



西安艾力特电子实业有限公司
XI'AN ELITE ELECTRONIC INDUSTRIAL CO., LTD.

Leading Provider of Systematic Interconnection Solutions

“科技领先, 优质高效”是公司质量方针。

“创新、务实”是公司经营理念。

“顾客至上, 遵信守约”是艾力特人对您的承诺。

Our quality policy

--"leading technology, high quality & efficiency"

Our business philosophy

-- "pragmatic and innovative"

Our commitment

--"customer oriented,integrity first"



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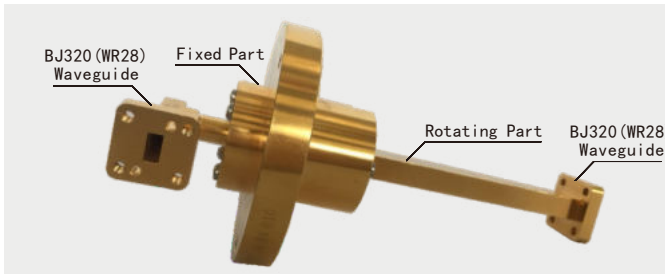
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波导系列产品宣传册

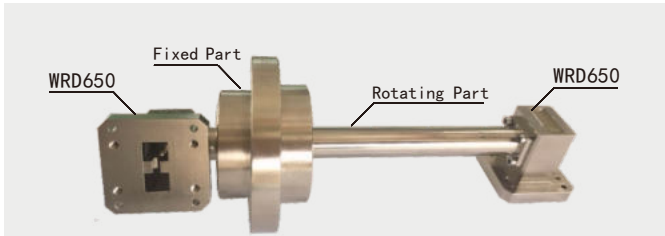
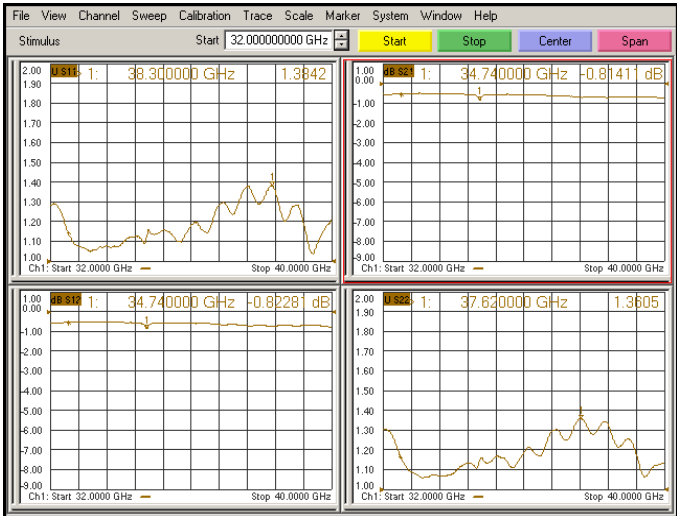
Waveguide Series Product Brochure

Waveguide Rotary Joints

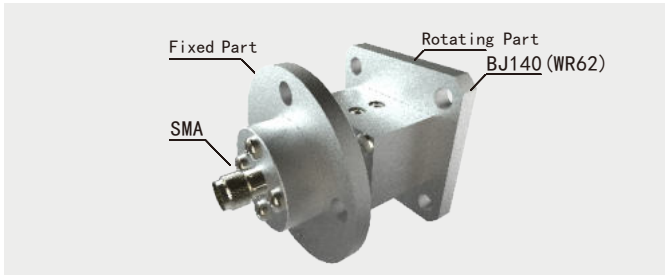
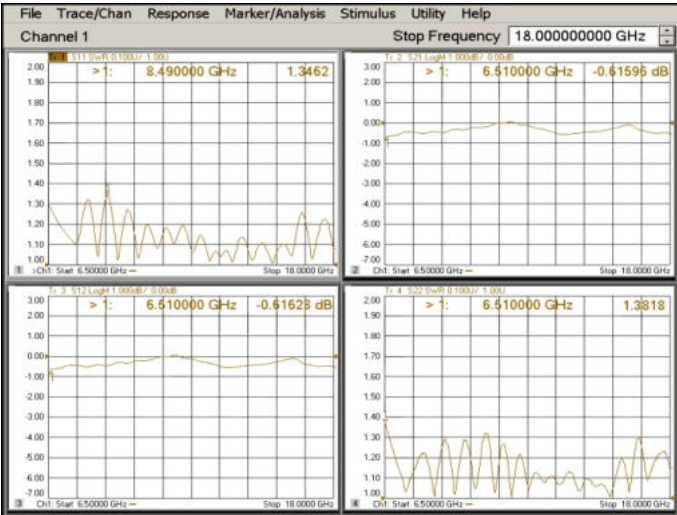
Waveguide rotary joints are mainly used for signal transmission between the fixed part and the rotating part. The terminal of the waveguide rotating joint involve coaxial, rectangular waveguides and ridge waveguides. There are single-channel and multi-channel waveguide rotary joints. According to the structure, it is divided into I type, L type and U type.



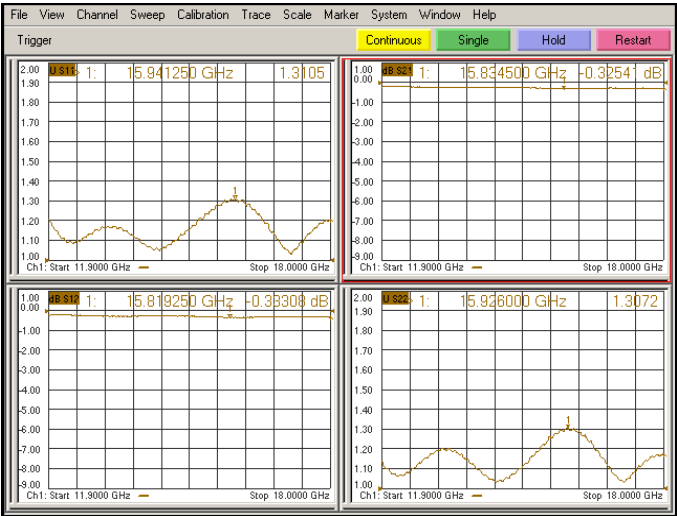
RJ-1LBJ320-1	
Terminal Type	BJ320(WR28)
Interface Type	Style L (straight to RA)
Frequency	Ka band 8GHz bandwidth
Power Capability	300W average power (40GHz)
VSWR	≤1. 45
Insertion Loss	≤1.0dB



RJ-1LWRD650	
Terminal Type	WRD650 double ridge waveguide
Interface Type	Style U (RA to RA)
Power Capability	300W average power (18GHz)
Frequency	6.5GHz~18GHz
VSWR	≤1.5
Insertion Loss	≤0.7dB



RJ-1LSMA/BJ140	
Terminal Type	Port 1 SMA; port 2 BJ140(WR62) waveguide
Interface Type	Style I
Frequency	11. 9GHz~18GHz
Power Capability	120W average power (18GHz)
VSWR	≤1.35
Insertion Loss	≤0. 35dB



High Performance Flexible Waveguide Cable Assembly

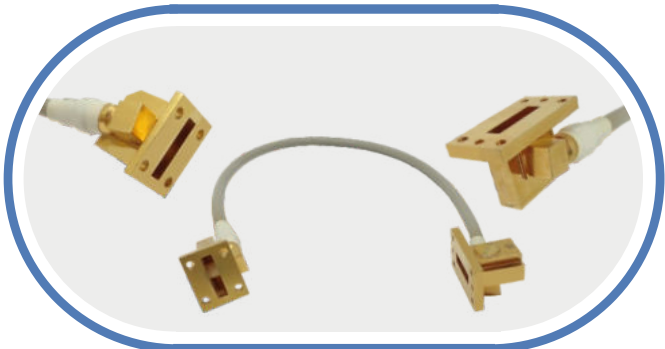


The high performance flexible waveguide cable assembly combines the advantages of waveguide and RF coaxial cable, which can be used in applications where the space is small, the weight is light, and the two ports are complex. It has the characteristics of flexible installation, small size, light weight, small footprint, small bending radius, small VSWR, low insertion loss and excellent phase consistency. It is suitable for microwave signal transmission in space areas such as airborne, missile, and spaceborne. There are rectangular type and ridge waveguide port.

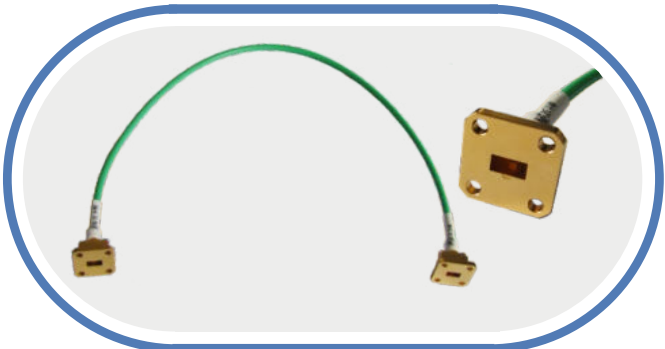
According to the frequency and power capability requirements, select the corresponding waveguide port and RF coaxial cable. Typical features are as follows:

- Waveguide Range: BJ70(WR137) ~ BJ400(WR22)
- Frequency Range : 6GHz to 50GHz
- VSWR ≤ 1.25 (20% waveguide bandwidth)
- VSWR ≤ 1.3 (40% waveguide bandwidth)

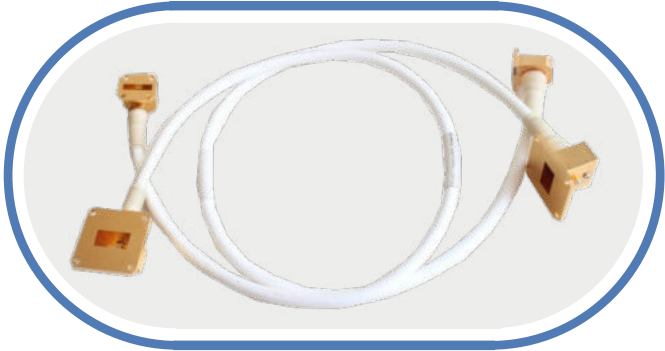
Typical Flexible Waveguide Cable Assembly



Waveguide 1 : BB150-F	Waveguide 2 : BJ150-F
Frequency	Ku band
VSWR	≤1. 2
Bending Radius	20mm
Cable Type	SFCG-50-3-51
Features	Soft, small bending radius, small footprint



Waveguide 1 : BJ320-E	Waveguide 2 : BJ320-E
Frequency	Ka band
VSWR	≤1. 25
Bending Radius	20mm
Cable Type	MF30A
Features	Soft, small bending radius, small footprint



Waveguide 1 : BJ140-P	Waveguide 2 : BB150-P
Frequency	Ku band
VSWR	≤1. 25
Power Capability	Average power180W, duty cycle 40%
Bending Radius	20mm
Cable Type	UED240E ; MF240B
Features	Soft, small bending radius, small footprint



Waveguide 1 : WRD580-E	Waveguide 2 : SMA-JG
Terminal Type	Waveguide- WRD580 double ridge; connector-SMA
Frequency	C-Ku band
VSWR	≤1. 25
Cable Type	SUCOFLEX104E;MF607A
Features	Wide frequency band , large power capacity Soft, small bending radius, small footprint

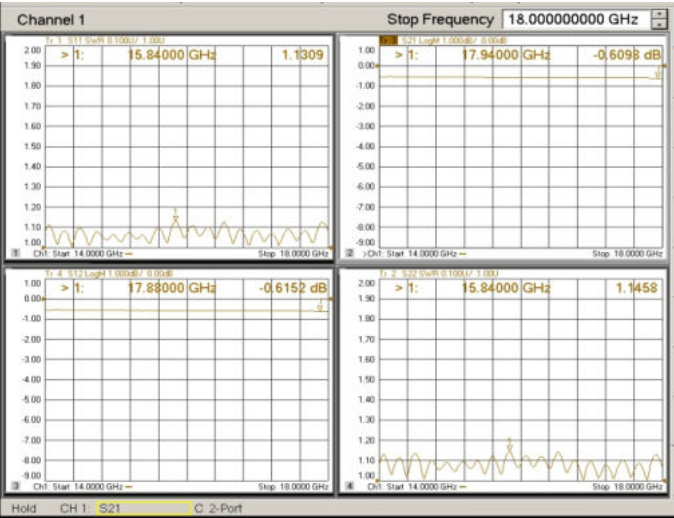
High Performance Flexible Waveguide Cable Assembly

Typical High power Waveguide Assembly

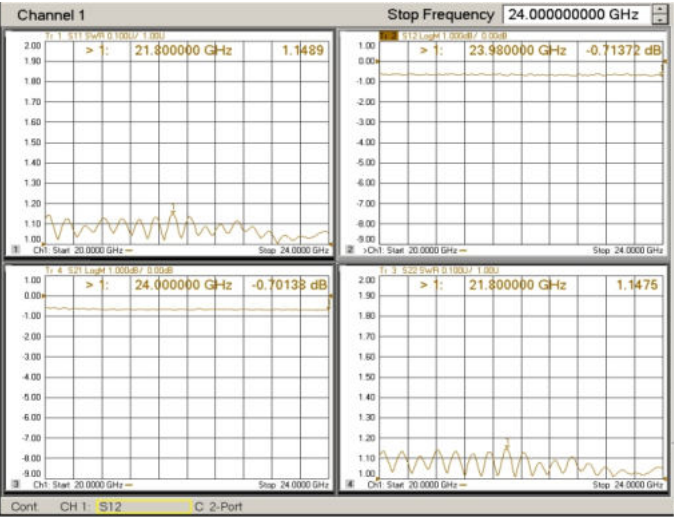
The company establishes the waveguide cable assembly type spectrum platform, which involves the waveguide ports BJ140(WR62), BJ220(WR42) and BJ320(WR28). High-power microwave signals are transmitted using a frequency range of 14 GHz to 18 GHz, 20 GHz to 24 GHz, and 32 GHz to 38 GHz.The spectral waveguide cable assembly is mainly used to transmit the high-power signal of the transmitter output with high performance and low loss to the antenna feeder system.



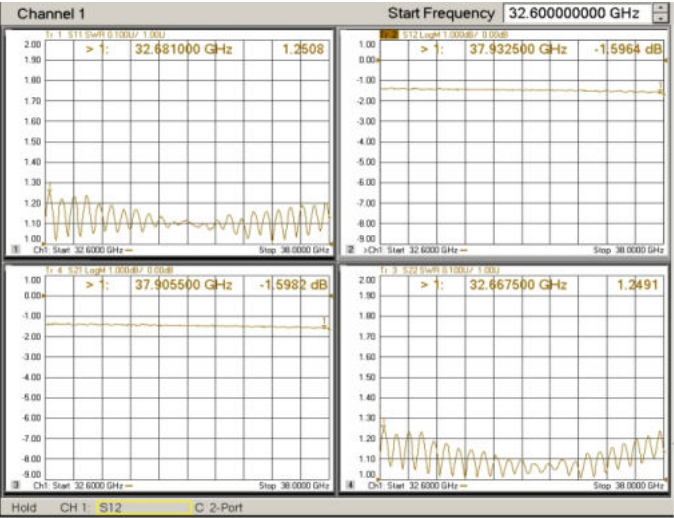
ZBD104E-BJ140E/BJ140E-500	
Waveguide Size	15. 799mm×7. 899mm
Frequency	14GHz~18GHz
Power Capability	210W average power,40% duty cycle,5 min duration
VSWR	≤1. 25
Cable Type	SUCOFLEX104E; MF607A



ZBD104E-BJ220E/BJ220E-500	
Waveguide Size	10.668mm×4.318mm
Frequency	20GHz~24GHz
Power Capability	190W average power,40% duty cycle,5min duration
VSWR	≤1. 25
Cable Type	SUCOFLEX104E; MF607A

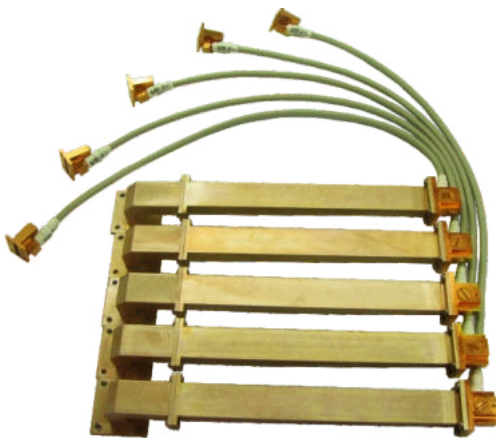


ZBD102E-BJ320E/BJ320E-500	
Waveguide Size	7. 112mm×3. 556mm
Frequency	32GHz~38GHz
Power Capability	70W average power,45% duty cycle,5min duration
VSWR	≤1. 3
Cable Type	SUCOFLEX102E; MF419A



High Performance Flexible Waveguide Cable Assembly

High Power Waveguide Cable assembly in Typical Low Pressure Environment



The high power, high performance flexible waveguide cable assembly is a commonly used microwave component in high power microwave port input and output devices. It covers the X, Ku, K, and Ka bands. It has the advantages of frequency bandwidth, small VSWR, low insertion loss and high power consumption. It is used to connect the same (or different) waveguide microwave circuits in a small, complex space to transmit high-power microwave signals. It also has excellent high frequency performance in low pressure environments. Typical features are as follows:

- Power Capability:
 - X-band average power up to 900W
 - Ku band resistance is up to 500W
 - Ka band resistance up to 340W
- Note: The actual power resistance data is related to the ambient temperature and air pressure value.



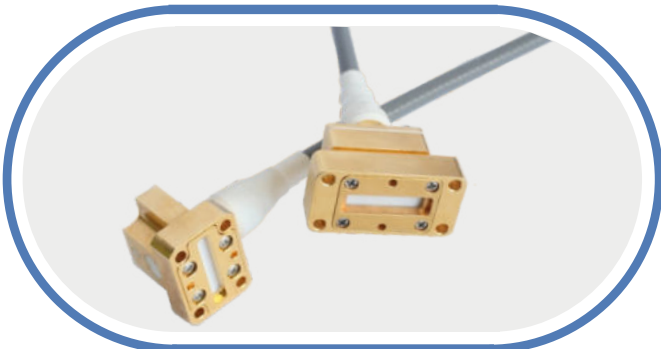
Waveguide 1 : BB125-F		Waveguide 2 : BB125A-E	
Frequency	Ku band		
VSWR	≤1. 25		
Power Capability	At a low pressure of 1.17KPa Average power 180W,duty cycle 40%, duration 10min		
Cable Type	SUCOFLEX103; MF103A		



Waveguide 1 : BB226-E		Waveguide 2 : BB226-P	
Frequency	K band		
VSWR	≤1. 35		
Power Capability	At a low pressure of 4KPa, Average power150W,duty cycle40%,duration greater than 8min.		
Cable Type	SUCOFLEX102E; MF419A		

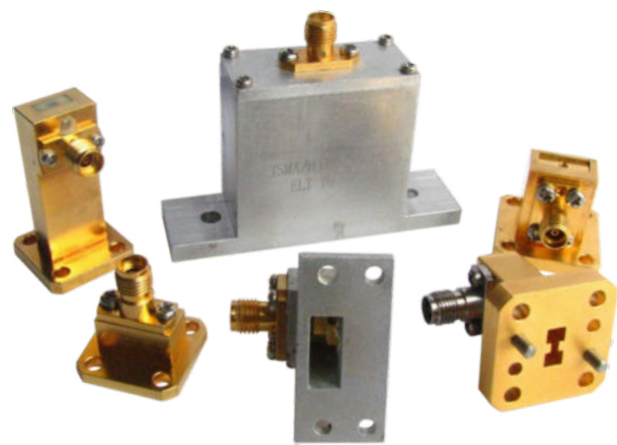


Waveguide 1 : BJ320-E		Waveguide 2 : BJ370-P	
Frequency	Ka band		
VSWR	≤1. 3		
Power Capability	At a low pressure of 1KPa Average power 340W, duty cycle 40%, duration greater than 35 sec.		
Cable Type	MF442A		
Features	Hermetic structure		



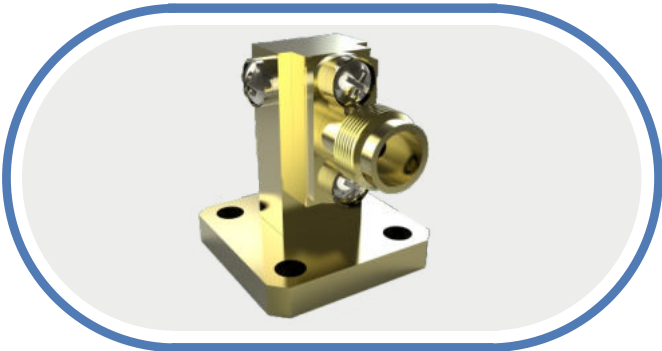
Waveguide 1 : BB125A-E		Waveguide 2 : BB125-F	
Frequency	Ku band		
VSWR	≤1. 25		
Power Capability	At a low pressure of 1.17KPa Average power 180W,duty cycle40%, duration 10min.		
Cable Type	CXN3449; MF503A		
Features	Hermetic structure		

Wave-guide to Coax Adapters

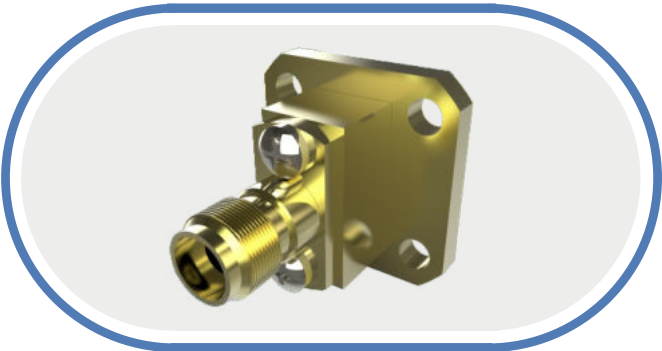


The frequency of wave-guide to coax adapters processed by ELT cover 5.4GHz-70GHz. With high reliability, small size and excellent performance, it is widely used in microwave measurement and millimeter wave equipment. The waveguide has standard rectangular and double-ridge waveguides, and non-standard waveguides can be customized according to user requirements. The coaxial end connection interface includes N, TNC, SMA, SMP, 3.5, K (2.92), 2.4, 1.85 and microstrip. Wave-guide to coax adapters are divided into two types: end Launch and right angle launch from interface orientation. Among them, the RA launch type can also be used as a high-power structure.

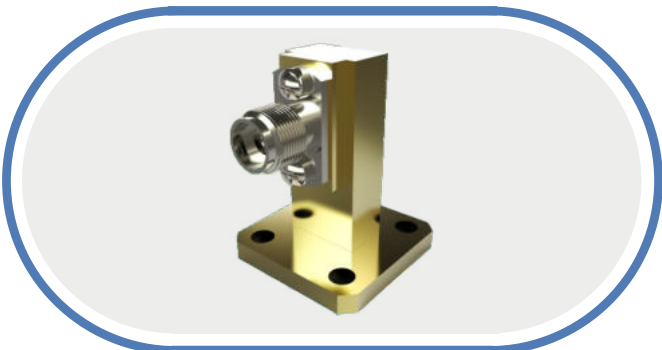
Typical mmW Coaxial to Rectangular Waveguide Adapter



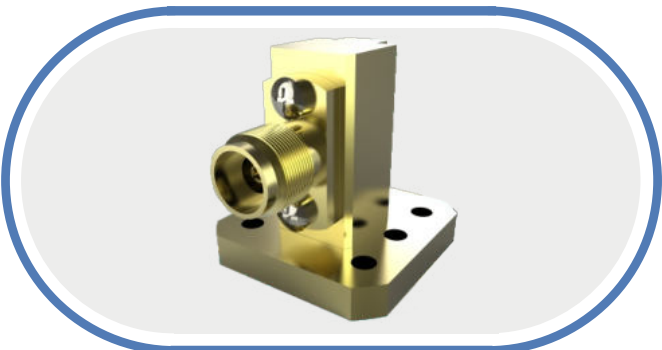
K/BJ320-KF	
Frequency Range	26. 4GHz~40GHz
VSWR	≤1. 25
Insertion Loss	≤0. 35dB
Waveguide Size	7. 112mm×3. 556mm



K/BJ320-KF1	
Frequency Range	26. 4GHz~40GHz
VSWR	≤1. 25
Insertion Loss	≤0. 35dB
Waveguide Size	7. 112mm×3. 556mm
Structural Features	High power structure



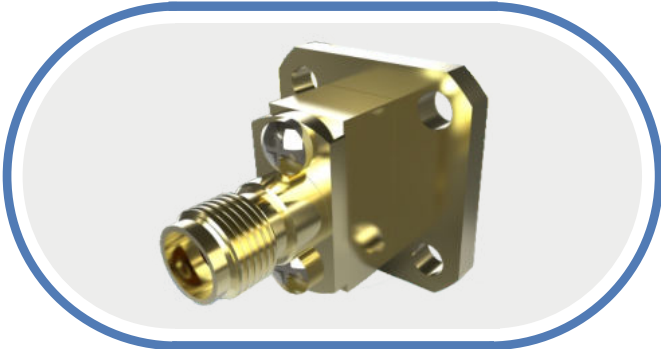
K/BJ320-KFP1	
Frequency Range	50% Waveguide bandwidth
VSWR	≤1. 25
Insertion Loss	≤0. 35dB
Waveguide Size	7. 112mm×3. 556mm
Structural Features	High power structure



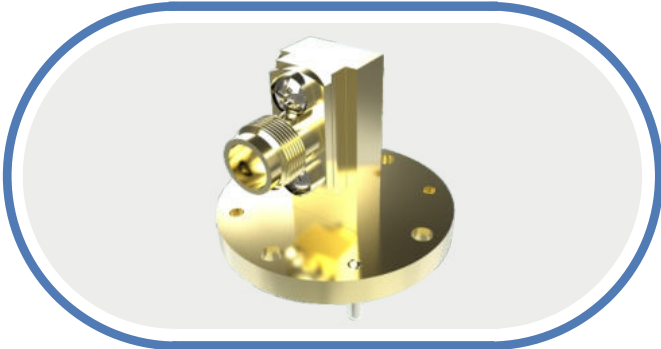
K/BJ400-KF	
Frequency Range	32. 9GHz~40GHz
VSWR	≤1. 3
Insertion Loss	≤0. 35dB
Waveguide Size	5. 690mm×2. 845mm

Wave-guide to Coax Adapters

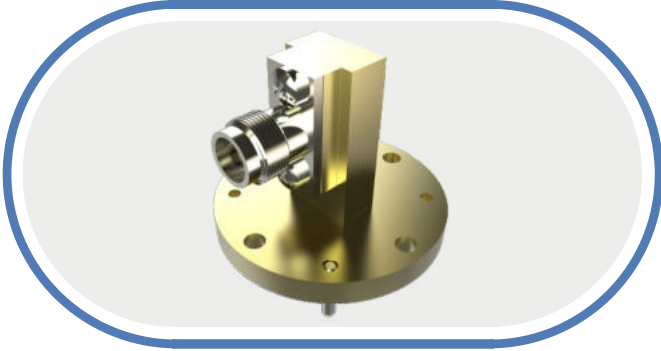
Typical mmW Coaxial to Rectangular Waveguide Adapter



K/BJ400-KF1	
Frequency Range	32. 9GHz~40GHz
VSWR	≤1. 3
Insertion Loss	≤0. 35dB
Waveguide Size	5. 690mm×2. 845mm
Structural Features	High power structure



2.4/BJ400-KF	
Frequency Range	32. 9GHz~50GHz
VSWR	≤1. 3
Insertion Loss	≤0. 4dB
Waveguide Size	5. 690mm×2. 845mm

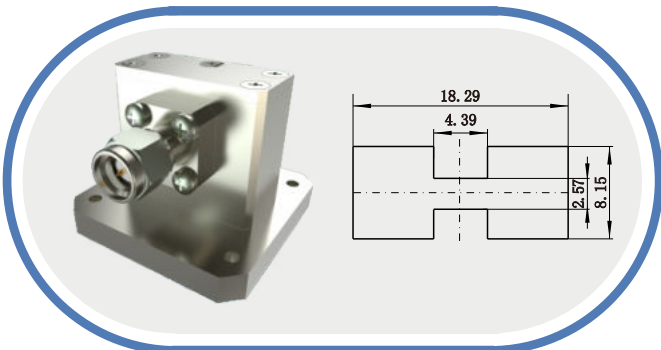


1.85/BJ500-KF	
Frequency Range	39. 2GHz~59. 6GHz
VSWR	≤1. 35
Insertion Loss	≤0. 45dB
Waveguide Size	4. 775mm×2. 388mm

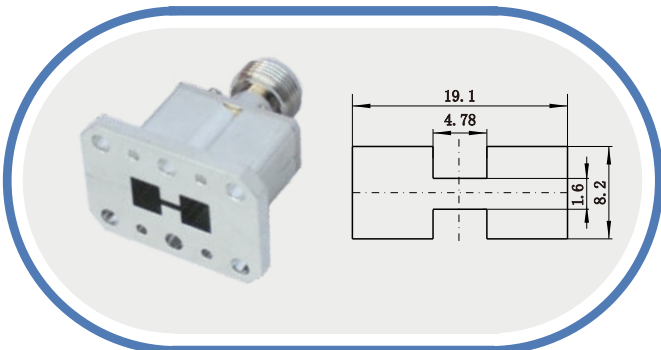


1.85/BJ620-KF	
Frequency Range	49. 8GHz~70GHz
VSWR	≤1. 4
Insertion Loss	≤0. 5dB
Waveguide Size	3. 759mm×1. 880mm

Typical Coaxial Ridge Waveguide Adapter



SMA/WRD650-JF	
Frequency Range	6. 5GHz~18GHz
VSWR	≤1. 3
Insertion Loss	≤0. 25dB



N/WRD500-KF1	
Frequency Range	6GHz~18GHz
VSWR	≤1. 45
Insertion Loss	≤0. 3dB

Wave-guide to Coax Adapters

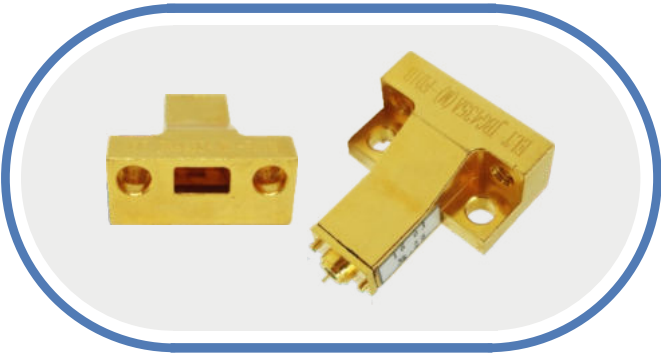
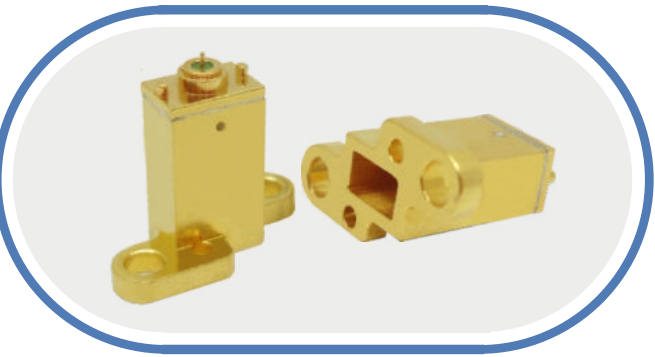
Typical Hermetic Coaxial Microstrip to Waveguide Adapter

The hermetic coaxial microstrip to waveguide converter is primarily used for hermetic connections between different systems. The coaxial end is usually a glass sintered part, and the waveguide is reliably connected by welding. This type of product has high welding reliability, good assembly dimensional consistency, high frequency bandwidth and excellent performance.



BJ320 (M) ×2-FD1	
Frequency	Ka band 6GHz bandwidth
VSWR	≤1. 4
Insertion Loss	≤0. 4dB
Waveguide Size	7. 112mm×3. 556mm
Features	Double waveguide port; hermetic coaxial end, microstrip diameter Φ0.3mm

BB320A(M)-FD1	
Frequency	Ka band 6GHz bandwidth
VSWR	≤1. 45
Insertion Loss	≤0. 5dB
Waveguide Size	7. 11mm×1. 78mm
Features	Very small waveguide size, the total height of the waveguide can be extended to 25mm; Hermetic coaxial end, microstrip diameter Φ0.3mm

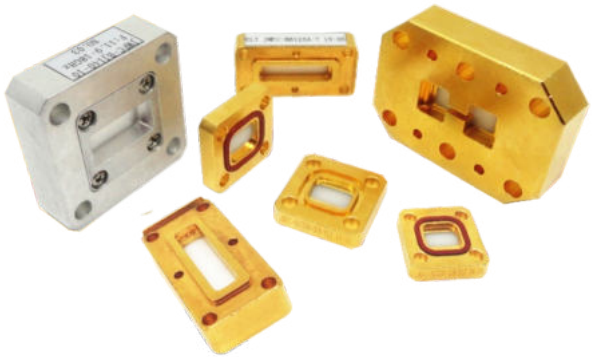


BG435A (M) -FD1	
Frequency	Ka band 6GHz bandwidth
VSWR	≤1. 35
Insertion Loss	≤0. 4dB
Waveguide Size	5. 2mm×2. 85mm
Features	Hermetic coaxial end, microstrip diameter Φ0.3mm

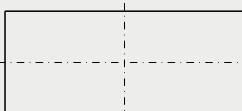
BG435A (M) -FD1B	
Frequency	Ka band 6GHz bandwidth
VSWR	≤1. 4
Insertion Loss	≤0. 5dB
Waveguide Size	5. 2mm×2. 85mm
Features	Hermetic coaxial end, microstrip diameter Φ0.3mm The microstrip output is offset from the waveguide center output by 2.7mm

Waveguide Sealing Window

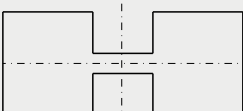
The waveguide sealing window is a waveguide device that connects two waveguide ports for sealing. The frequency covers 6.5 GHz to 60 GHz. The waveguide has standard rectangular and double ridge waveguides, and non-standard waveguides can be customized according to user requirements. The products have excellent performance and high reliability, and are widely used in communication systems, radar systems and high-power waveguide transmission systems. The waveguide sealing window also has a thermal insulation function.



Rectangular waveguide



Double ridge waveguide



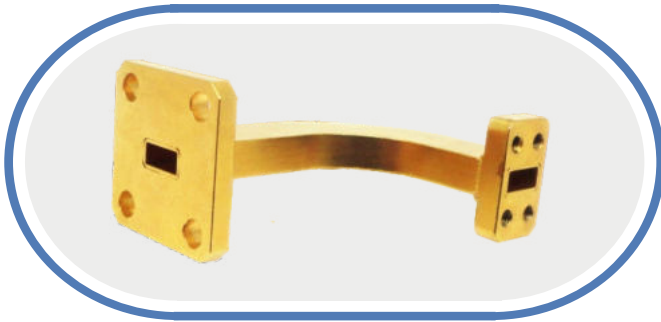
Model No.	Waveguide	Dielectric	Frequency	VSWR	IL
MFC-BJ120 (S) -7. 2	Rectangular	PTFE	9. 84~15GHz	≤1. 15	≤0. 2dB
MFC-BJ140 (S) -8	Rectangular	PTFE	11. 9~18GHz	≤1. 15	≤0. 2dB
MFC-BJ320 (S) -9	Rectangular	PTFE	26. 4~40GHz	≤1. 25	≤0. 4dB
MFC-BJ500 (S) -6	Rectangular	PTFE	39. 2~59. 6GHz	≤1. 3	≤0. 7dB
MFC-BJ100 (M) -5	Rectangular	Glass	40% bandwidth	≤1. 25	≤0. 2dB
MFC-BJ140 (M) -6	Rectangular	Glass	40% bandwidth	≤1. 25	≤0. 2dB
MFC-BJ320 (M) -3. 1	Rectangular	Glass	40% bandwidth	≤1. 25	≤0. 5dB
MFC-WRD500 (M) -9. 5	Double ridge	Glass	5~18GHz	≤1. 3	≤0. 3dB

High Temperature Resistant Waveguide Components

The high temperature resistant waveguide component is a new type of component that ensures the normal transmission of microwave signals in a high temperature environment.Divided into high temperature type and high temperature resistant type. The former can transmit microwave signals in a high temperature (+400 ° C) environment, the latter can be used in high temperature environment, or can also isolate high temperature conduction (temperature difference 400 ° C → 80 ° C), can protect the transmission system from high temperature damage. The frequency covers 5.4 GHz to 50 GHz and is suitable for each waveguide port of BJ70(WR137) to BJ400(WR22).



High temperature resistant insulated conversion waveguide



Laser welding type heat insulation conversion waveguide



High temperature resistant wave-guide to coax adapters



High temperature resistant insulated waveguide sealing window