Company Profile

Chengdu Sanlianweixun Technology Co., Ltd. is a high-tech enterprise specializing in the research and development, production and sales of microwave and millimeter wave passive components. Our products used in high-tech fields such as aerospace, navigation, radar, electronic countermeasures and satellite communication. Relying on the team led by microwave and millimeter wave experts and professors from the University of Electronic Science and Technology of China, the company has independently developed high-precision electromagnetic simulation software with intellectual property rights. It can quickly and accurately develop various microwave and millimeter wave passive devices and passive components.

Our company can R&D of various microwave and millimeter wave passive components and components:

Filters, Duplexers/Multiplexers, Power Dividers, Directional Couplers, Rotary Joints, Orthogonal Mode Couplers (OMT), Coaxial Waveguide Converters, Loads, Satellite Communication Antenna Feed Components, Phased Array, Phase Shifters devices, microwave and millimeter wave differential networks, etc.

According to the users' special requirements, our company can professionally design high-power passive components and space-borne antenna array passive components for high-altitude aircraft with small size, light weight, excellent performance and stable compact structure.

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Passive components

Passive devices are an extremely important branch in the development of microwave technology, including filters, duplexers/multiplexers, power dividers/combiners, directional couplers, phase shifters, and orthogonal mode couplers (OMT). , rotary joints, coaxial waveguide converters, loads, etc.

Our company can professionally design various microwave passive components:

Frequency range: 0.1~ 50GHz;

Structural form: coaxial type, waveguide type, stripline type, microstrip type, fin type, cavity type, Lumped/distributed, etc.

Our passive devices have been widely used in aerospace, navigation, radar, electronic countermeasures and satellite communications.

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Filter

The role of filter is to filter out unnecessary radio frequency signals, while ensuring good passband characteristics. There are a wide variety of filters with different performances, and our company can quickly customize them according to the specific requirements of users:

Frequency range: 0.1~ 50GHz;

Function: low-pass, high-pass, band-pass, band-stop;

Structural form: waveguide type, cavity type, microstrip type, interdigital type, comb type, coaxial cavity type, Lumped/distributed, etc.;

Usage scenarios: aerospace, navigation, radar, electronic countermeasures and satellite communications, etc.

Filters with special requirements can be designed, such as:

high altitude filter;

Ultra-high suppression filter;

ultra-wideband filter;

Ultra-narrowband filter;

TE01 mode low loss filter;

One-cavity multi-mode filter, etc.;

high power filter;

Linear phase filters, etc.

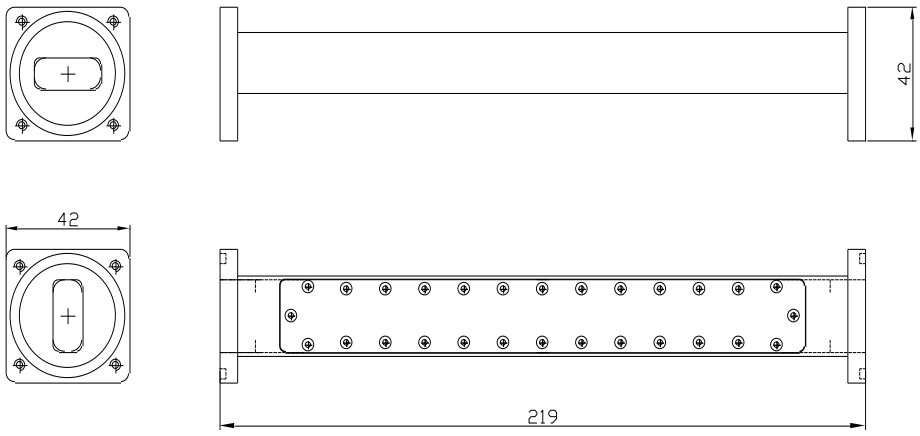
X Band High Altitude Waveguide Bandpass Filter

【Product introduction】:

Features: High altitude, high power, sealed, without tuning screws.

【Technical indicators】:

1. Working frequency: 9.55~10.30Ghz
2. VSWR: 1.20:1 MAX
3. Insertion loss: 0.5db MAX
4. Rejection: 30db MIN@9.38Ghz
5. Power Capacity: 200W (average power)
6. Air tight requirements: inflate 0.12Mpa. Reduce less than 0.01Mpa after 1hour.
7. Structure:



X Band High Altitude Waveguide Bandpass Filter

X Band High Altitude Waveguide Bandpass Filter

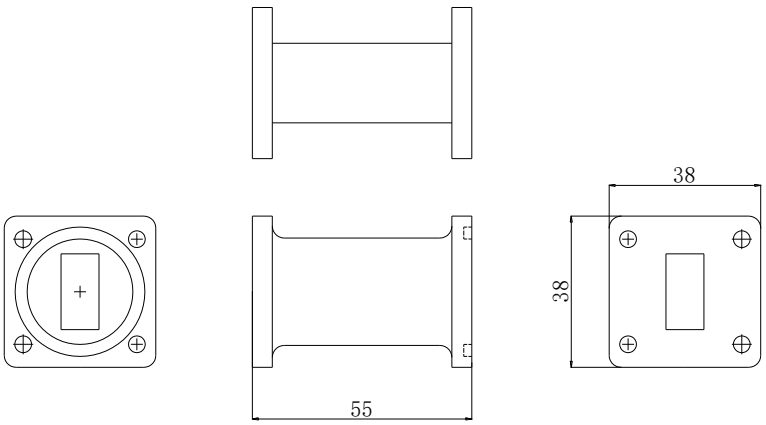
Ku Band Satellite Communication Band Pass Filter

【Product introduction】:

Features: Low insertion loss, great rejection.

【Technical indicators】:

1. Working frequency: 10.70~12.75Ghz
2. VSWR: 1.20:1 MAX
3. Insertion loss: 0.25db MAX
4. Rejection: 80db MIN@13.75~14.50Ghz
5. Interface: WR75
6. Structure:



Ku Band Satellite Communication Band Pass Filter

Ku Band Satellite Communication Band Pass Filter

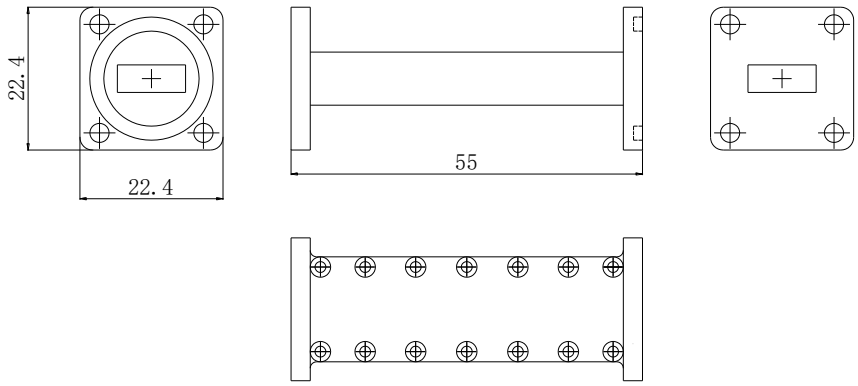
K Band Bandpass Filter

【Product introduction】:

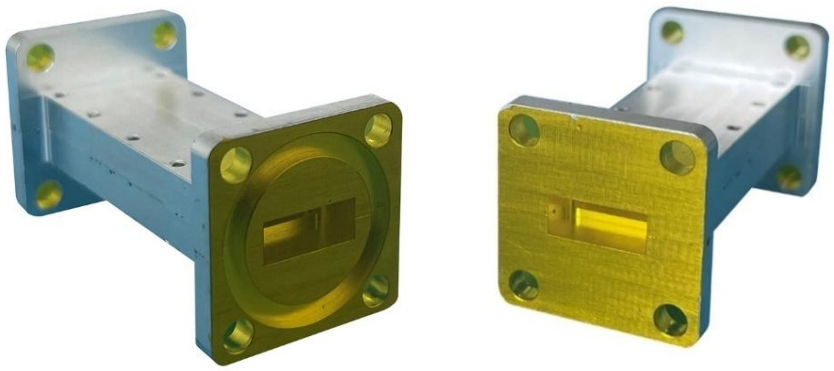
Features: Low insertion loss, great rejection without tuning screws.

【Technical indicators】:

1. Working frequency: 17.7~22.2GHz
2. VSWR: 1.20:1 MAX
3. Insertion loss: 0.2dB MIN
4. Rejection: 80dB MIN@ 27.5~31.5GHz
5. Interface: WR42
6. Structure:



K Band Bandpass Filter



K Band Bandpass Filter

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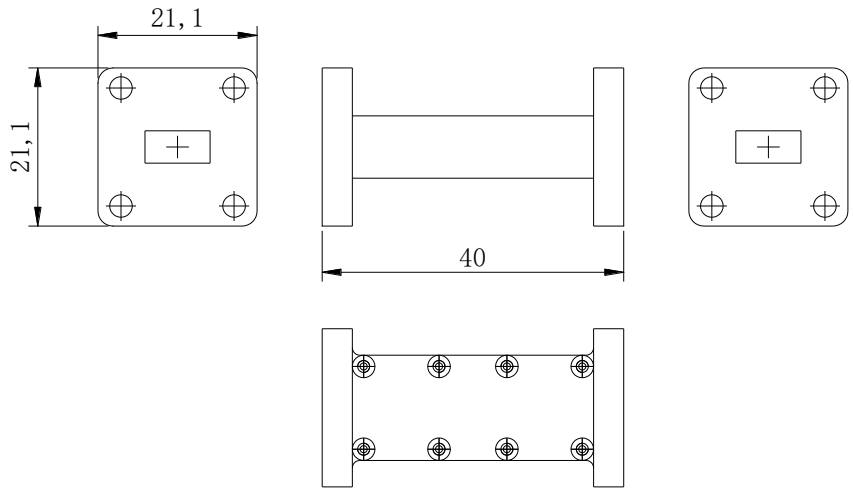
Ka Band Bandpass Filter

【Product introduction】:

Features: Low insertion loss, great rejection without tuning screws.

【Technical indicators】:

1. Working frequency: 30.50~31.00GHz
2. VSWR: 1.3:1 MAX
3. Insertion loss: 0.5dB MIN
4. Rejection: 70dB MIN@ 0~21.10GHz
5. Interface: WR34
6. Structure:



Ka Band Bandpass Filter

Ka Band Bandpass Filter

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Duplexer/ Multiplexer

Duplexer used for combines two or more signals with different frequencies, and it often used in microwave communication systems that transmit and receive bidirectionally. The main function of the multiplexer is to divide the wideband signal into several narrowband signals. Our company can provide various duplexers/multiplexers according to user requirements:

Frequency range: 0.1~50GHz

Structural form: waveguide type, coaxial cavity type, microstrip type, interdigital type, lumped element type, etc.

Usage scenarios: aerospace, navigation, radar, electronic countermeasures and satellite communications, etc.

Ku Band Satellite Communication Duplexer

【Product introduction】:

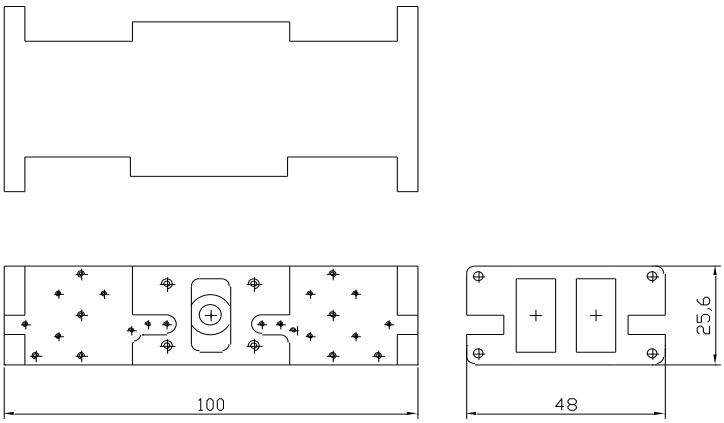
Contains two duplexers.

Features: Compact structure, low insertion loss, great rejection.

【Technical indicators】:

1. Working frequency: RX: 12.0~13.0GHz TX: 14.0~14.5GHz
2. VSWR: 1.22:1 MAX
3. Insertion loss: 0.45dB MAX
4. Isolation: TX/RX 90dB MIN

   RX/TX 50dB MIN
5. Phase coherence: ±3° MAX
6. Interface: Non-standard WR75
7. Structure:



Ku Band Satellite Communication Duplexer

Ku Band Satellite Communication Duplexer

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Ku Band satcom duplexer

【Product introduction】:

Features: High power capacity, great rejection.

【Technical indicators】:

1. Working frequency: RX: 10.70~12.75GHz

   TX: 13.75~14.50GHz

2. VSWR: 1.25:1 MAX

3. Insertion loss: RX: 0.60dB MAX; TX: 0.45dB MAX

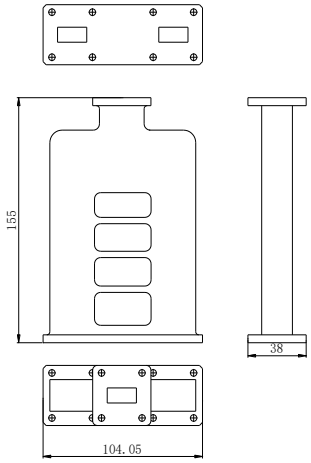
4. Isolation: TX/RX: 110dB MIN

   RX/TX: 90dB MIN

5. Power capacity: 2KW (Each TX port with 1KW input power)

6. Interface: Common port: Φ19.05 circular waveguide; Other ports: WR75

7. Structure:



Ku Band Satellite Communication Duplexer (Type A)

Ku Band Satellite Communication Duplexer (Type A)

Ku Band Duplexer

【Product introduction】:

Features: Great rejection, low phase variation.

【Technical indicators】:

1. Working frequency: RX: 12.25~12.75GHz

   TX:14.00～14.50GHz

2. VSWR: 1.22:1 MAX

3. Insertion loss: 0.40dB MAX

4. Isolation: TX/RX: 90dB MIN

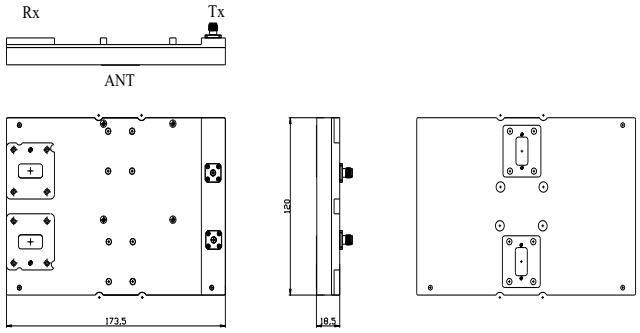
   RX/TX: 62dB MIN

5. phase coherence: ±3° MAX

6. Interface: Common port: Non-standard WR75;

   RX: Non-standard WR75 flange; TX: SMA-K

7. Structure:



Ku Band Satellite Communication Duplexer (Type B)

Ku Band Satellite Communication Duplexer (Type B)

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Ku Band Satellite Communication Duplexer

【Product introduction】:

Features: Low insertion loss, great isolation, compact structure.

【Technical indicators】:

1. Center frequency: RX: 12.0~13.0GHz

   TX: 15.0~15.35GHz

2. VSWR: 1.25:1 MAX

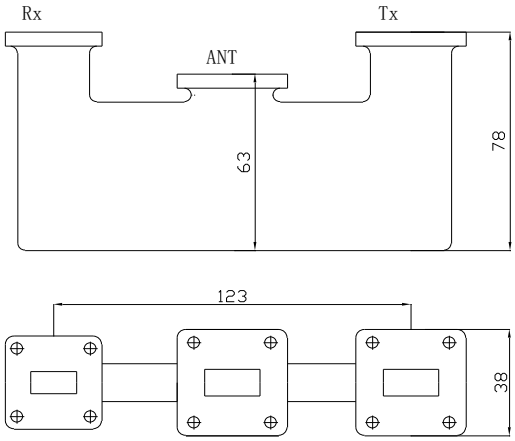
3. Insertion loss: 0.3dB MAX

4. Isolation: TX/RX: 90dB MIN

   RX/TX: 62dB MIN

5. Interface: RX: WR75, TX: WR62

6. Structure:



Ku Band Satellite Communication Duplexer (Type C)

Ku Band Satellite Communication Duplexer (Type C)

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Splitters/Dividers

The power divider/combiner is an important microwave passive device. The function of the power divider is to divide the input microwave energy into equal or unequal multiple energy outputs. The function of the combiner is opposite to that of the power divider, which is to combine the equal or unequal multi-channel signal energy into one output. Various types of power dividers/combiners can be quickly developed according to user needs:

Frequency range: 0.1~100GHz (terahertz band);

Function: equal division, non-equal division;

Number of branches: 2~128 (a higher number of branches can be developed);

Structural form: waveguide type, microstrip line type, strip line type, etc.

Usage scenarios: aerospace, navigation, radar, electronic countermeasures and satellite communications, etc.

Power dividers/combiners can be designed with special requirements, such as:

High power splitter/combiner;

Ultra-wideband power divider/combiner;

Large-scale array antenna feed network power divider/combiner, etc.

Ku Band Satellite Communication 4 in 1 dividers

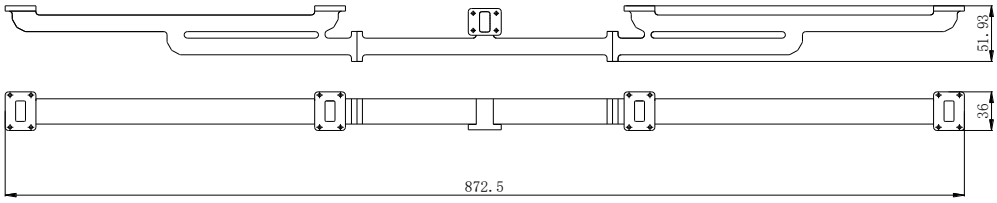
【Product introduction】:

Features: Excellent indicators and stable physical structure. Normally used for SOTM system as rf signal combiner.

【Technical indicators】:

1. Working frequency: RX: 12.25～12.75GHz

   TX: 14.00～14.50GHz
2. VSWR: 1.15:1 MAX
3. Insertion loss: 0.3dB MAX
4. Phase variation: ±4° MAX
5. Weight: 700gram
6. Interface: WR75
7. Structure:



Ku Band Satellite Communication 4 in 1 Combiner

Ku Band Satellite Communication 4 in 1 Combiner

Ku Band Satellite Communication 8 in 1 dividers

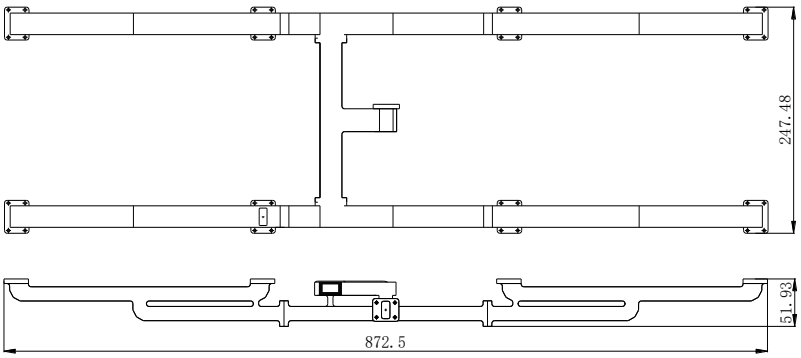
【Product introduction】:

Features: Excellent indicators and stable physical structure. Normally used for communication on the move system as rf signal combiner.

【Technical indicators】:

1. Working frequency: RX:12.25～12.75GHz

   TX: 14.00～14.50GHz
2. VSWR: 1.15:1 MAX
3. Insertion loss: 0.4dB MAX
4. Phase variation: ±4° MAX
5. Weight: 1700 gram
6. Interface: WR75
7. Structure:



Ku Band Satellite Communication 8 in 1 Combiner

Ku Band Satellite Communication 8 in 1 Combiner

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Rotary joint

Waveguide rotary joints are often used as rotating components in antenna-feed systems. Various types of waveguide rotary joints with stable structure, small volume, low insertion loss can be quickly designed according to user needs:

Frequency range: 4~40GHz;

Structural form: straight, L-shaped, U-shaped, etc.

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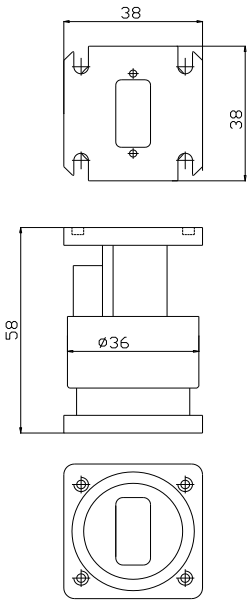
Ku Band Waveguide Rotary Joint I

【Product introduction】:

Features: Low insertion loss, stable structure. Can be used for antenna feed system.

【Technical indicators】:

1. Working frequency: 14.0～14.5GHz
2. VSWR: 1.2:1 MAX
3. Insertion loss: 0.2dB MAX
4. Operating temperature: -55℃～+85℃
5. Interface: WR75
6. Structure:



Ku Band Waveguide Rotary Joint I

Ku Band Waveguide Rotary Joint I

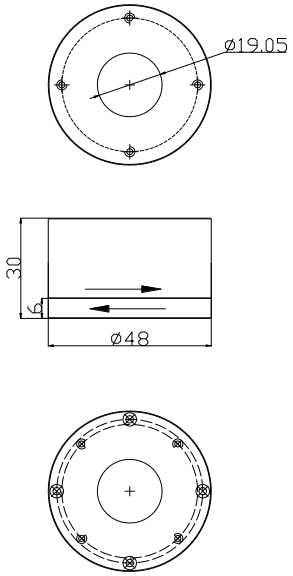
Ku Band Waveguide Rotary Joint II

【Product introduction】:

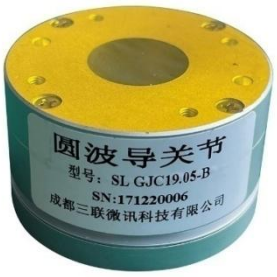
Features: Low insertion loss, stable structure. Can be used for antenna feed system.

【Technical indicators】:

1. Working frequency: 10.7～14.5GHz
2. VSWR: 1.15:1 MAX
3. Insertion loss: 0.2dB MAX
4. Operating temperature: -55℃～+85℃
5. Interface: circular waveguide Φ 19.05
6. Structure:



Ku Band Waveguide Rotary Joint II



Ku Band Waveguide Rotary Joint II

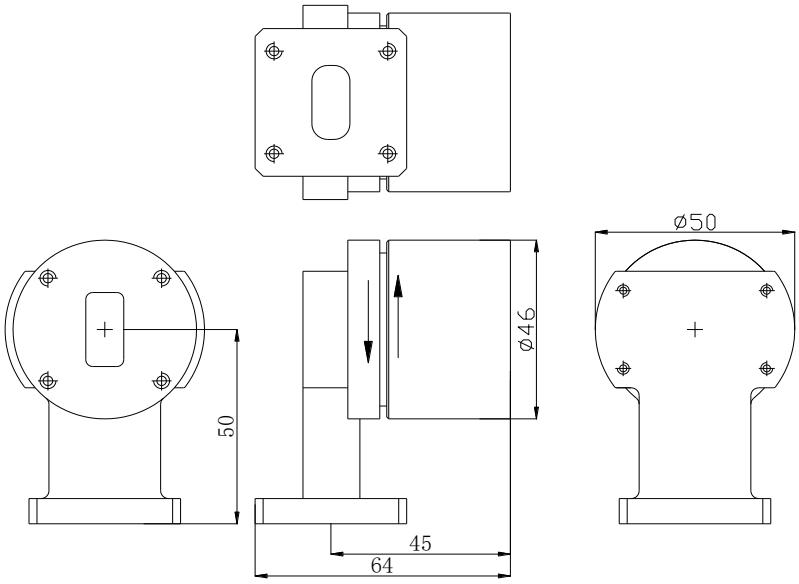
Ku Band L Type Waveguide Rotary Joint

【Product introduction】:

Features: Low insertion loss, stable structure. Can be used for antenna feed system.

【Technical indicators】:

1. Working frequency: 13.75～14.5GHz
2. VSWR: 1.20:1 MAX
3. Insertion loss: 0.2dB MAX
4. Operating temperature: -55℃～+85℃
5. Interface: WR75
6. Structure:



Ku Band L Type Waveguide Rotary Joint

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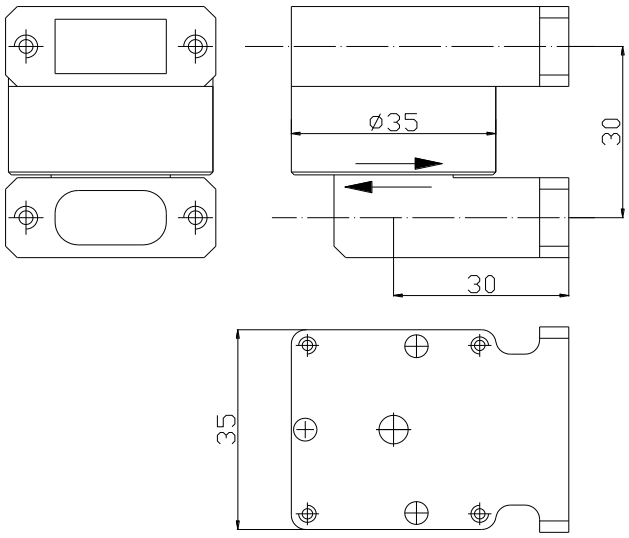
Ku Band U Type Waveguide Rotary Joint

【Product introduction】:

Features: Low insertion loss, stable structure. Can be used for antenna feed system.

【Technical indicators】:

1. Working frequency: 14～14.5GHz
2. VSWR: 1.20:1 MAX
3. Insertion loss: 0.2dB MAX
4. Operating temperature: -55℃～+85℃
5. Interface: WR75 Non-standard flange
6. Structure:



Ku Band U Type Waveguide Rotary Joint

Ku Band U Type Waveguide Rotary Joint

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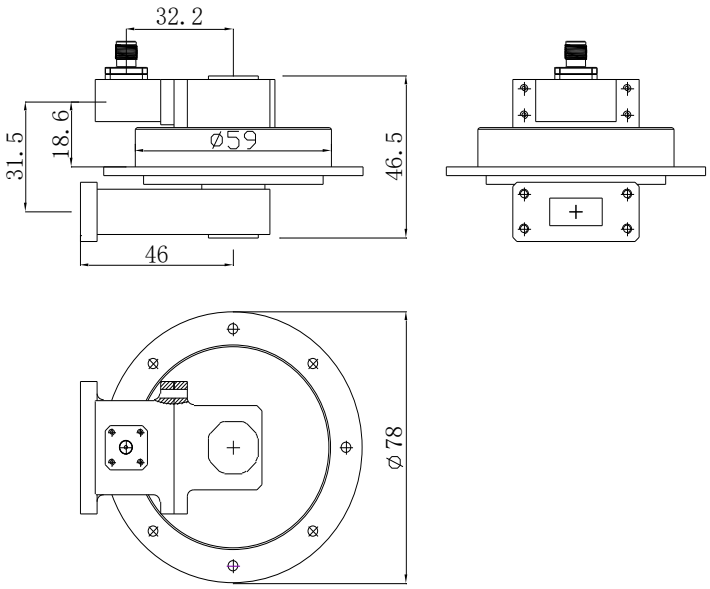
Ku Band U/SMA Type Waveguide Rotary Joint

【Product introduction】:

Features: Low insertion loss, stable structure. Can be used for antenna feed system.

【Technical indicators】:

1. Working frequency: 14.5～16.5GHz
2. VSWR: 1.2:1 MAX
3. Insertion loss: 0.3dB MAX
4. Operating temperature: -40℃～+70℃
5. Interface: WR62 Non-standard flange/SMA-K, average power: 70W
6. Structure:



Ku Band U/SMA Type Waveguide Rotary Joint

Ku Band U/SMA Type Waveguide Rotary Joint

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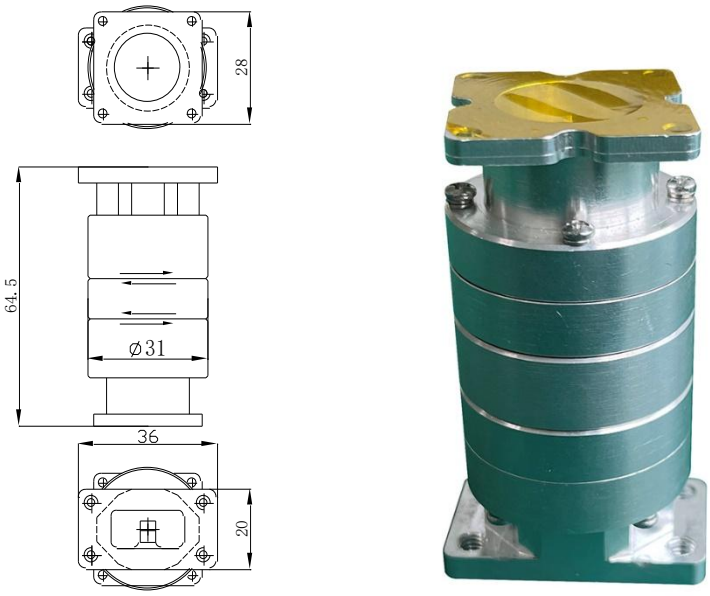
Ku Band I Type/circular waveguide Polarization Tracking Rotary Joint

【Product introduction】:

Features: Low insertion loss, stable structure. Can be used for antenna feed system.

【Technical indicators】:

1. Working frequency: 12.25～12.75G
2. VSWR: 1.20:1 MAX
3. Insertion loss: 0.3dB MAX
4. Operating temperature: -40℃～+70℃
5. Interface: Non-standard flange
6. Structure:



Ku Band I Type/circular waveguide Polarization Tracking Rotary Joint

Orthogonal Mode Coupler (OMT)

OMT is also known as an orthogonal mode coupler. The main function is to realize the duplex transmission of orthogonal modes in the antenna-feed system. It is a key component in the antenna-feed system and is widely used in various linear polarization, circular in a polarized antenna-feed system, the quality of its indicators directly affects the performance of the entire system. Various types of OMT can be quickly designed according to user needs:

Frequency range: 3~40GHz;

Structural form: waveguide type, coaxial line type, etc.

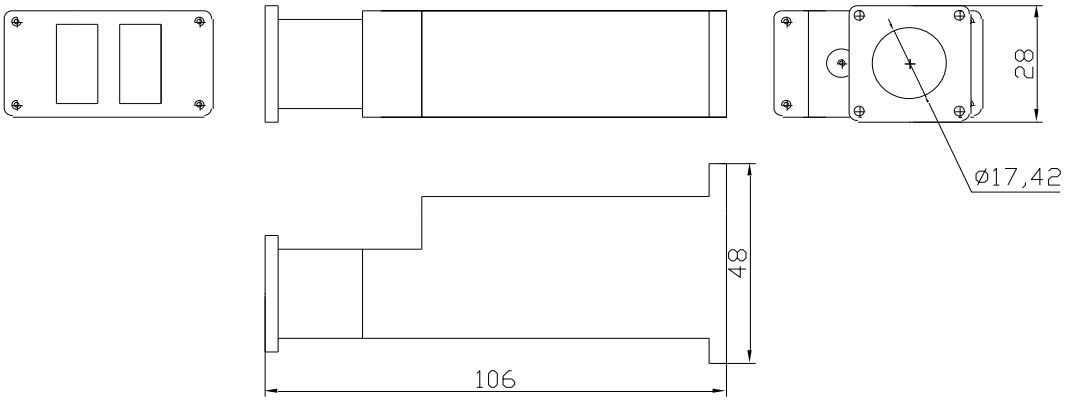
Ku Band microwave Inphase OMT

【Product introduction】:

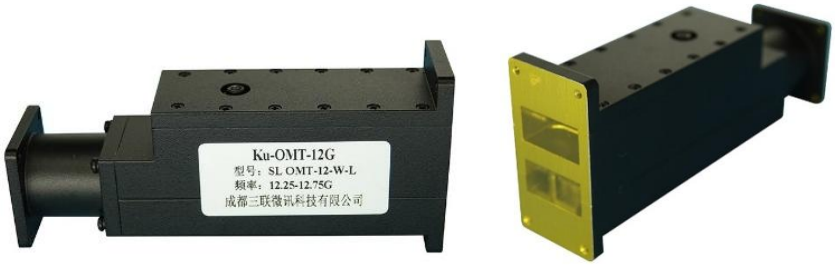
Features: Low insertion loss, great isolation and phase coherence.

【Technical indicators】:

1. Working frequency: 12.25~12.75GHz
2. VSWR: 1.12:1 MAX
3. Insertion loss: 0.15dB MAX
4. Isolation: 35dB MIN
5. Phase coherence: ±3° MAX
6. Interface: circular waveguide Φ17.42(Common port); WR75(Other ports)
7. Structure:



Ku Band Inphase OMT(type A)



Ku Band Inphase OMT(type A)

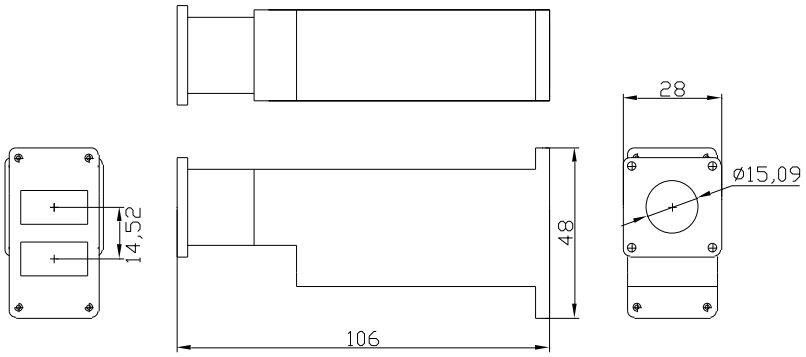
Ku Band waveguide inphase OMT

【Product introduction】:

Features: Low insertion loss, great isolation and phase coherence.

【Technical indicators】:

1. Working frequency: 14.0~14.5GHz
2. VSWR: 1.15:1 MAX
3. Insertion loss: 0.15dB MAX
4. Isolation: 35dB MIN
5. Phase coherence: ±3° MAX
6. Interface: circular waveguideΦ15.09(Common port); Waveguide WR75/WR62
7. Structure:



Ku Band Inphase OMT(type B)

Ku Band Inphase OMT(type B)

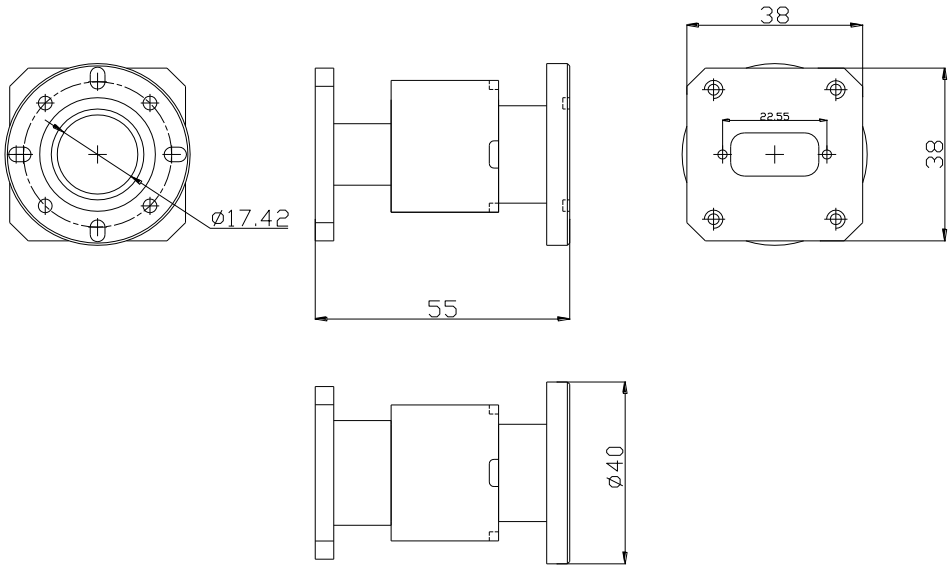
Ku Band Absorptive OMT

【Product introduction】:

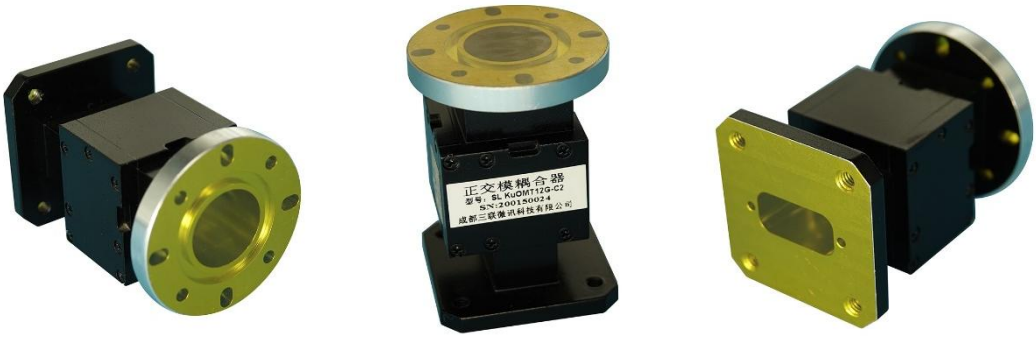
Features: Low insertion loss, great isolation.

【Technical indicators】:

1. Working frequency: 12.25～12.75GHz
2. VSWR: 1.20:1 MAX
3. Insertion loss: 0.1dB MAX
4. Orthogonal mode isolation: 40dB MIN
5. Structure:



Ku Band Absorptive OMT



Ku Band Absorptive OMT

Ku Band OMT

【Product introduction】:

Features: Low insertion loss, great isolation.

【Technical indicators】:

1. Working frequency: RX: 10.7～12.75GHz

   TX: 13.75～14.5GHz

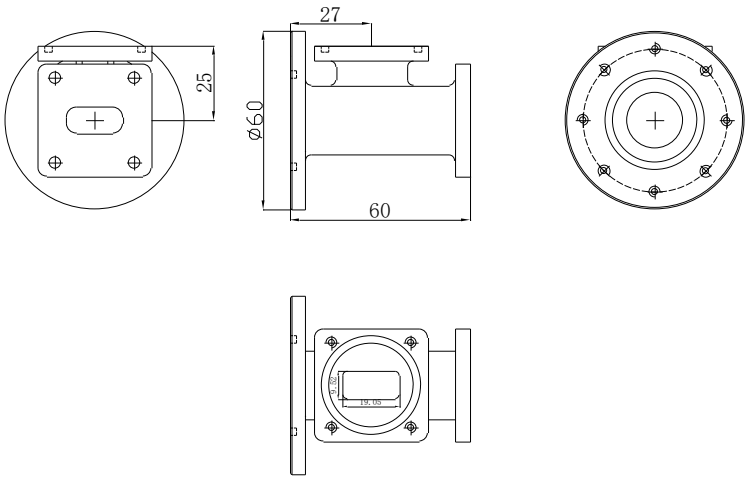
2. VSWR: 1.15:1 MAX

3. Insertion loss: 0.15dB MAX

4. Isolation: 40dB MIN

5. Interface: Common port: C19.05; RX: WR75; TX:WR75

6. Structure:



Ku Band OMT

Ku Band OMT

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K/Ka Band OMT

【Product introduction】:

Features: Low insertion loss, great isolation.

【Technical indicators】:

1. Working frequency: RX: 17.7～21.2GHz

   TX: 29.0～31.0GHz

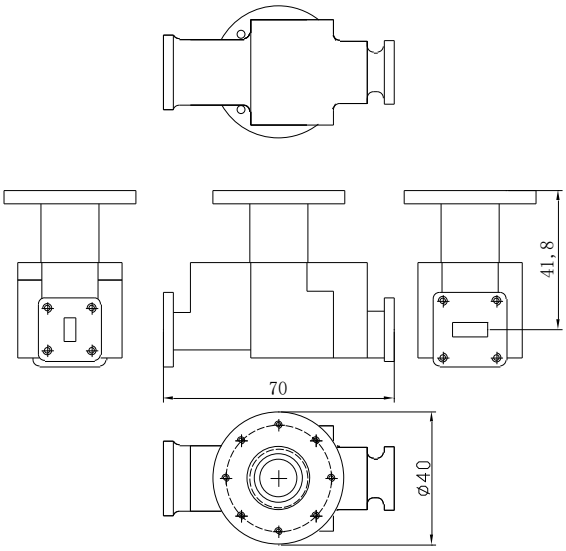
2. VSWR: 1.15:1 MAX

3. Insertion loss: 0.15dB MAX

4. Isolation: 35dB MIN

5. Interface: Common port: circular waveguide Φ 11.6;other ports: WR42、WR28

6. Structure:



K/Ka Band OMT

K/Ka Band OMT

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Coaxial waveguide converter

Coaxial waveguide converter is a commonly used microwave device. Its function is to convert the type of waveguide transmission line and coaxial transmission line. Various coaxial transmission lines with great VSWR, low insertion loss, wide operating frequency bandwidth and compact structure can be quickly designed according to user needs. Waveguide Converter:

Frequency range: 3~40GHz.

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Coaxial Waveguide Converter Data Sheet:

Connector Type(Waveguide)	Frequency Range(GHz)	VSWR Max	Insertion loss Max (dB)	Connector Type (Coaxial)
WR229	3.22-4.90	1.12	0.10	N
WR187	3.94-5.99	1.12	0.10	N
WR159	4.64-7.05	1.12	0.10	N
WR137	5.38-8.17	1.12	0.10	SMA/N
WR112	6.57-9.99	1.12	0.10	SMA/N
WR90	8.20-12.4	1.12	0.10	SMA/N
WR75	9.84-15.0	1.12	0.10	SMA
WR62	11.9-18.0	1.12	0.10	SMA
WR51	14.5-22.0	1.12	0.15	SMA
WR42	17.6-26.7	1.15	0.15	SMA
WR34	21.7-33.0	1.19	0.15	SMA
WR28	26.5-40.0	1.19	0.15	SMA

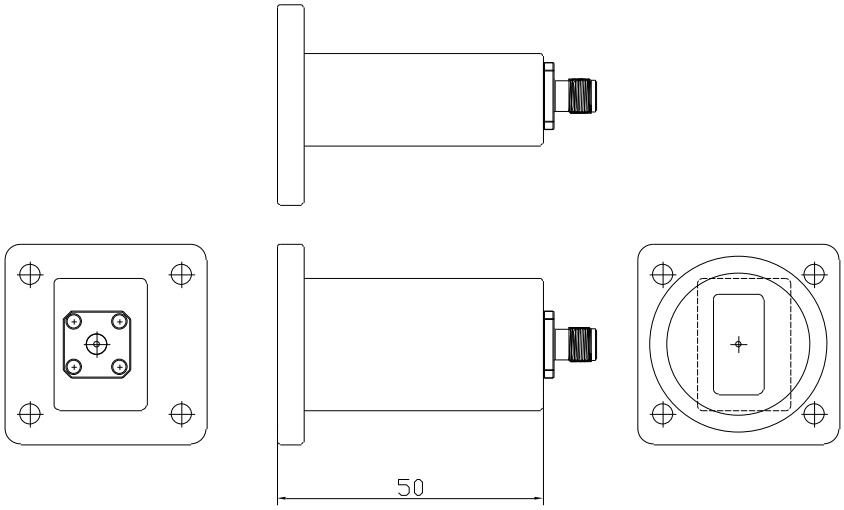
WR75 Coaxial Waveguide Converter

【Product introduction】:

Features: Great VSWR. Great insertion loss.

【Technical indicators】:

1. Working frequency: 9.84～15.0GHz
2. VSWR: 1.12:1 MAX
3. Insertion loss: 0.15dB MAX
4. Interface: SMA-K/WR75
5. Structure:



WR75 Coaxial Waveguide Converter

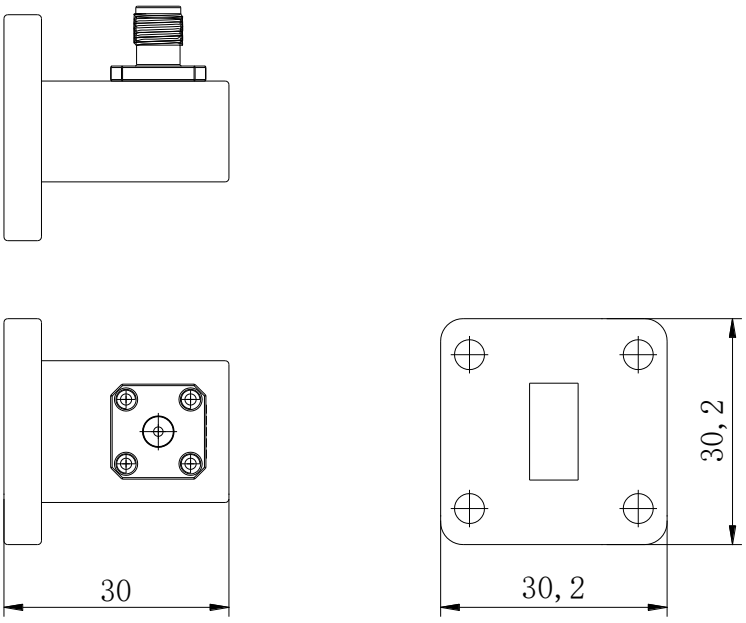
WR51 Coaxial Waveguide Converter

【Product introduction】:

Features: Great VSWR. Great insertion loss.

【Technical indicators】:

1. Working frequency: 14.5～22.0GHz
2. VSWR: 1.12:1 MAX
3. Insertion loss: 0.2dB MAX
4. Interface: SMA-K/WR51
5. Structure:



WR51 Coaxial Waveguide Converter

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Load

Matching load is a commonly used single-port passive device, its function is to absorb microwave energy. According to user requirements, each band waveguide matching load with great VSWR, wide operating frequency bandwidth and compact structure can be quickly designed:

Frequency range: 1~40GHz.

Structure type: rectangular waveguide, circular waveguide.

Rectangular Waveguide Matching Load Data Sheet:

Connector Type(Waveguide)	Frequency Range(GHz)	VSWR Max	Flange Model	Load Length(mm)
WR430	1.72-2.61	<1.04	FDP/FDM	300
WR229	3.22-4.90	<1.04	FDP/FDM	240
WR187	3.94-5.99	<1.04	FDP/FDM	200
WR159	4.64-7.05	<1.04	FDP/FDM	180
WR137	5.38-8.17	<1.04	FDP/FDM	160
WR112	6.57-9.99	<1.04	FDP/FDM	120
WR90	8.20-12.4	<1.04	FDP/FDM	120
WR75	9.84-15.0	<1.04	FDP/FDM	100
WR62	11.9-18.0	<1.04	FDP/FDM	85
WR51	14.5-22.0	<1.04	FDP/FDM	75
WR42	17.6-26.7	<1.04	FDP/FDM	65
WR34	21.7-33.0	<1.04	FDP/FDM	60
WR28	26.5-40.0	<1.04	FDP/FDM	55

Note: High-power matching loads can be designed according to user requirements

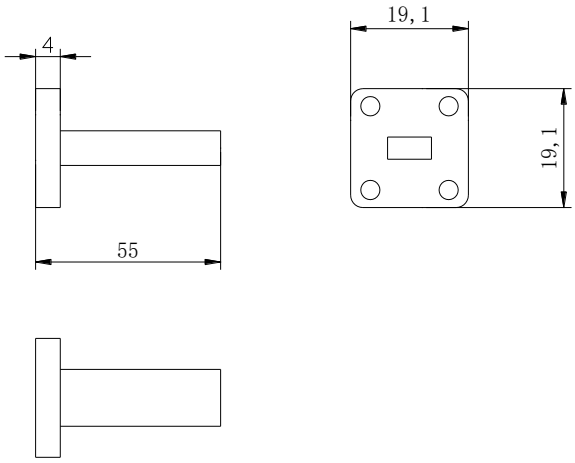
WR28 Waveguide Load

【Product introduction】:

Features: Great VSWR.

【Technical indicators】:

1. Working frequency: 26.5～40.0GHz
2. VSWR: 1.05:1 MAX
3. Interface: WR28
4. Structure:



WR28 Waveguide Load

Circular Waveguide Load Data Sheet:

Connector Type(Waveguide) IEC	Frequency Range(GHz)	VSWR Max	Flange Model	Load Length(mm)
C89	8.49-11.6	<1.04	Customizable	150
C104	9.97-13.7	<1.04	Customizable	130
C120	11.6-15.9	<1.04	Customizable	110
C140	13.4-18.4	<1.04	Customizable	100
C165	15.9-21.8	<1.04	Customizable	80
C190	18.2-24.9	<1.04	Customizable	70
C220	21.2-29.1	<1.04	Customizable	60
C255	24.3-33.2	<1.04	Customizable	60
C290	28.3-38.8	<1.04	Customizable	50
C330	31.8-43.0	<1.04	Customizable	50

Note: High-power matching loads can be designed according to user requirements

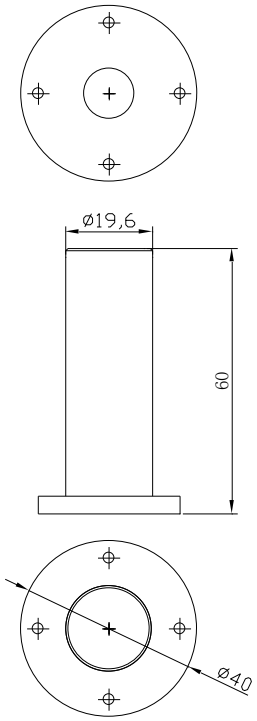
Circular Waveguide Load

【Product introduction】:

Features: Great VSWR.

【Technical indicators】:

1. Working frequency: 18.0～32.0GHz
2. VSWR: 1.05:1 MAX
3. Input port type: circular waveguide Φ 11.6
4. Structure:



Circular Waveguide Load

Phase shifter

A phase shifter is a microwave passive device that produces a certain phase difference between two signals or two states of a signal. It includes fixed phase shifters, digital phase shifters, adjustable phase shifters, etc. Among the phasers, the 90º phase shifter is often used as a circular polarizer for linearly polarized wave/circular polarized wave conversion, and is a very important microwave passive device; the 180º phase shifter is often used as a polarization tracker in satellite communications. In the communication-in-motion system. The adjustable phase shifter is often used to compensate the phase difference between the two signals in the microwave communication system. It can be quickly designed according to user requirements with low VSWR, low insertion loss, operating frequency bandwidth, small phase fluctuation, and compact structure. The various phase shifters:

Frequency range: 4~40GHz.

Structural type: rectangular waveguide, circular waveguide, microstrip line, coaxial line, fin line, stripline, etc.

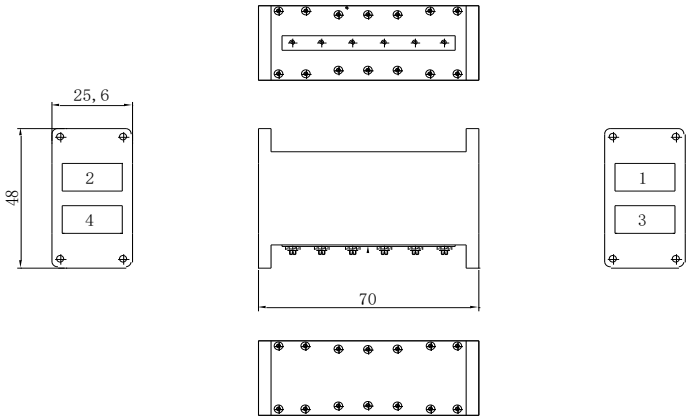
Ku Band Adjustable waveguide Phase Shifter

【Product introduction】:

It is used to compensate the phase difference between the uplink channel and the downlink channel of the satellite communication in-motion system. Features: Phase adjustable.

【Technical indicators】:

1. Working frequency: 12.25～12.75GHz
2. VSWR: 1.15:1 MAX
3. Insertion loss: 0.15dB MAX
4. Phase adjustable range: 30° MAX
5. Interface: WR75
6. Structure:



Ku Band Adjustable Phase Shifter

Ku Band Adjustable Phase Shifter

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Ku Band Circular Polarizer

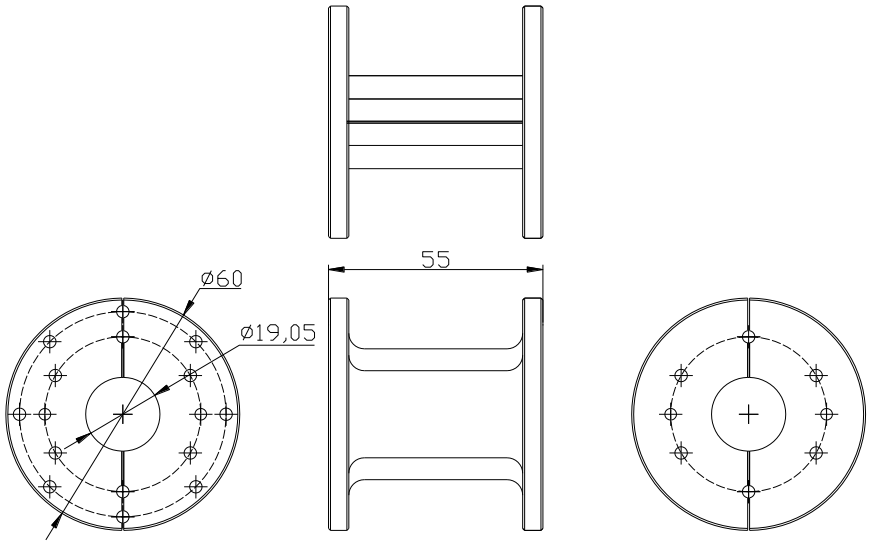
【Product introduction】:

It is used achieve circularly polarized wave.

Features: low insertion loss, low phase fluctuation.

【Technical indicators】:

1. Working frequency: 10.70～14.50GHz
2. VSWR: 1.17:1 MAX
3. Insertion loss: 0.15dB MAX
4. Circular polarizability: 0.5~1.2 dB
5. Interface: circular waveguideΦ19.05
6. Structure:



Ku Band Circular Polarizer

K Band Circular Polarizer

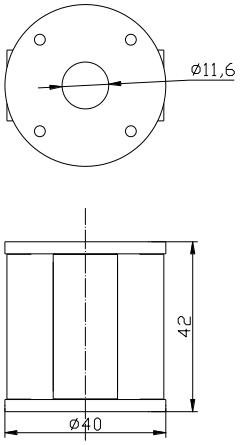
【Product introduction】:

It is used achieve circularly polarized wave. K Band phase shifter.

Features: low insertion loss, low phase fluctuation.

【Technical indicators】:

1. Working frequency: 17.7~22.0 GHz
2. VSWR: 1.17:1 MXA
3. Insertion loss: 0.20dB MAX
4. Circular polarizability: 0.5~1.2 dB
5. Interface: circular waveguideΦ11.6
6. Structure:



K Band Circular Polarizer

K Band Circular Polarizer

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K/Ka Band Circular Polarizer

【Product introduction】:

It is used achieve circularly polarized wave.

Features: low insertion loss, low phase fluctuation.

【Technical indicators】:

1. Working frequency: K band: 19.6～21.2GHz

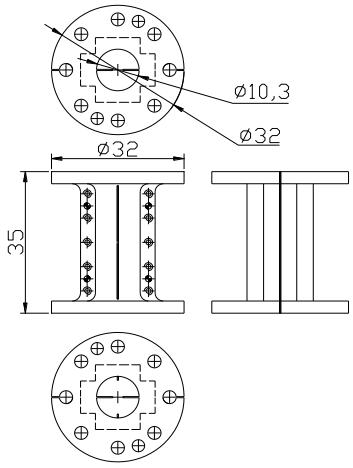
   Ka band: 29.4～31.0GHz

2. VSWR: 1.20:1 MAX

3. Insertion loss: 0.25dB MAX

4. Circular polarizability: 0.5~1.2 dB

5. Structure:



K/Ka Band Circular Polarizer (Type A)

K/Ka Band Circular Polarizer (Type A)

K/Ka band phase shifter

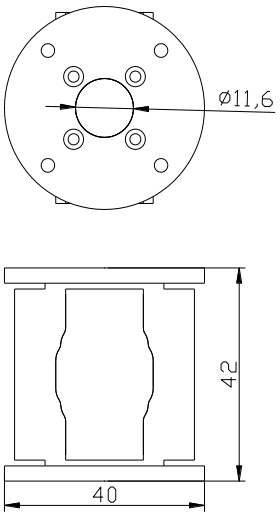
【Product introduction】:

It is used achieve circularly polarized wave.

Features: low insertion loss, low phase fluctuation.

【Technical indicators】:

1. Working frequency: K: 17.7～21.2GHz; Ka: 29.0～31.0GHz
2. VSWR: 1.17:1 MAX
3. Insertion loss: 0.25dB MAX
4. Circular polarizability: 0.5~1.2 dB
5. Interface: circular waveguideΦ11.6
6. Structure:



K/Ka Band Circular Polarizer (Type B)

K/Ka Band Circular Polarizer (Type B)

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Ku Band 180° Phase Shifter

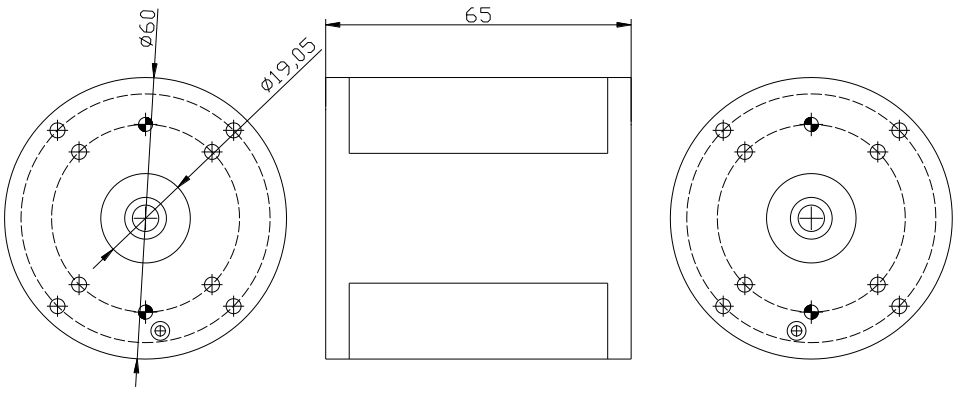
【Product introduction】:

It is used for polarization tracking of satellite communication in-motion system.

Features: low insertion loss, low phase fluctuation, compact structure.

【Technical indicators】:

1. Working frequency: 10.70～12.75GHz
2. VSWR: 1.17:1 MAX
3. Insertion loss: 0.20dB MAX
4. Phase fluctuation: 180±3°
5. Interface: circular waveguideΦ19.05
6. Structure:



Ku Band 180° Phase Shifter (Type A)

Ku Band 180° polarizer

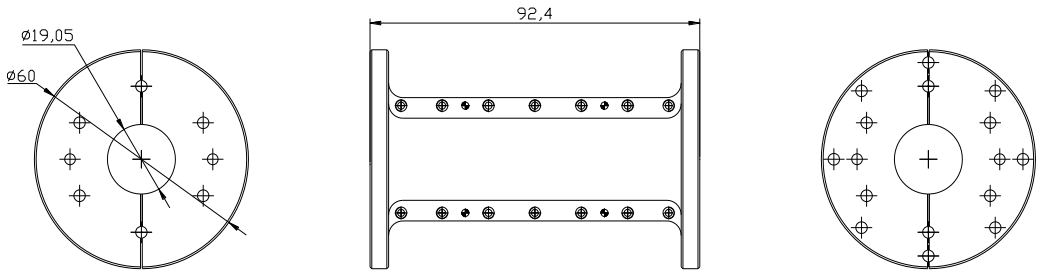
【Product introduction】:

It is used for polarization tracking of satellite communication in-motion system.

Features: low insertion loss, low phase fluctuation.

【Technical indicators】:

1. Working frequency: 10.70～14.50GHz
2. VSWR: 1.17:1 MAX
3. Insertion loss: 0.20dB MAX
4. Phase fluctuation: 180±4°
5. Interface: circular waveguideΦ19.05
6. Structure:



Ku Band 180° Phase Shifter (Type B)

K Band 180° Phase Shifter

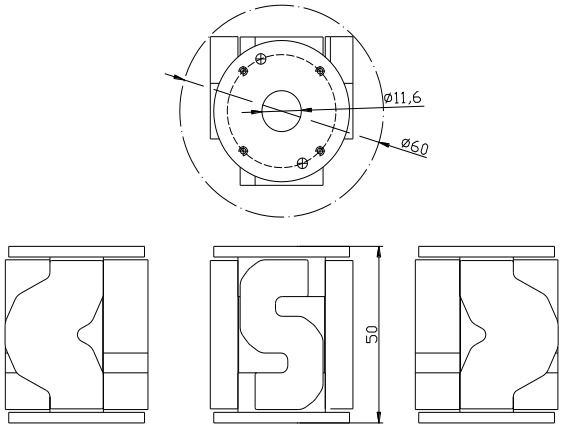
【Product introduction】:

It is used for polarization tracking of satellite communication in-motion system.

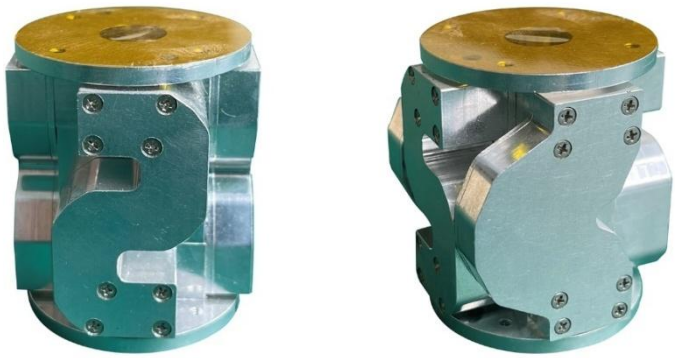
Features: low insertion loss, low phase fluctuation.

【Technical indicators】:

1. Working frequency: 17.70～21.20GHz
2. VSWR: 1.17:1 MAX
3. Insertion loss: 0.25dB MAX
4. Phase fluctuation: 180±3°
5. Interface: circular waveguideΦ11.60
6. Structure:



K Band 180°Phase Shifter



K Band 180°Phase Shifter

Antenna feed components

The feed component refers to the component composed of the antenna feed and the devices behind the feed, generally including the antenna feed, duplexer, orthogonal mode coupler (OMT), circular polarizer (90º phase shifter), template pole Chemizer, etc. It is used for two-way operation of receiving/transmitting signals, dual-mode transmission, and the polarization mode is linearly polarized wave or circularly polarized wave. Our company can professionally design various antenna and feeder components:

Frequency range: 0.1~40GHz;

Structural form: waveguide type, coaxial line type, strip line type, microstrip type, lumped element type, etc.

C Band Linear Polarization Component

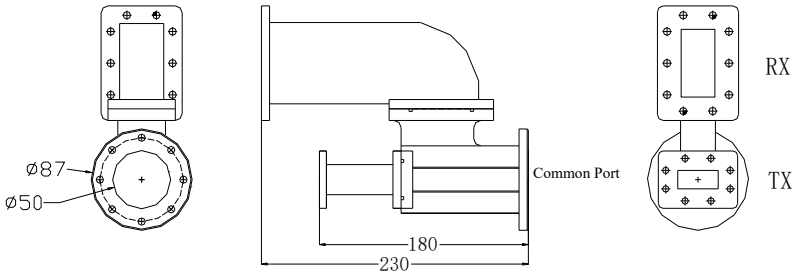
【Product introduction】:

Including OMT, duplexer.

Features: High power Capacity, great isolation. Used for a part of antenna feed.

【Technical indicators】:

1. Working frequency: RX: 4.50~4.80GHz; TX:6.725~7.025GHz
2. VSWR: 1.25:1 MAX
3. Insertion loss: RX: 0.25dB MAX, TX: 0.15dB MAX
4. Cross polarization: 35.0dB MIN
5. Isolation: TX/RX: 90dB MIN
6. Power Capacity: 5KW
7. Air tightness requirements: 5psig
8. Interface: WR229 (RX); WR137(TX)
9. Structure:



C Band Linear Polarization Component

C Band Linear Polarization Component

K/Ka Band Circular Polarization Component

【Product introduction】:

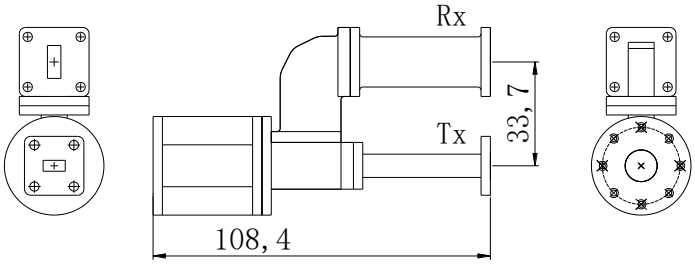
Including circular polarizer, OMT, filter. Used for a part of antenna feed.

Features: High power capacity, great rejection.

【Technical indicators】:

1. Working frequency: K: 20.2～21.2GHz; Ka: 28.5～29.5GHz
2. VSWR: 1.25:1 MAX
3. Insertion loss: 0.5dB MAX
4. Circular polarizability: 0.5～1.2dB
5. Isolation: TX/RX: 110dB MIN

   RX/TX: 35dB MIN
6. Transmit power: 150W
7. Interface: circular waveguideΦ10.3; WR42(K band); WR28(Ka band)
8. Structure:



K/Ka Band Circular Polarization Component

K/Ka Band Circular Polarization Component

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Extend C Band 4 Port Linear Polarization Diplexer

【Product introduction】:

Contains OMT and 2 duplexers. Used for a part of antenna feed.

Features: wide working bandwidth, low insertion loss, great rejection, high Power Capacity.

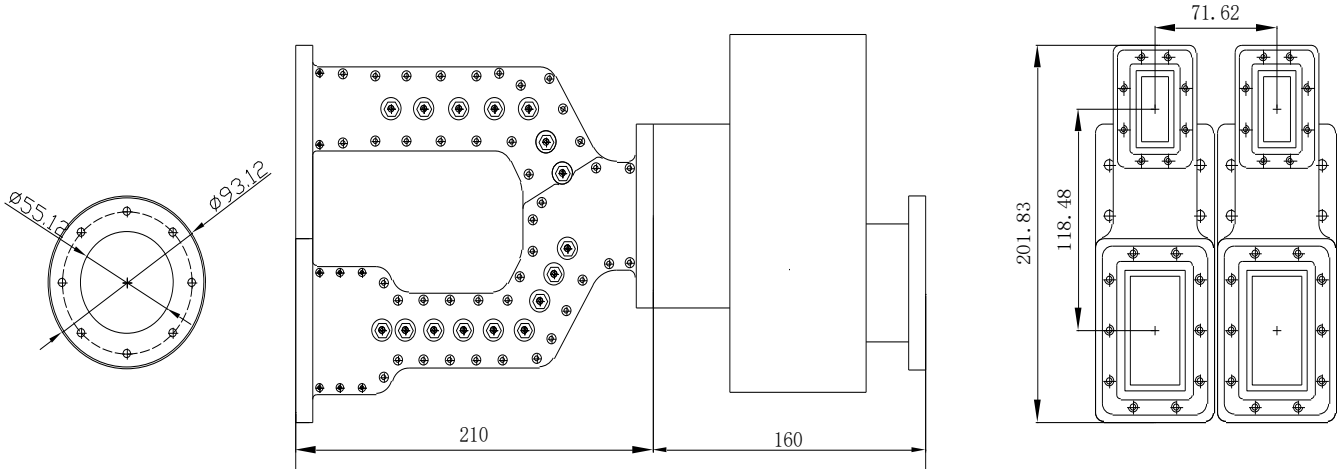
【Technical indicators】:

1. Working frequency: RX: 3.40~4.80GHz; TX: 5.85~7.025GHz
2. VSWR: 1.25:1 MAX
3. Insertion loss: 0.20dB MAX
4. Isolation: RX/TX 95dB MIN

   TX/RX 95dB MIN

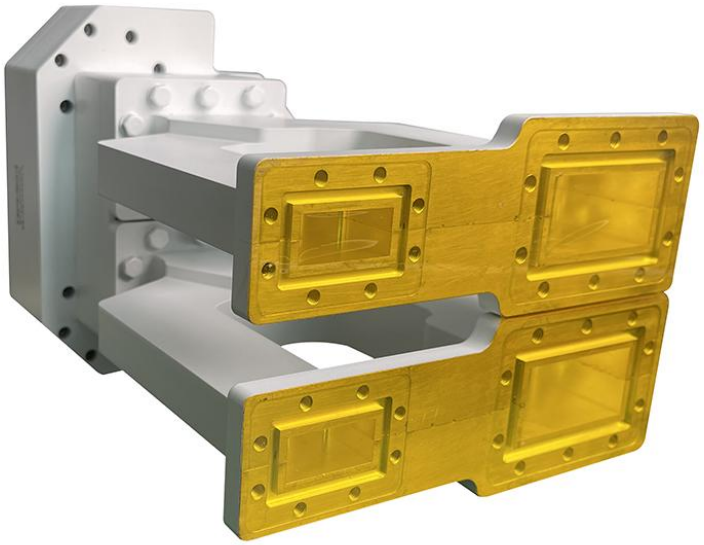
   TX/TX 40dB MIN

   RX/RX 40dB MIN
5. Power Capacity: 5KW(CW)
6. Interface: WR229(RX), WR137(TX)
7. Structure:



Extend C Band 4 Port Linear Polarization Duplexer

(a)



(b)

Extend C Band 4 Port Linear Polarization Duplexer

C Band 4 Port Circular Polarization Duplexer

【Product introduction】:

Contains OMT and 2 duplexers and 2 directional couplers. Used for a part of antenna feed.

【Technical indicators】:

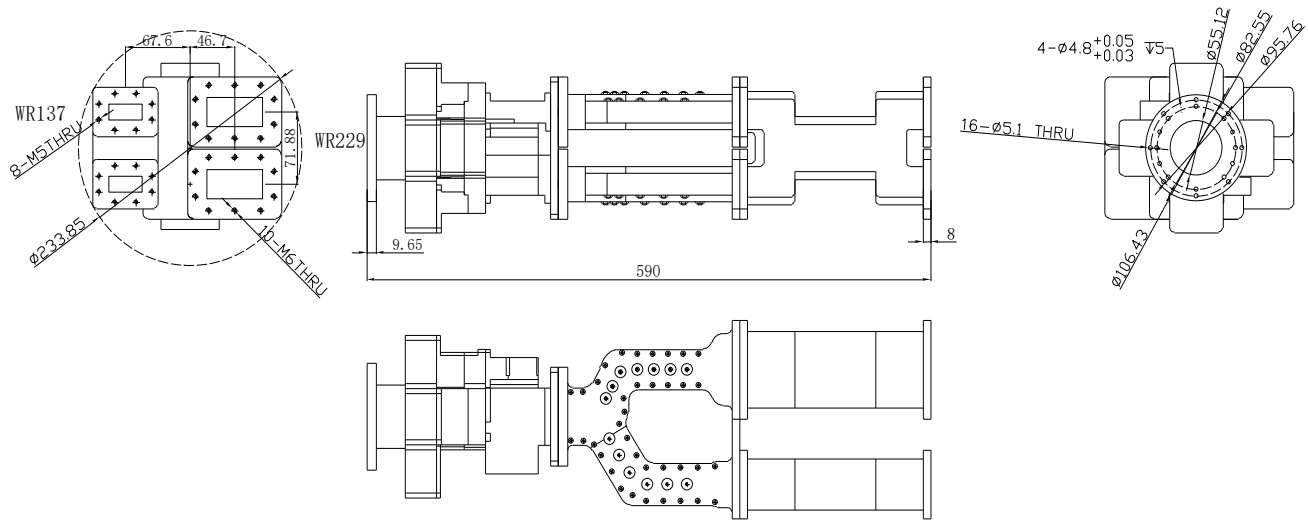
1. Frequency：3.40～4.20GHz (Rx)， 5.85～6.725GHz（Tx）
2. VSWR：1.25:1 MAX
3. Insertion loss：0.40dB MAX
4. Axial ratio：0.4dB MAX
5. Isolation: TX/RX 85dB MIN

   RX/TX 85dB MIN

   TX/TX 20dB MIN

   RX/RX 20dB MIN
6. Interface：WR229（Rx）

   WR137（Tx）
7. Pressurization：sealed to 2.0 PSIG
8. Power handling：5000W
9. Weight：8.3KG
10. Structure:



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C Band 4 Port Linear Polarization Duplexer

【Product introduction】:

Contains OMT and 2 duplexers. Used for a part of antenna feed.

【Technical indicators】:

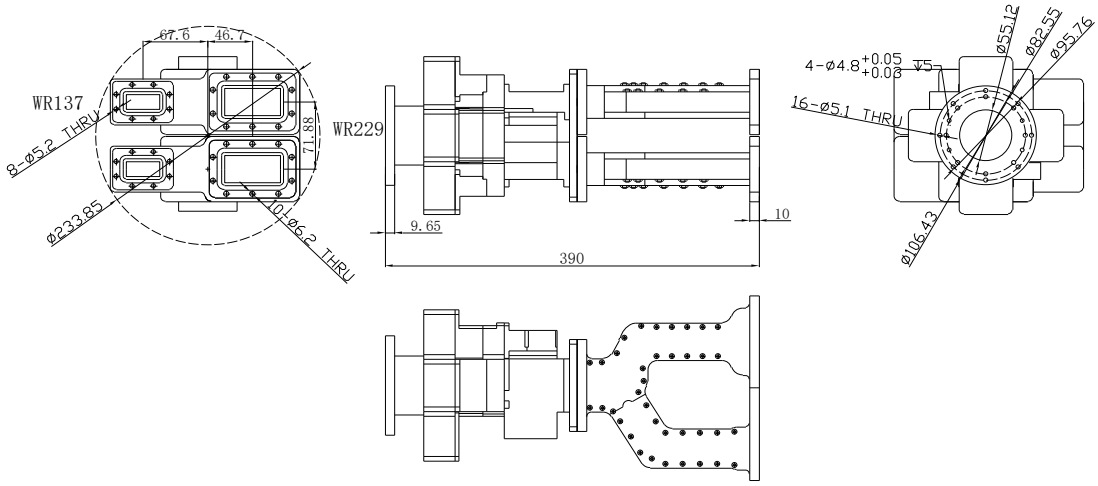
1. Frequency：3.40～4.20GHz (Rx)， 5.85～6.725GHz（Tx）
2. VSWR：1.25:1 MAX
3. Insertion loss：0.35dB MAX
4. Isolation：TX/RX 85dB MIN

   RX/TX 85dB MIN

   RX/RX 40dB MIN

   TX/TX 40dB MIN
5. Cross pol：40dB MIN
6. Interface：WR229（Rx）

   WR137（Tx）
7. Pressurization：sealed to 2.0PSIG
8. Power handling：5000W
9. Weight：5.8KG
10. Structure:



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Tel: +86 13558811550 (Whatsapp & Wechat)

Extend C Band 4 Port Circular Polarization Duplexer

【Product introduction】:

Contains OMT and 2 duplexers and 2 Magic T. Used for a part of antenna feed.

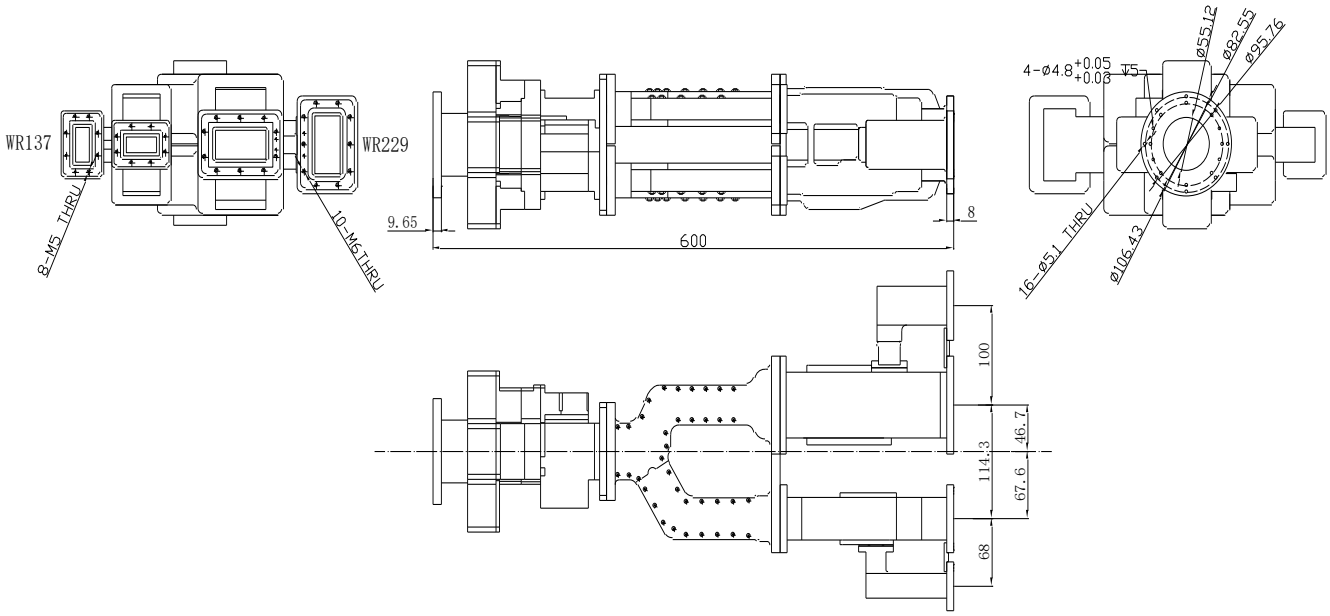
【Technical indicators】:

1. Frequency：3.40～4.80GHz (Rx)， 5.725～7.25GHz（Tx）
2. VSWR：1.20:1 MAX
3. Insertion loss：0.35dB MAX
4. Axial ratio：0.5dB MAX
5. Isolation: TX/RX 85dB MIN

   RX/TX 85dB MIN

   TX/TX 20dB MIN

   RX/RX 20dB MIN
6. Interface：WR229（Rx）,WR137（Tx）
7. Pressurization：sealed to 2.0 PSIG
8. Power handling：5000W
9. Weight：11KG
10. Structure:



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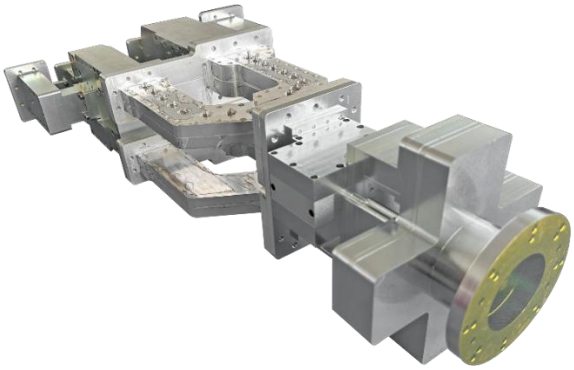
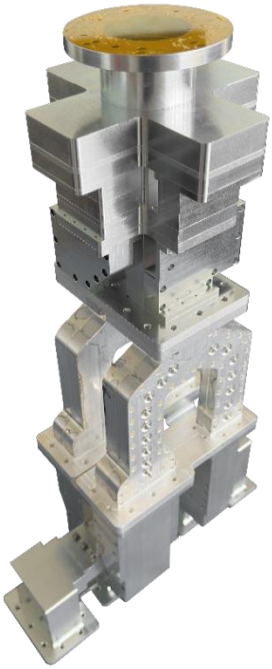
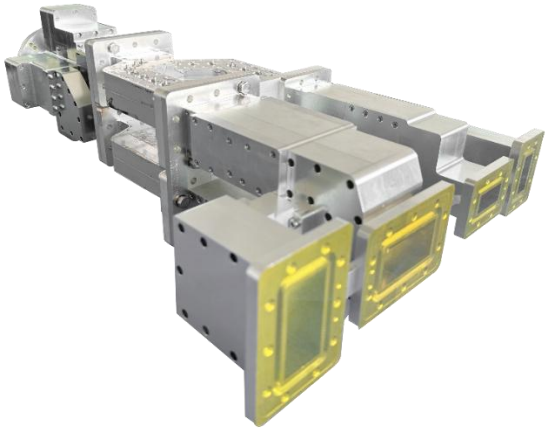






Extend C Band 4 Port Linear Polarization Duplexer

【Product introduction】:

Contains OMT and 2 duplexers. Used for a part of antenna feed.

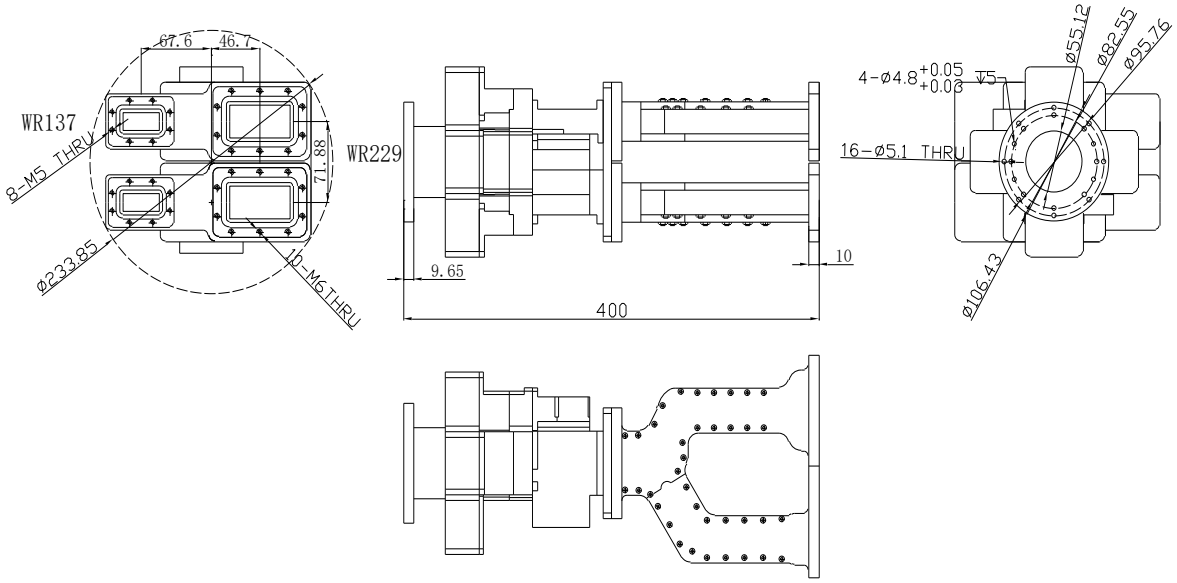
【Technical indicators】:

1. Frequency：3.40～4.80GHz (Rx)， 5.725～7.25GHz（Tx）
2. VSWR：1.20:1 MAX
3. Insertion loss：0.30dB MAX
4. Isolation：TX/RX 85dB MIN

   RX/TX 85dB MIN

   RX/RX 40dB MIN

   TX/TX 40dB MIN
5. Crosspol：35dB MIN
6. Interface：WR229（Rx）,WR137（Tx）
7. Pressurization：sealed to 2.0PSIG
8. Power handling：5000W
9. Weight：6.2KG
10. Structure:



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Ku Band 4 Port Linear Polarization Duplexer

【Product introduction】:

Contains OMT and 2 duplexers.

Features: High power capacity, great rejection. Used for a part of antenna feed.

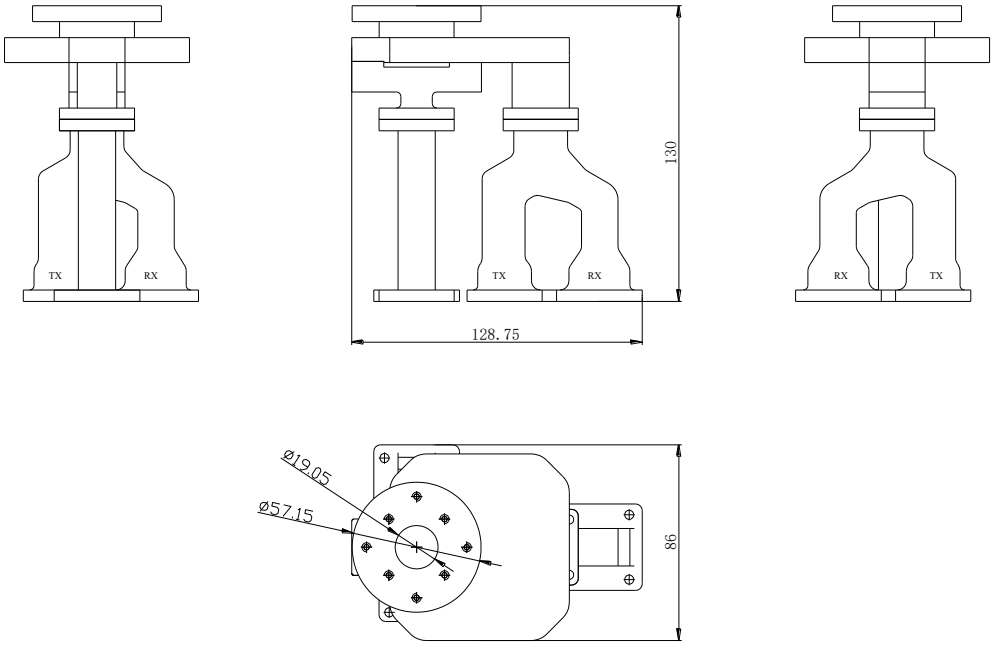
【Technical indicators】:

1. Working frequency: RX:10.70~12.75GHz, TX:17.30~18.4GHz
2. VSWR: 1.20:1 MAX
3. Insertion loss: 0.50dB MAX(RX), 0.35dB MAX(TX)
4. Isolation: TX/RX 100dB MIN

   RX/TX 90dB MIN

   RX/RX 35dB MIN

   TX/TX 35dB MIN
5. Power Capacity: 1000W(TX)
6. Interface: Common port: Φ19.05 circular waveguide; TX: WR62; RX: WR75
7. Structure:



Ku Band 4 Port Linear Polarization Duplexer

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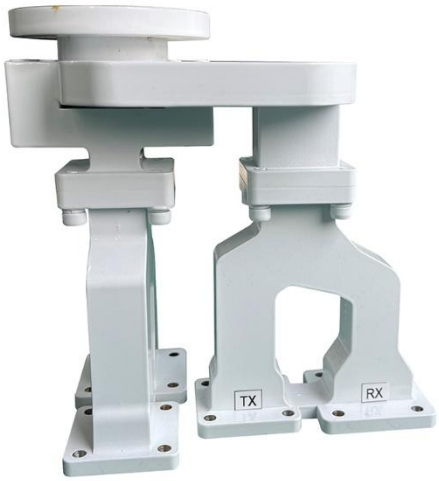
（a）

(c)

（b）



(d)

Ku Band 4 Port Linear Polarization Duplexer

Extend 4 Port Circular Polarization Diplexer

【Technical indicators】:

1. Frequency：Ku (Satcom)： 10.70~12.75GHz (RX)

13.75~14.50GHz(TX)

Ku（Scattering）: 14.50~14.8GHZ(RX)

15.05~15.35GHz(TX)

K: 17.70~21.20GHz(RX)

Ka: 27.50~31.00GHz(TX)

2. VSWR：1.4:1 MAX
3. Insertion loss：0.8dB MAX
4. Axial ratio：1.5dB MAX
5. Isolation: Ku orthogonal isolation 35dB MIN

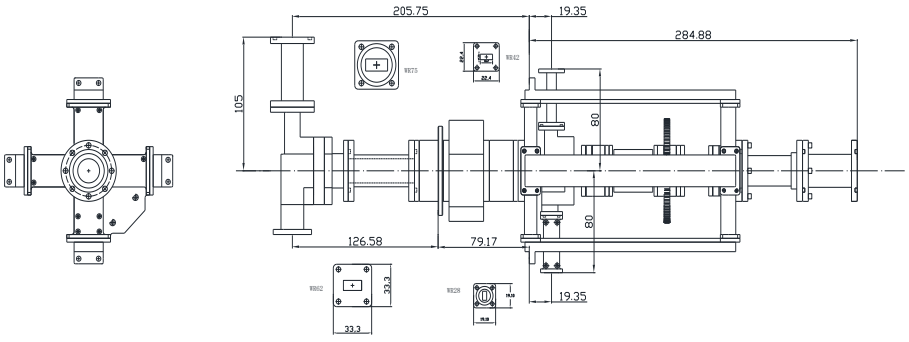
(K&Ka)/Ku 40dB MIN

K/Ka : TX/RX 85dB MIN

RX/TX 85dB MIN

Ku-TX/Ku-RX(Satcom) 85dB MIN

6. Interface：WR42（Rx）,WR28（Tx）， WR75(RX&TX)，WR62(TX)
7. Structure:



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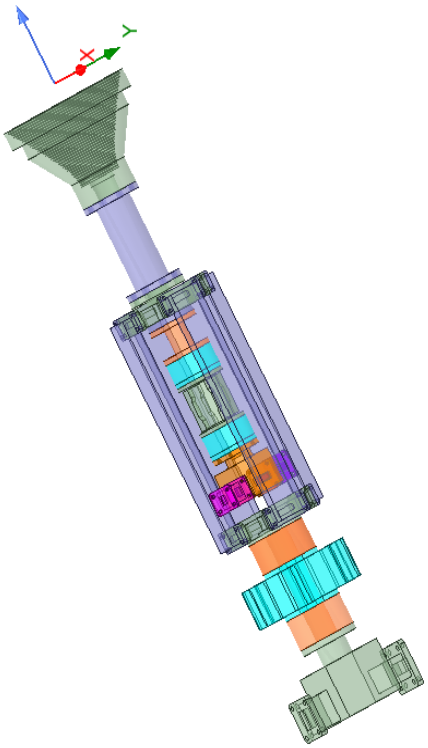


K/Ka 4 Port Circular Polarization Duplexer

【Product introduction】:

Contains OMT and 2 duplexer and 2 Directional couplers. Used for a part of antenna feed.

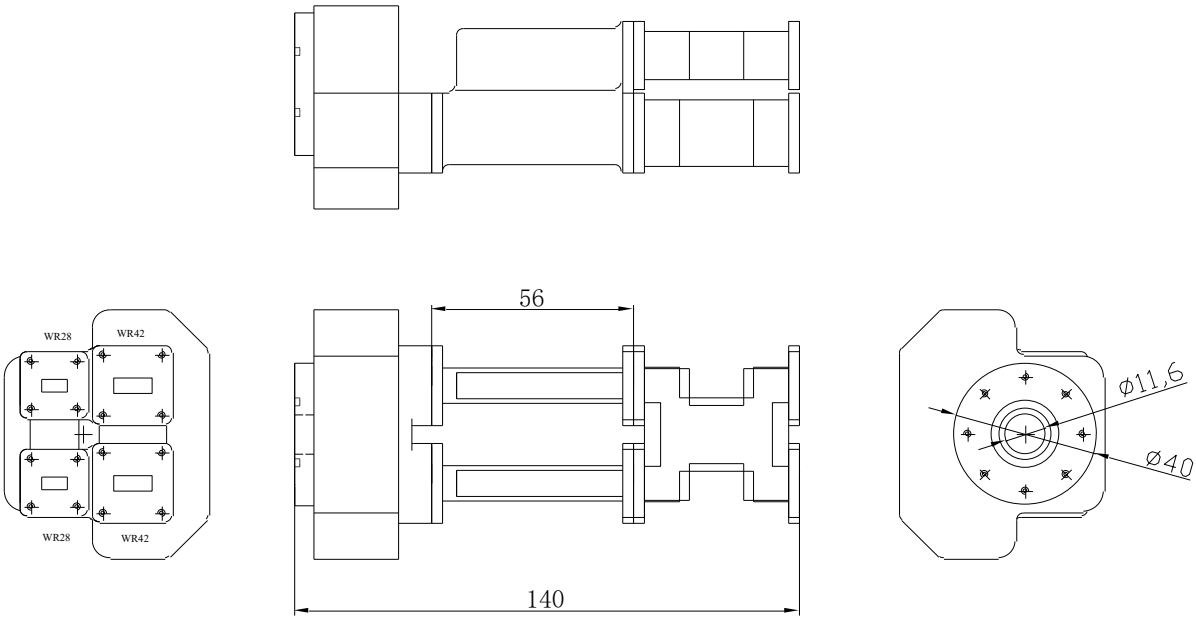
【Technical indicators】:

1. Frequency：17.70～21.2GHz (Rx)， 27.5～31GHz（Tx）
2. VSWR：1.25:1 MAX
3. Insertion loss：0.5dB MAX
4. Axial ratio：0.6dB MAX
5. Isolation: TX/RX 90dB MIN

   RX/TX 90dB MIN

   TX/TX 20dB MIN

   RX/RX 20dB MIN
6. Interface：WR42（Rx）,WR28（Tx）
7. Pressurization：sealed to 2.0 PSIG
8. Power handling：5000W
9. Structure:



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K/Ka 4 Port Circular Polarization Diplexer

【Product introduction】:

Contains OMT and 2 duplexer and 2 Directional couplers. Used for a part of antenna feed.

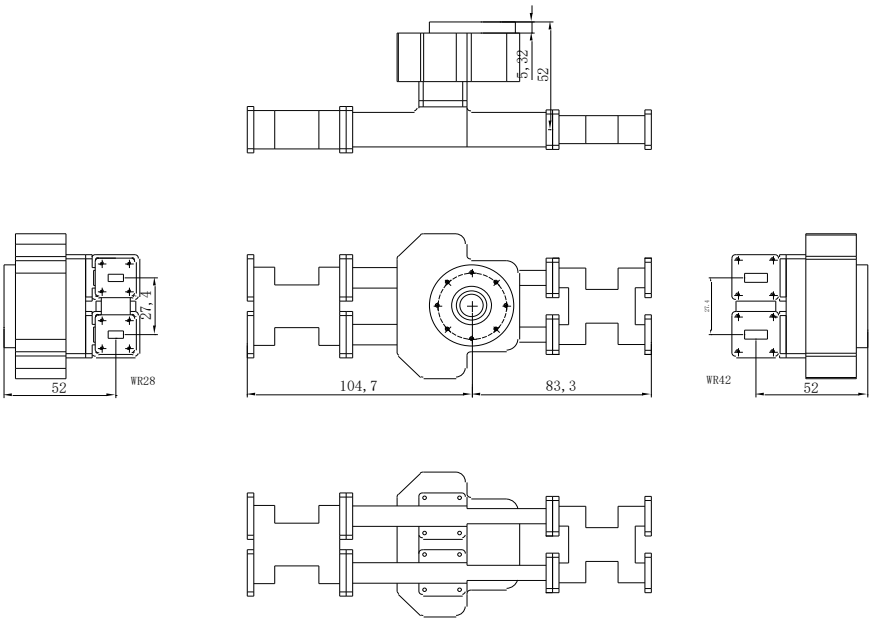
【Technical indicators】:

1. Frequency：17.70～21.2GHz (Rx)， 27.5～31GHz（Tx）
2. VSWR：1.25:1 MAX
3. Insertion loss：0.5dB MAX
4. Axial ratio：0.6dB MAX
5. Isolation: TX/RX 90dB MIN

   RX/TX 90dB MIN

   TX/TX 20dB MIN

   RX/RX 20dB MIN
6. Interface：WR42（Rx）,WR28（Tx）
7. Pressurization：sealed to 2.0 PSIG
8. Power handling：5000W
9. Structure:



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Ku/K/Ka multi band antenna feed compoents

【Product introduction】:

Including splitter, combiner, filter, connecting waveguide.

Features: wide bandwidth, low insertion loss, compact size.

【Technical indicators】:

1. Working frequency: Ku band: 12.25～12.75GHz (RX);14～14.5GHz (TX)

   K/Ka band: 19.6～21.2GHz (RX);29.4～31.0GHz (TX)

2. VSWR: 1.25:1 MAX

3. Insertion loss: 0.35dB MAX @ Ku/K/Ka

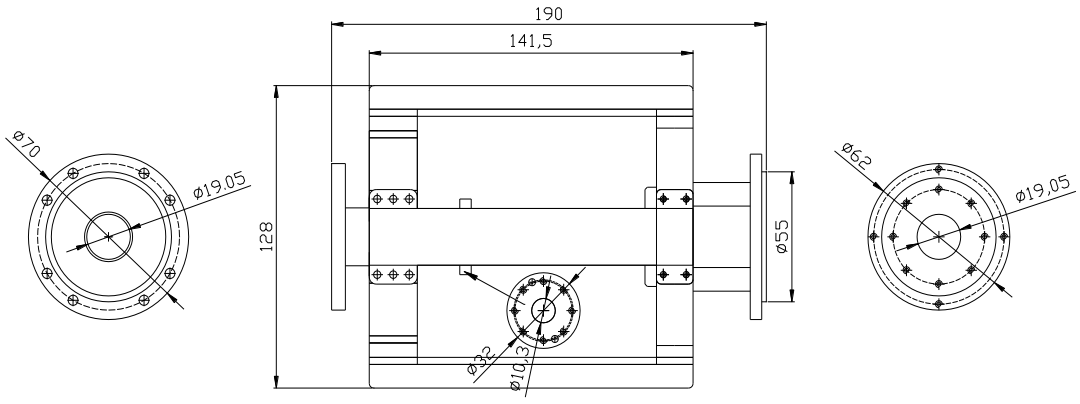
4. Isolation: K/Ku: 60dB MIN

   Ka/Ku: 40dB MIN

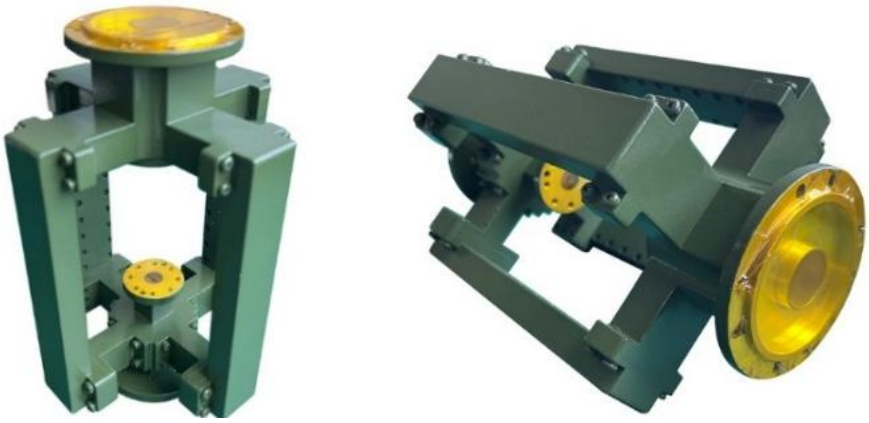
   Ku Orthogonal mode isolation: 40dB MIN

5. Phase difference: Ku: ±4° MAX; K/Ka: ±4° MAX

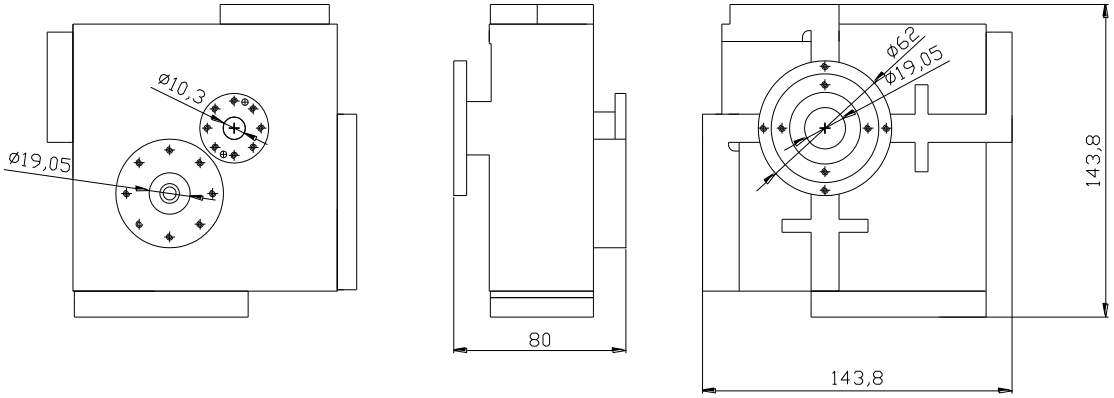
6. Structure:



Ku/K/Ka Multi Band Orthogonal Mode Component (Type A)

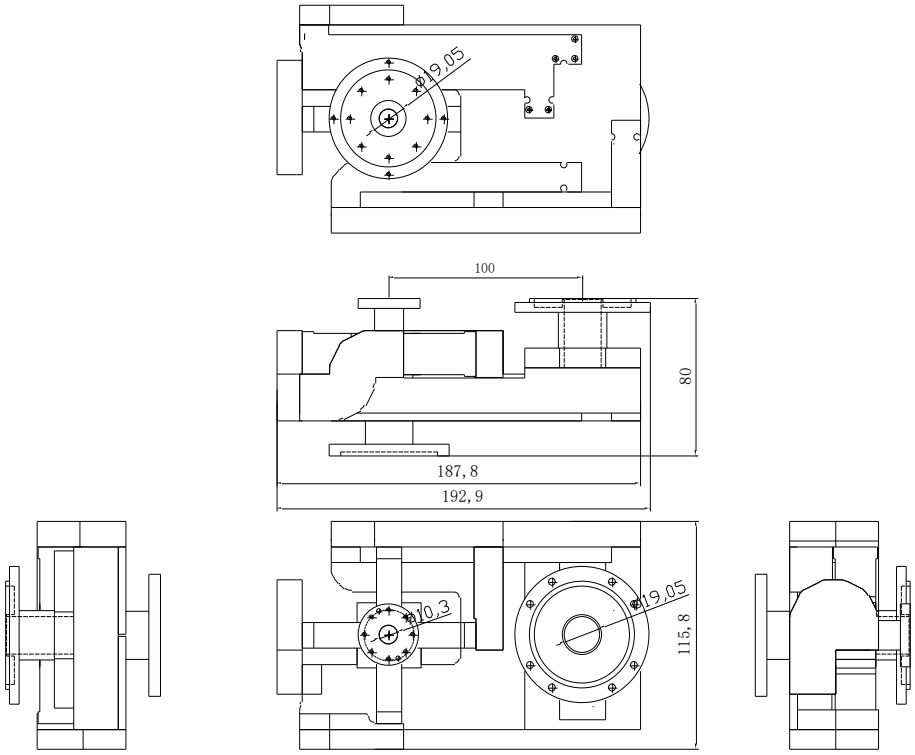


Ku/K/Ka Multi Band Orthogonal Mode Component (Type A)

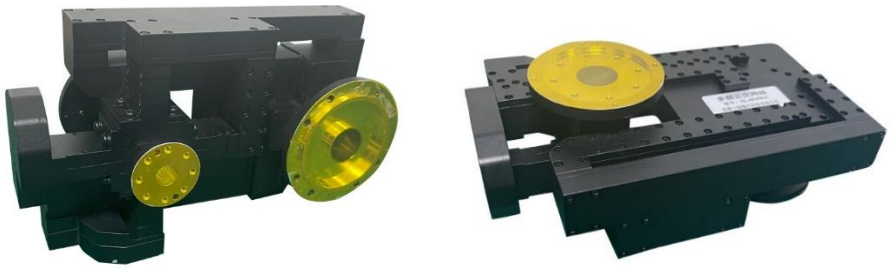


Ku/K/Ka Multi Band Orthogonal Mode Component (Type B)

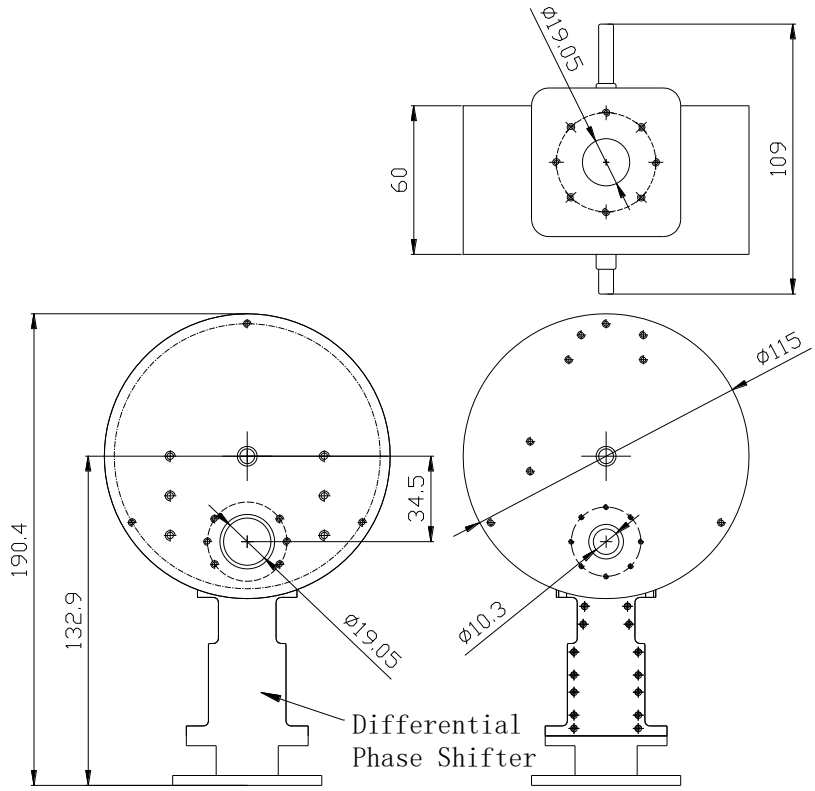
Ku/K/Ka Multi Band Orthogonal Mode Component (Type B)



Ku/K/Ka Multi Band Orthogonal Mode Component (Type C)



Ku/K/Ka Multi Band Orthogonal Mode Component (Type C)



Ku/K/Ka Multi Band Orthogonal Mode Component (Type D)

Ku/K/Ka Multi Band Orthogonal Mode Component (Type D)

Ku/K/Ka multi band compact feed components

【Product introduction】:

Including splitter, combiner, filter, septum polarizer, connecting waveguide.

Features: wide bandwidth, low insertion loss, compact size.

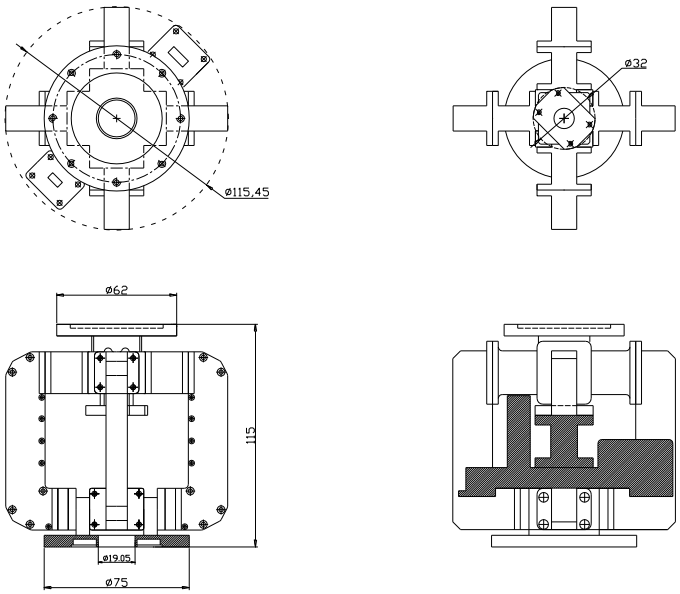
【Technical indicators】:

1. Working frequency: Ku band: 12.25～12.75GHz (RX); 14～14.5GHz (TX)

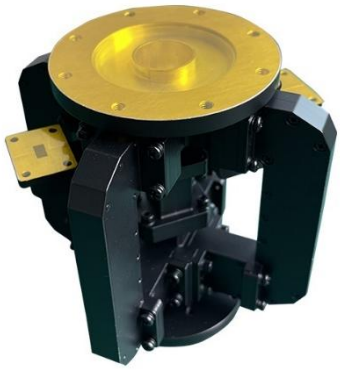
   K/Ka band: 19.6～21.2GHz (RX); 29.4～31.0GHz (TX)
2. VSWR: 1.30:1 MAX
3. Insertion loss: Ku: 0.6dB MAX; K/Ka: 0.5dB MAX
4. Isolation: (K/Ka)/Ku: 60dB MIN

   K/Ka: TX/RX 85dB MIN

   K/Ka: RX/TX 50dB MIN
5. circular polarizability (K/Ka): 1.0dB MAX
6. Orthogonal mode isolation: 40dB MIN
7. Orthogonal mode phase difference: ±4° MAX

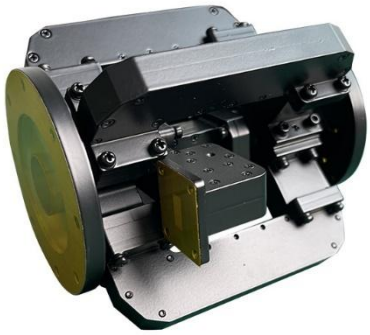


Ku/K/Ka Multi Band Orthogonal Mode Component (Compact Type)



（a）

(b)



（b）

(d)

Ku/K/Ka Multi Band Orthogonal Mode Component (Compact Type)

Ku/K/Ka multi band antenna feed subsystem

【Product introduction】:

Including RF splitters, combiners, OMTs, circular polarizers, filters and connecting waveguides.

Features: wide band, low insertion loss, good rejection, compact size.

【Technical indicators】:

1. Working frequency: Ku band: 11.45～12.75GHz(RX);13.75～14.5GHz(TX)

   K/Ka band: 19.0～21.2GHz(RX);29.0～31.0GHz(TX)

2. VSWR: 1.30:1 MAX

3. Insertion loss: 0.8dB MAX

4. Isolation: (K/Ka)/Ku: 60dB MIN

   Ku: TX/RX 90dB MIN

   Ku: RX/TX 35dB MIN

   K/Ka: TX/RX 90dB MIN

   K/Ka: RX/TX 90dB MIN

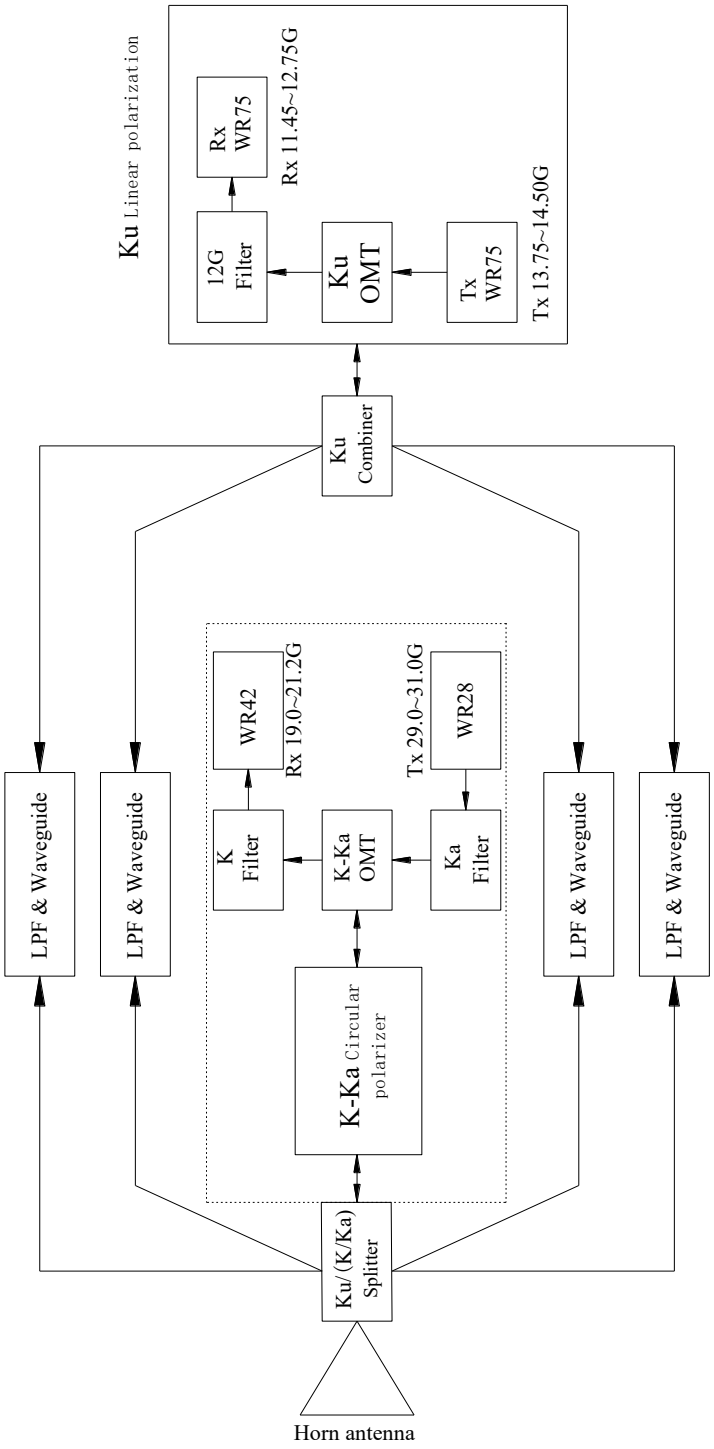
5. circular polarizability(K/Ka): 1.0dB MAX

6. Interface: Common port: circular waveguideΦ19.05

   Ku band: RX: WR75; TX: WR75

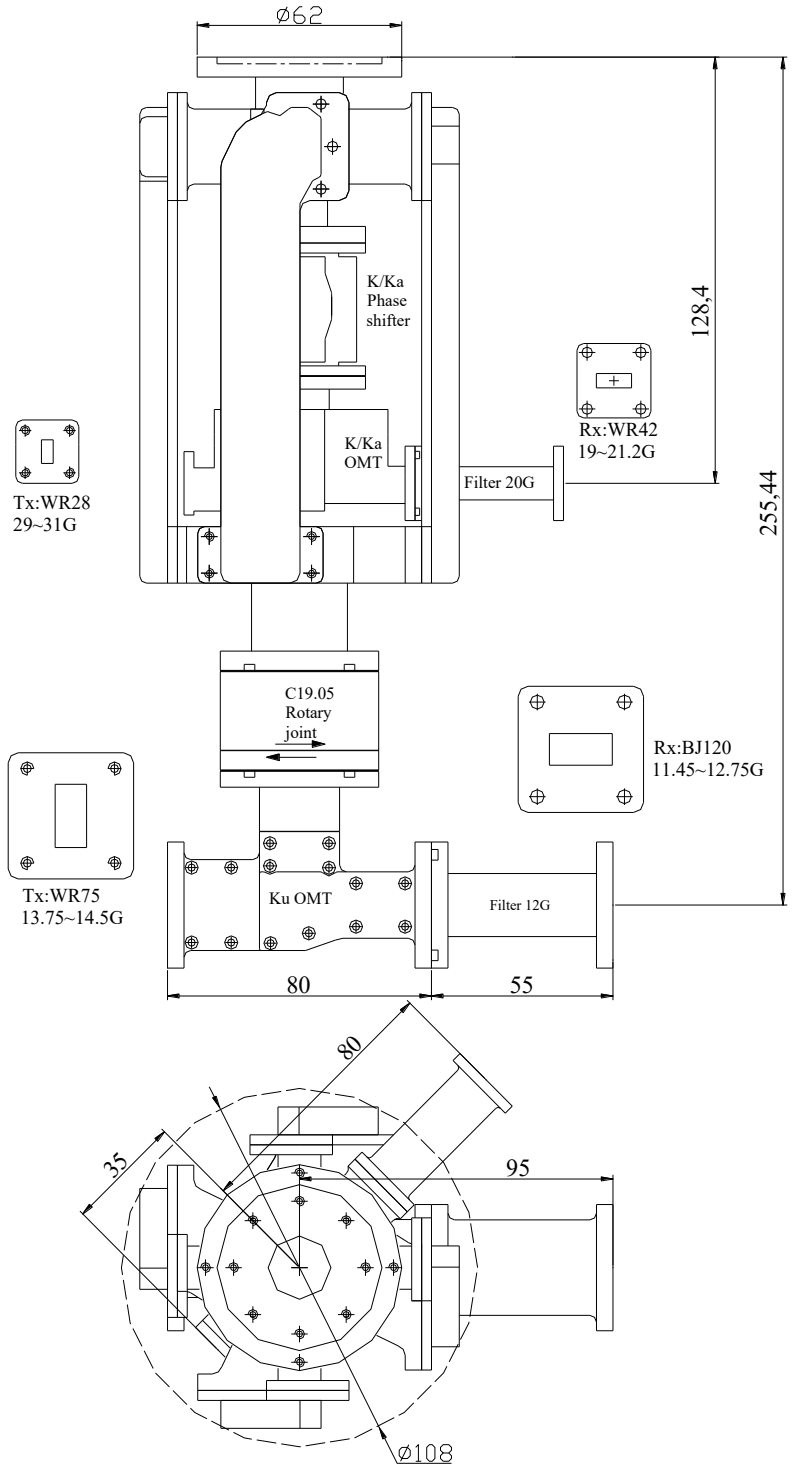
   K/Ka band: RX: WR42; TX: WR28

7. Principal schematic:

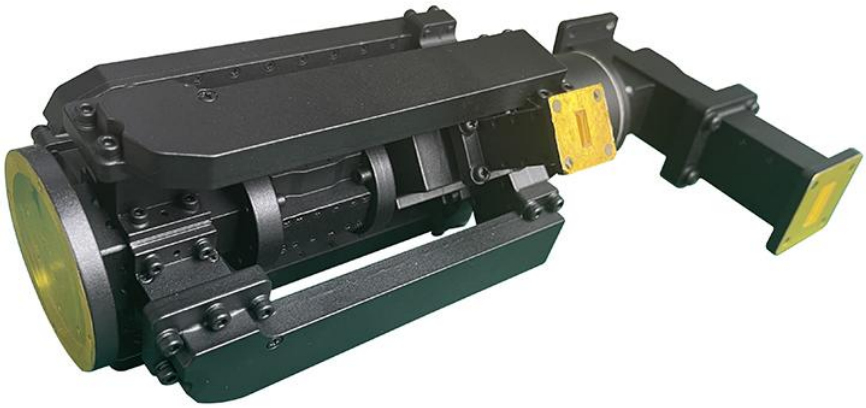


Ku/K/Ka Multi Band Orthogonal Mode Subsystem (Type A)

5. Structure:



Ku/K/Ka Multi Band Orthogonal Mode Subsystem (Type A)



Ku/K/Ka Multi Band Orthogonal Mode Subsystem (Type A)

Ku/K/Ka multi band antenna feed system

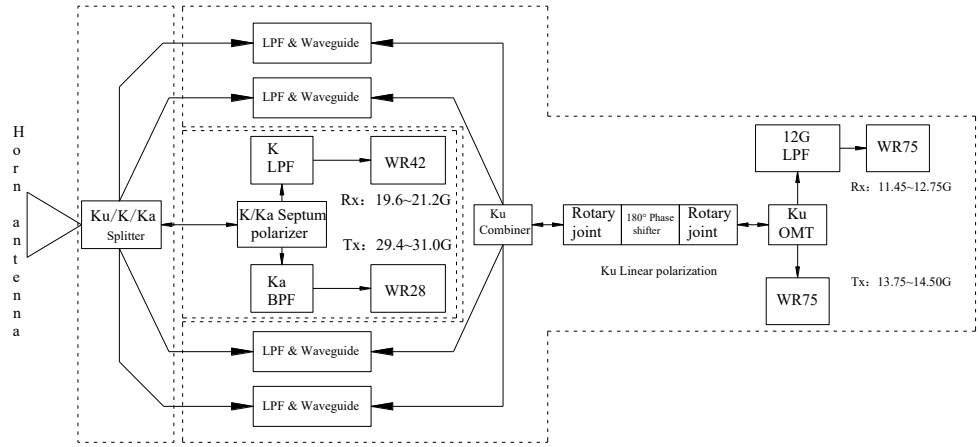
【Product introduction】:

Including splitter, combiner, OMT, circular polarizer, rotary joints, 180º phase shifter, septum polarizer, filters and connecting waveguides.

Features: wide band, low insertion loss, good rejection, compact size.

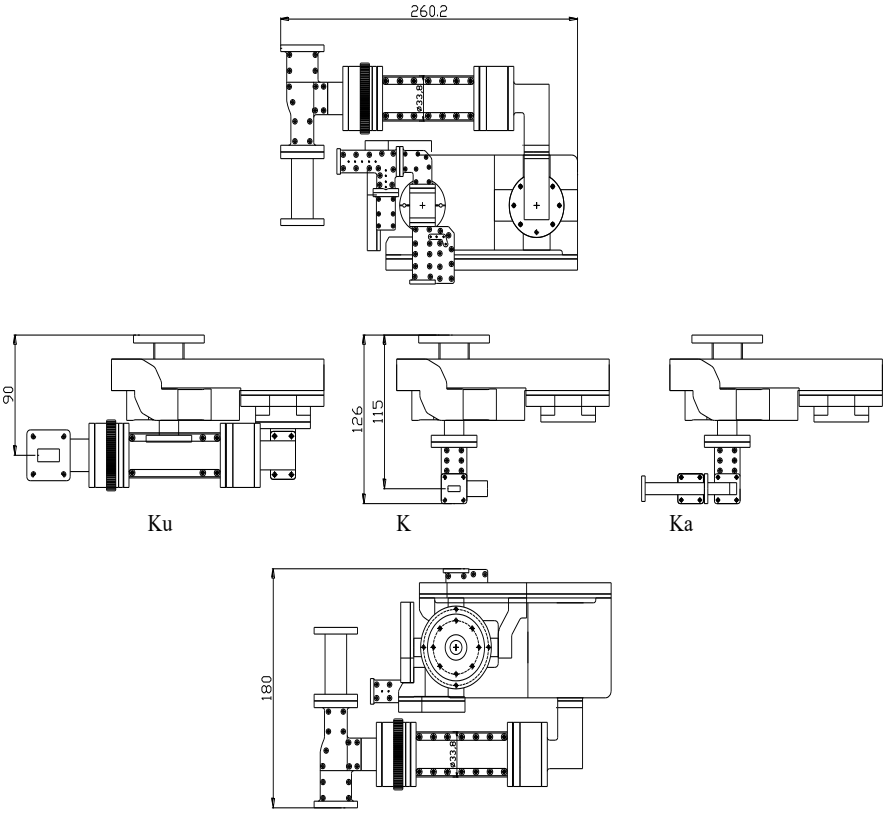
【Technical indicators】:

1. Working frequency: Ku band: 11.45～12.75GHz (RX); 13.75～14.5GHz (TX)
   K/Ka band: 19.6～21.2GHz (RX); 29.4～31.0GHz (TX)
2. VSWR: 1.35:1 MAX
3. Insertion loss: 0.6dB MAX
4. Isolation: (K/Ka)/Ku: 60dB MIN
   Ku/(K/Ka): 100dB MIN
   Ku: TX/RX 85dB MIN
   Ku: RX/TX 35dB MIN
   K/Ka: TX/RX 90dB MIN
   K/Ka: RX/TX 90dB MIN
5. Interface: Common port: circular waveguide Φ19.05
   Ku band: RX: WR75; TX: WR75
   K/Ka band: RX: WR42(K); TX: WR28(Ka)
6. Principal schematic:



Ku/K/Ka Multi Band Orthogonal Mode Subsystem (Type B)

7. Structure:



Ku/K/Ka Multi Band Orthogonal Mode Subsystem (Type B)

Ku/K/Ka Multi Band Orthogonal Mode Subsystem (Type B)

Ku/K Band LHCP/RHCP/Horizontal/Vertical feed

【Product introduction】:

Including K/Ku splitter, Ku combiner, K/Ku-OMT, circular polarizer, 180º phase shifter, rotary joint, K/Ku low-pass filter and connecting waveguide, K/Ku- LNB.

Features: wide band, low insertion loss, good rejection.

Function: combining the frequencies of the two bands of Ku/K, or separating them from the antenna port, the circular polarization/linear polarization working mode can be switched freely.

【Technical indicators】:

1. Working frequency: Ku band, K band
2. Polarization mode: Circular polarization/linear polarization, freely switchable
3. VSWR: 1.35:1 MAX
4. Insertion loss: 1.20dB MAX
5. circular polarizability: 1.20dB MAX
6. Isolation: Ku/K: 80dB MIN

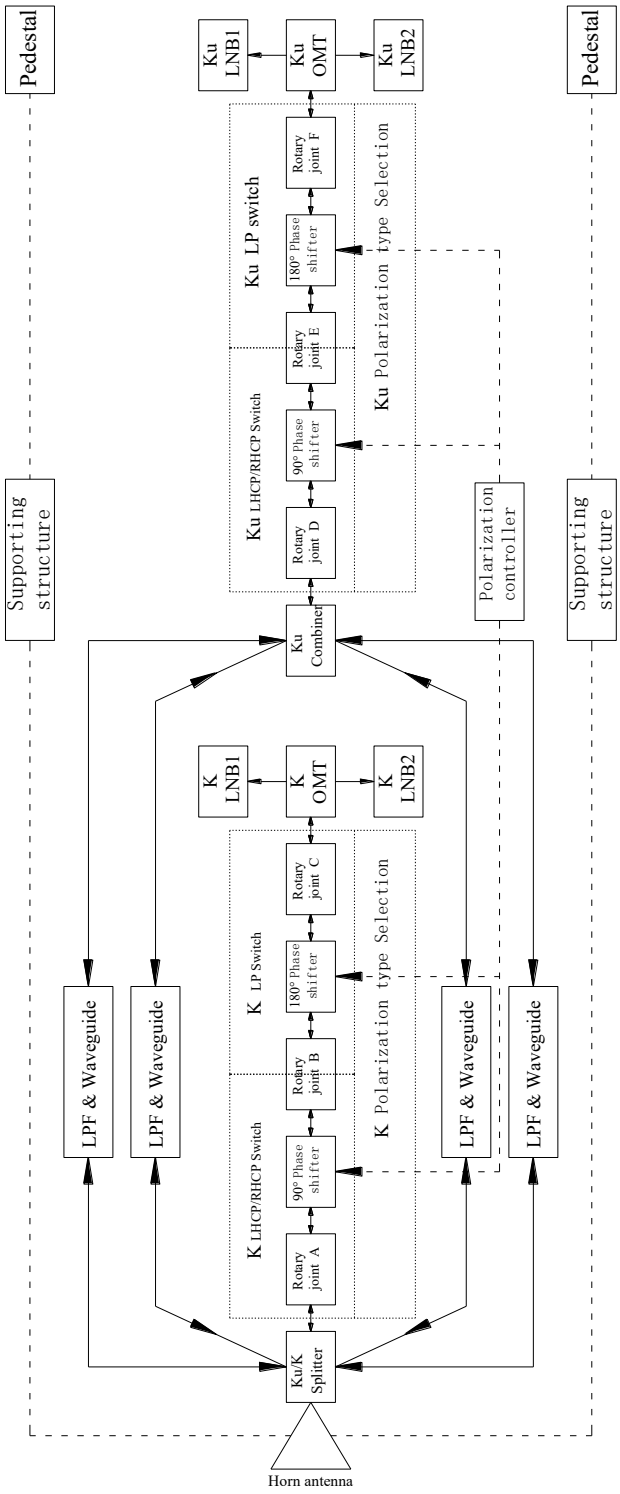
   K/Ku: 60dB MIN

   K orthogonal isolation: 40.0dB MIN

   Ku orthogonal isolation: 40.0dB MIN
7. Structure:

Ku/K LHCP/RHCP/Horizontal Polarization/Vertical Polarization Sub System

8．Principal schematic



Ku/K LHCP/RHCP/Horizontal Polarization/Vertical Polarization Sub System