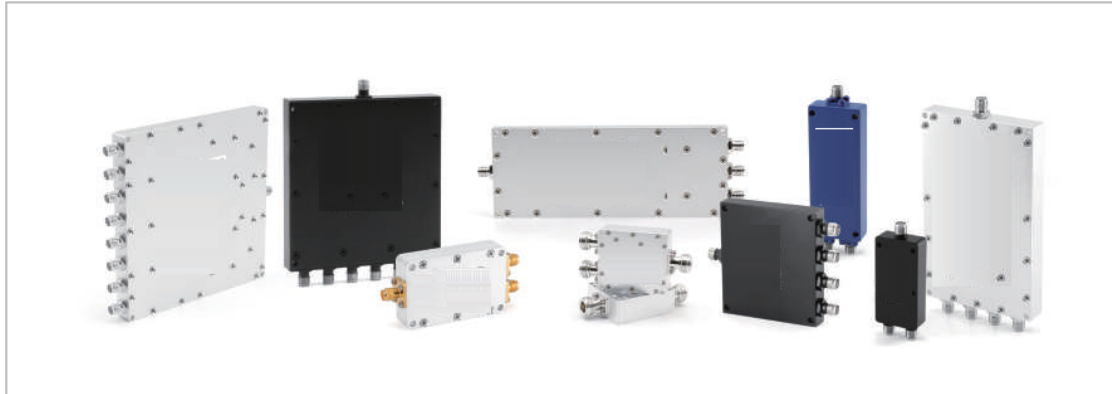
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Product Features

- Small size
- Low VSWR
- Low insertion loss
- High isolation
- High precision and reliability
- High temperature resistance
- Excellent VSWR to meet application scenarios with high accuracy requirements
- Can be used for power distribution or merging
- The frequency range can meet the test and measurement of a variety of RF communication fields
- Can be customized professional test grade and military grade products



RF Microstrip Power Divider/Combiner



- ◆ Small size, low VSWR, low insertion loss, high isolation
- ◆ The frequency range within 60GHz can be customized
- ◆ Laboratory and production test of radio frequency communication electronic products
- ◆ High mechanical reliability, wear resistance, corrosion resistance, long service life
- ◆ Customization of different connectors/materials

RF Active Power Divider



- ◆ GPS/Galileo/Gnss signals can be distributed and amplified to multiple GPS reception
- ◆ The GPS active antenna can be fed DC
- ◆ Customization of different connectors/materials
- ◆ Support customization

RF Resistive Power Dividers/Combiners



- ◆ The frequency range from DC to 60GHz can be customized
- ◆ Excellent electrical performance to meet the high precision test requirements
- ◆ Customization of different connectors/materials
- ◆ Support customization



RF Coaxial Cable (Assembly)



RF Coaxial Cable (Assembly) offers superior field-proven performance characteristics with low insertion loss and excellent VSWR in the market, less affected by noise or cross-talk or electromagnetic interference. Different series of test cable components are designed for different operating requirement environments.



Customized Service

- Customized phase matching and phase tracking
- Customized 3D bending, IMD3, delay, waterproof, magnet ring
- Custom armor, connectors

Product Features

- Stable amplitude and phase
- Stable temperature phase
- Stable bending phase
- Excellent shielding performance
- Reliability and durability
- High power



VNA Test Cable (Assembly)



RG Cable (Assembly)





Ultra Low Loss Phase Stable Cable(Assembly)



Ultra Flexible Low Loss Phase Stable Cable(Assembly)



High Shield/Temperature Phase Stabilized Cable(Assembly)



Low Loss Flexible Interconnection Cable(Assembly)



Low Loss Power Cable(Assembly)



Armored Flexible Test Cable (Assembly)



Semi-Flexible Cable(Assembly)



Semi-Rigid Cable(Assembly)



RF Coaxial Connector



RF Coaxial Connectors are used to connect coaxial cables, microstrip lines or other RF transmission lines to realize electrical connection, isolation or transfer of different types of transmission lines. RF Connector belongs to electromechanical integration products, it plays the role of bridge.



Product Features

- Wide RF range; High reliability; Smaller volume
- Excellent mechanical and electrical properties
- Non-magnetic series can be customized
- Can be used in aviation, aerospace, military, microwave communication and other fields

Installation Forms: panel mount (2-hole and 4-hole flanges), PCB mount, cable mount (cable connector), etc

Connector Type: 1.85mm, 2.4mm, 2.92mm, 3.5mm, SMA, SSMA, SMP, SSMP (SMPM), BMA, BNC, TNC, MCX, MMCX, 4.3/10, N, L16, SC, SMB, etc

Detachable



Direct Connection





Metal Through



Air Line Through



Dielectric Through



Weld-Free



Printed Circuit Board



Cable Connector





RF Coaxial Adapters are available in N, SMA, TNC, 3.5mm, 2.92mm, 2.4mm, 1.85mm, BNC, DIN, MCX, MMCX, SC, SMP, APC7 connectors, etc. XINQY RF adapters frequency range from DC to 110 GHz.



Product Features

- Can be converted between and within series
- Reusable with long life-span, low RF leakage
- Wide RF range, low VSWR, low insertion loss
- Support customization

Connector Type	Frequency Range(GHz)	External Conductor Material
1.0mm	DC-110GHz	Passivated Stainless Steel
1.85mm	DC-65GHz	Passivated Stainless Steel
SMPM(SSMP)	DC-65GHz	Brass
2.4mm	DC-50GHz	Passivated Stainless Steel
SMP(GPS/SPPQ)	DC-40GHz	Brass
2.92mm	DC-40GHz	Passivated Stainless Steel
SSMA	DC-40GHz	Passivated Stainless Steel
3.5mm	DC-33GHz	Passivated Stainless Steel
SMA	DC-27GHz	Passivated Stainless Steel/Brass
BMA	DC-22GHz	Passivated Stainless Steel
N(L16)	DC-18GHz	Passivated Stainless Steel/Brass
QMA	DC-18GHz	Passivated Stainless Steel
TNC	DC-11GHz	Brass
SC	DC-11GHz	Passivated Stainless Steel
DIN(4.3/10)	DC-8.3GHz	Brass
DIN(7/16,L29)	DC-8.3GHz	Brass
MCX	DC-6GHz	Brass
MMCX	DC-6GHz	Brass
BNC(Q9)	DC-4GHz	Brass
SMB	DC-4GHz	Brass



RF Coaxial Attenuator



“ RF Coaxial Attenuator is a device used to attenuate RF energy and is mainly used for high-power measurements and improving port matching (VSWR). ”

Product Features

- Low VSWR, wide RF range
- Low intermodulation, high power and high reliability
- Flat attenuation value, military grade quality
- Support customization

Connector Type	Frequency Range(GHz)	Power(W)	Attenuation Value(dB)
SMA	SMA	2/5/10/25/30	1-90
N	N	2/5/10/25/30/50/100/300	1-60
2.92mm	2.92mm	2-50	1-80
2.4mm	2.4mm	2-50	1-80
1.85mm	1.85mm	2-50	1-80

>> Adjustable 90dB Step Attenuator



Adjustable 90dB Step Attenuator is a mechanical attenuator that regulates the power level of an RF circuit in steps over a range of frequencies. It is small, accurate, stable and reliable, and more importantly, it can be adjusted manually without power supply.



RF Termination Load



Rf Coaxial Load is a device used to absorb RF energy, which is mainly used in power splitter test. It is installed on idle ports to absorb RF energy and prevent port energy reflection to ensure the completeness of S-network parameter test.



Product Features

- Low VSWR, wide RF range(DC~67GHz)
- Support for multiple interfaces
- Withstand a wide range of power
- Support customization

Model	Frequency Range(GHz)	External Conductor Material
1.85-J(K)L-67-1W	DC-67GHz	Passivated Stainless Steel
2.4-J(K)L-50-1W	DC-50GHz	Passivated Stainless Steel
2.92-J(K)L-40-1W	DC-40GHz	Passivated Stainless Steel
SMP-J(K)L-XX-2W	DC-18/27/40GHz	Passivated Stainless Steel/Brass
SSMP-J(K)L-XX-2W	DC-18/27/40GHz	Passivated Stainless Steel/Brass
SMA-J(K)L-XX-2W	DC-6/18/27GHz	Passivated Stainless Steel/Brass
SMA-J(K)L-XX-5W	DC-6/18/27GHz	Passivated Stainless Steel/Brass
N-J(K)L-XX-2W	DC-6/18GHz	Passivated Stainless Steel/Brass
N-J(K)L-XX-5W	DC-6/18GHz	Passivated Stainless Steel/Brass
N-J(K)L-XX-10W	DC-6/18GHz	Passivated Stainless Steel/Brass
TNC-J(K)L-XX-2W	DC-6/11/18GHz	Passivated Stainless Steel/Brass



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The test probe is composed of a waveguide or coaxial connector which suitable for the probe pin. These probes are used to connect component/device test points or pin-trays located on semiconductor wafers, chip surfaces, or printed circuit board (PCB) surfaces.

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Product Features

- Low VSWR, low insertion loss, wide RF range
- Testing, Long life-span, short test time

Suitable For
Coaxial Mount



(SMAK-TTT135KY)



(SMAK-TNT125KY)



(MMCXK-TGT429Z)



(ML51-TGT329Z)

Suitable For
Switch Mount



(SMAK-TNK138Y)



(SMAK-TNK120KY)



(ML51-TGK322Z)



(SSMP-TGK218Z)

Suitable For
Multi-Spot Pad



(SMAK-TTD115JZ)



(SMAK-TTD155Z)



(SMAK-TTD200KY)



(SMAK-TTD155JZ-5)

Suitable For
Concentric Pad



(SMAK-TGY135Z)



(SMAK-TNY125KY)



(SMAK-TNY130KY)



(SMAK-TNY135Y)



Filter

Customized Service

- Bandpass, bandstop, lowpass, highpass, etc
- Microstrip, cavity, LC, etc
- Optional frequency range: DC~40GHz



Directional Coupler

Customized Service

- Microstrip, cavity, etc
- Optional frequency range: DC~40GHz



Hybrid Coupler

Customized Service

- Microstrip, cavity, etc
- Optional frequency range: DC~40GHz



Adjustable Step Attenuator

Customized Service

- Manual step-adjustable attenuator
- ESC attenuator
- Multi-channel attenuator module



Bias Tee



DC Blocks



Circulator



Diplexer



RF Active Components



High Isolation SPDT

Product Features

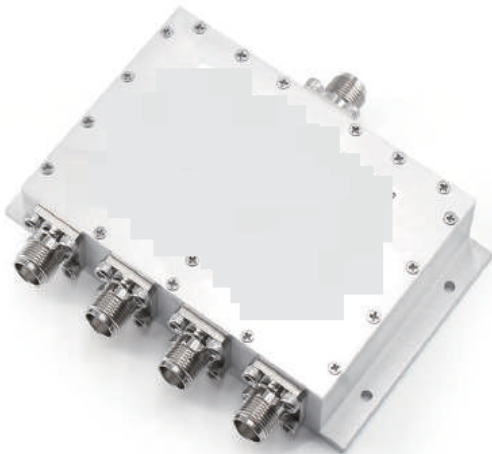
- High bandwidth: 9KHz~8.5GHz
- High isolation: >90dB@8.5GHz
- Integrated TTL/COMS driver without external drivers



Wide Band Amplifier

Product Features

- Frequency range: 40MHz~2150MHz
- Suitable for amplification of cable TV and satellite signals
- Output 18V or 13V DC feed voltage



GPS Active Power Splitter



Low Noise Amplifier



Torque Wrench



Calibration Kit