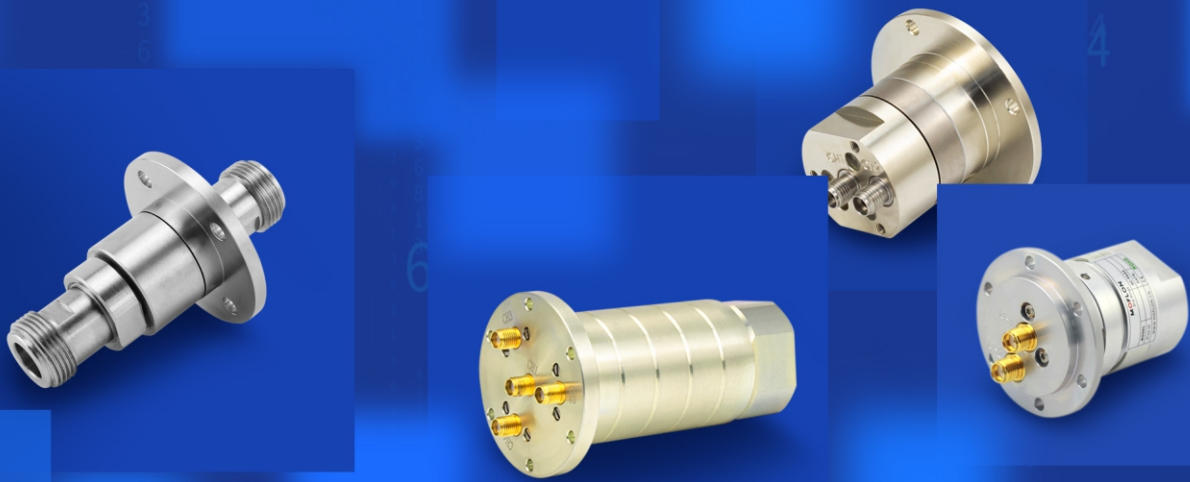



HIGH FREQUENCY COAXIAL ROTARY JOINT





On our website, you can find our latest updates.
As your contribution to environmental protection, you can also download our catalog in PDF format.
This catalog has been printed on Prinaset paper without wood.

The specifications and illustrations provided here are for reference only.
You can obtain a written quotation and make technical modifications by contacting our staff.

COMPANY INTRODUCTION



Shenzhen MOFLON Technology Co., Ltd. Abbreviation: MOFLON (MOFLON) - a global manufacturer of high-end precision rotary joints, which is located in Shajing, Shenzhen, with more than 500 employees, annual sales exceeding 200 million, and a high-tech factory building of 10,000 square meters, dedicated to high-end intelligent manufacturing. Shenzhen Moflon Technology Co., Ltd. is one of the earliest domestic companies engaged in the technical research, production and sales of slip ring and rotary joints (360-degree rotating conductive devices).

MOFLON technology research and development team has strong research and development strength, rich experience, unique design concept, advanced testing technology, as well as years of technology accumulation and foreign advanced technology cooperation and absorption, so that MOFLON technology has always maintained the international leading level, leading the industry. The products have passed CE, RoHs and other certifications, Shenzhen high-tech enterprises, and various certificates from national authoritative testing institutions, the company has fully introduced the ISO9001 quality management system, and the product performance and various indicators are in the forefront of the industry.

MOFLON has provided various high-precision rotary joints and technical support for military industry, aviation, navigation, wind power generation, automation equipment, various research institutes and colleges for a long time, mature and perfect solutions and reliable quality, and has won highly recognized in the industry, it has become the preferred partner of high-demand and high-precision rotary joints; at the same time, the products are exported to foreign countries, and have been widely and maturely used in Europe, America, Canada, Russia, Australia, Japan, India, Southeast Asia and other regions. It has been recognized by foreign multinational companies and established a good image of China's R&D and manufacturing. As a high-end slip ring manufacturer, the company not only provides high-quality and high-standard products, but also relies on our technical advantages to focus on providing customers with customized products with high requirements, high difficulty and special requirements.

Taking advantage of large-scale procurement, the company not only improves product materials and guarantees quality, but also reduces the price of standard products, so that the standard products of Moflon have very high cost performance and very strong market competitiveness.

In the future, under the opportunities and challenges of China's economic transformation and comprehensive upgrading of the manufacturing industry, MOFLON Technology will continue to provide global customers with high-quality, high-performance rotary joint solutions and serve the world!





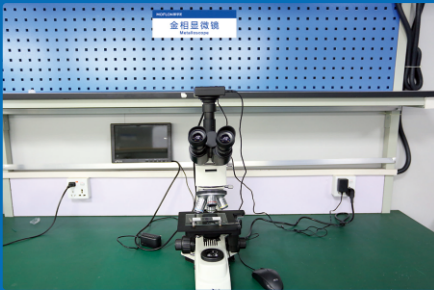
MANUFACTURING EQUIPMENT



COMPANY CERTIFICATE



TEST EQUIPMENT



Metallographic Microscope



Rotation working life test



Salt spray test



CT slip ring life test



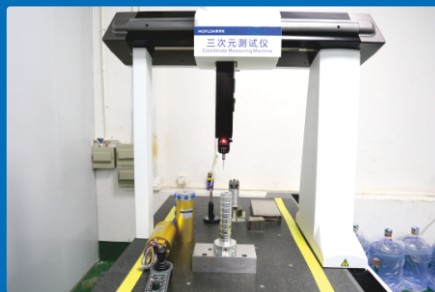
Secondary element tester



Vacuum test platform



Electroplating film thickness tester



Three-dimensional tester



Hardness Tester



Connector cycle durability test board



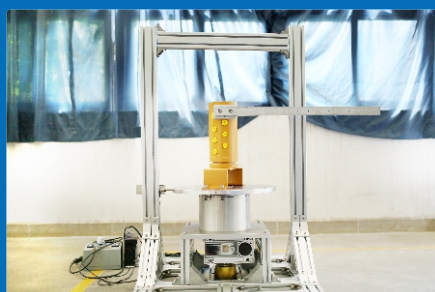
High Low temperature test box



Multi-way hydraulic test board



Explosion-proof hydraulic test



Torque test



High precision pressure loss test board

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With the continuous development of science and technology, information and communication have a profound impact on every aspect of our lives. It plays a crucial role in commercial applications, remote communication, traffic management, and military communication systems. This mainly relies on highly precise radar and satellite communication systems.

As an international leader in the field of innovation, Mobilon is a reliable supplier of advanced components for radar and satellite systems. Since its establishment, Mobilon has established multiple industry standards worldwide. Our innovation and technological reserves in this field, as well as our highest quality products, make us one of the leading manufacturers of high-frequency rotary joints.

Wherever signals are needed, a rotating joint is required to transmit between a fixed platform and a continuously rotating second platform. This type of application platform includes traditional radar technology control or anti missile defense for air traffic, medical engineering, V-Sat and SatCom technologies, as well as industrial television camera systems or cable reels, which can ensure that signal transmission cables do not tangle, thereby improving their reliability.

The special advantages of the MOFLON high-frequency rotary joint lie in its compact design, excellent standing wave ratio, low insertion loss, small changes in transmission characteristics during rotation, and high crosstalk attenuation in the minimum range of the entire channel frequency.

Our engineers have extensive experience in designing and manufacturing rotary joints for use in outer space. When it comes to space applications, our high-frequency rotary joints are the preferred choice for our main customers.





Custom-made rotary joints

For inquiries about customized rotary joints, please visit www.moflon.com. Our specification sheet can help you define the system.

As an additional service MOFLON offers repair and maintenance of all rotary joint brands.



Media joints

Highly integrated radar systems with radio frequency (RF) amplifiers right behind the rotating antenna often require access to cooling liquid. Media joint solutions, that transport cooling liquid or simply air through the joint to cool of active components, are available for intergration as well.

Non-contacting RF rotary joints

RF signals can be transmitted via axial and radial coupling structures. Non-contacting solutions have an excellent lifetime and are used for narrow band transmissions. Additionally, with special coupling structures, two different bands can be transmitted within one module (e.g. X- and L-Band).

Contacting RF rotary joints

The inner and outer conductors of stator and rotor are DC coupled. These rotary joints are used for broadband applications. If a coaxial structure is used, the cut-off frequency depends on the diameter of the coaxial line. In some cases, specially designed slip rings can be used at lower frequencies.



Single channel high frequency Rotary joint

In a variety of aerospace, maritime, industrial and automotive applications – in communication and radar systems, MOFLON highly reliable coax rotary joints are part of the solution. Recently, several SatCom terminals and other mobile tracking platforms have been equipped with our low form factor designs.

Our standard portfolio consists of single, dual and 3 channel rotary joints in a frequency range from DC up to 50 GHz. We distinguish basically between contacting and non-contacting designs:

In case of contacting rotary joints, the inner and outer conductor of stator and rotor are DC coupled. These rotary joints are used for broadband applications. If a coaxial structure is used, the cut-off frequency depends on the diameter of the coaxial line.

In case of non-contacting rotary joints, RF signals can be transmitted via axial or radial coupling structures. Non-contacting solutions have an excellent lifetime and RF performance for narrow band transmission.

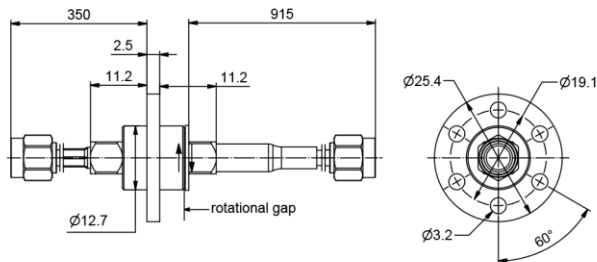
On customer request, coaxial rotary joints can be combined excellently with slip rings for additional low frequency data or power transmission, as well as with Fast Ethernet modules and other transmission modules.



Model	Channel	frequency	Interfaces
MHF100-SMA-M-3G	1	0-3GHz	SMA-M(50Ω)
MHF100U-SMA-M-3G	1	0-3GHz	SMA-M(50Ω)
MHF100L-F-M-3G	1	0-3GHz	F-M(75Ω)
MHF100-7-16-5G	1	0-5GHz	7-16-F(50Ω)
MHF100-N-8G	1	0-8GHz	N-F(50Ω)
MHF100-N-18G	1	0-18GHz	N-F(50Ω)
MHF100-SMA-18G	1	0-18GHz	SMA-F(50Ω)
MHF100-3.5-30G	1	0-30GHz	3.5-F(50Ω)
MHF100-2.92-40G	1	0-40GHz	2.92-F(50Ω)
MHF100-2.4-50G	1	0-50GHz	2.4-F(50Ω)



MHF100-SMA-M-3G



Rf channel characteristics

Interfaces	cable pigtails with SMA-M (50Ω)
Frequency range	DC-3.0 GHz
Average power , max	18W
VSWR . max	1.35dB
VSWR WOW . max	0.2dB
Insertion loss . max	1.5 dB @ DC ≤ f ≤ 1.0 GHz 2.0 dB @ 1.0 < f ≤ 2.0 GHz 2.2 dB @ 2.0 < f ≤ 2.5 GHz 2.4 dB @ 2.5 < f ≤ 3.0 GHz
Insertion loss WOW . max	0.2 dB
DC carrying capability	0.5A @ 48 VDC , full RF avg . power 2.0A @ 48 VDC , RF avg power 1 W

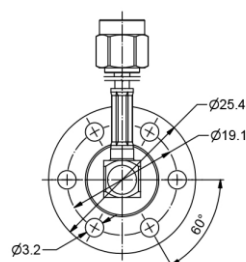
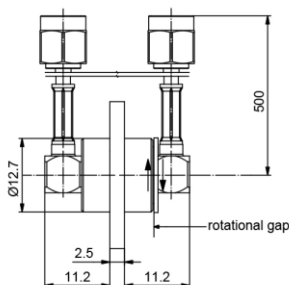
General mechanical data

Rotating speed . max	60 RPM
Life . min	0.25 X 10 ⁶ Revolutions
Starting torque , max .	0.05 Nm @ Room Temperature
Torque during rotation , max	0.05 Nm @ Room Temperature
Case material	Copper Alloy
Case surface finish	Partially Silver , Nickel , Tin Plated
Connector material	Copper Alloy
Connector surface finish	Gold Plated

General environmental conditions Operation

Ambient temperature range	-40°C~+85°C
Relative humidity , max	95%
IP protection level	IP51

MHF100U-SMA-M-3G



Rf channel characteristics

Interfaces	cable pigtailed with SMA-M (50Ω)
Frequency range	DC-3.0 GHz
Average power , max	18W
VSWR . max	1.35dB
VSWR WOW . max	0.2dB
Insertion loss . max	1.1 dB @ DC ≤ f ≤ 1.0 GHz 1.5 dB @ 1.0 < f ≤ 2.0 GHz 1.7 dB @ 2.0 < f ≤ 2.5 GHz 1.9 dB @ 2.5 < f ≤ 3.0 GHz
Insertion loss WOW . max	0.2 dB
DC carrying capability	0.5A @ 48 VDC , full RF avg . power 2.0A @ 48 VDC , RF avg power 1 W

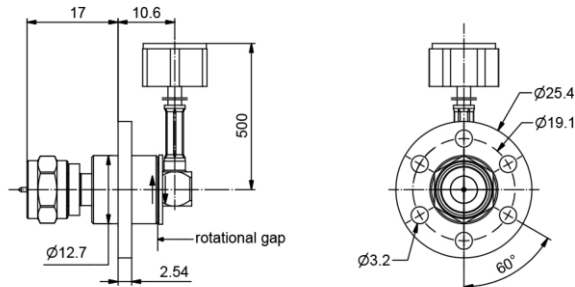
General mechanical data

Rotating speed . max	60 RPM
Life . min	0.25 X 10 ⁶ Revolutions
Starting torque , max .	0.05 Nm @ Room Temperature
Torque during rotation , max	0.05 Nm @ Room Temperature
Case material	Copper Alloy
Case surface finish	Partially Silver , Nickel , Tin Plated
Connector material	Copper Alloy
Connector surface finish	Gold Plated

General environmental conditions Operation

Ambient temperature range	-40°C~+85°C
Relative humidity , max	95%
IP protection level	IP51

MHF100L-F-M-3G



Rf channel characteristics

Interfaces	cable pigtails with F-M (75Ω)
Frequency range	DC-3.0 Ghz F-M
Average power , max	18W
VSWR . max	1.20 dB @ DC ≤ f ≤ 1.0 GHZ 1.30 dB @ 1.0 < f ≤ 2.0 GHZ 1.35 dB @ 2.0 < f ≤ 2.5 GHZ 1.40 dB @ 2.5 < f ≤ 3.0 GHZ
VSWR WOW . max	0.2 dB
Insertion loss . max	0.6 dB @ DC ≤ f ≤ 1.0 GHZ 0.8 dB @ 1.0 < f ≤ 2.0 GHZ 1.0 dB @ 2.0 < f ≤ 2.5 GHZ 1.2 dB @ 2.5 < f ≤ 3.0 GHZ
Insertion loss WOW . max	0.2 dB
DC carrying capability	0.5 A @ 48 VDC , full RF avg . power 2.0 A @ 48 VDC , RF avg power 1 W

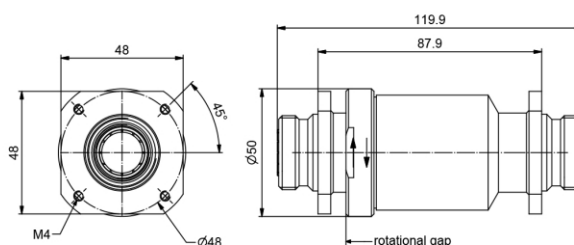
General mechanical data

Rotating speed . max	60 RPM
Life . min	0.25 X 10 ⁶ Revolutions
Starting torque , max .	0.05 Nm @ Room Temperature
Torque during rotation , max	0.05 Nm @ Room Temperature

General environmental conditions Operation

Ambient temperature range	-40°C~+85°C
Relative humidity , max	95%
IP protection level	IP51

MHF100-7-16-5G



Rf channel characteristics

Channel	1
Interfaces	7-16-f (50 Ω)
Frequency range	DC-5 GHZ
Peak power , max	10 kw
Average power , max	600W
VSWR . max	1.1dB@DC-5 GHZ
VSWR WOW . max	0.006dB
Insertion loss . max	0.2 dB @ DC-5 GHZ
Insertion loss WOW . max	0.02 dB

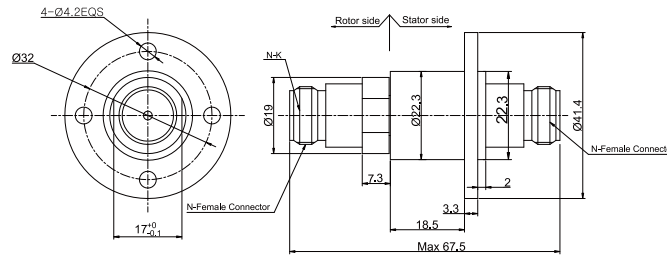
General mechanical data

Rotating speed , max	200rpm
Life . min	10 x 10 ⁶ revolutions
Starting torque , max	0.1 nm @ room temperature
Torque during rotation , max	0.1 nm @ room temperature
Case material	Copper alloy
Case surface finish	Silver plated

General environmental conditions Operation

Ambient temperature range	-40°C~+85°C
Relative humidity , max	95%
IP protection level	IP64

MHF100-N-8G



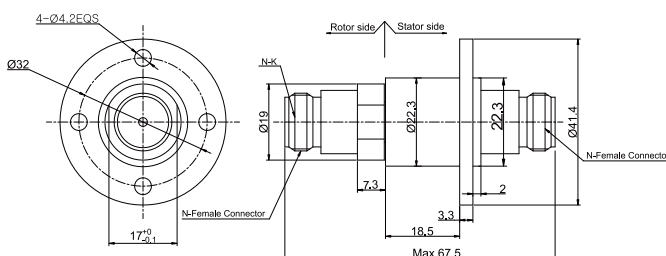
Rf Channel Characteristics

Channel	1
Interfaces	N-F(50Ω)
Frequency	0-8GHz
Average Power, Max.	200W@DC-2GHz 100W@2-8GHz
Vswr, Max.	1.3dB
Vswr Wow, Max	0.1dB
Insertion Loss, Max.	0.3dB
Insertion Loss Wow, Max.	0.1dB

General Mechanical Data

Rotating Speed, Max.	60RPM
Working Life (minimum)	5 million rpm
Operation Temperature	-40°C ~ +70°C
Storage Temperature	-55°C ~ +85°C
Ip Protection Level	IP61
Material	Stainless Steel

MHF100-N-18G



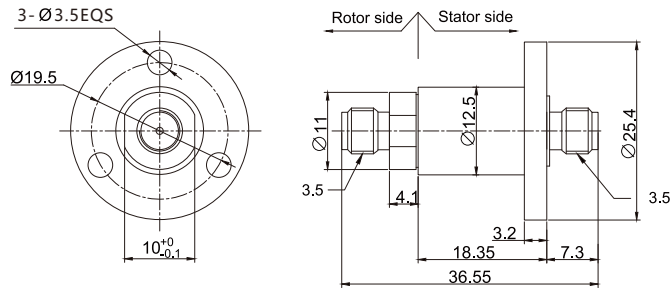
Rf Channel Characteristics

Channel	1	
Interfaces	N-F(50Ω)	
Frequency	0-18GHz	
Average Power, Max.	200W@DC-2GHz 75W@8-15GHz	100W@2-8GHz 70W@15-18GHz
Vswr, Max.	1.2dB @DC-12GHz 1.35dB @12GHz-18GHz	
Vswr Wow, Max	0.15dB	
Insertion Loss, Max.	0.3dB@DC-12GHz 0.8dB@12-18GHz	
Insertion Loss Wow, Max.	0.15dB	

General Mechanical Data

Rotating Speed, Max.	60RPM
Working Life (minimum)	5 million rpm
Operation Temperature	-40°C~+70°C
Storage Temperature	-55°C~+85°C
Ip Protection Level	IP61
Material	Stainless Steel

MHF100-SMA-18G



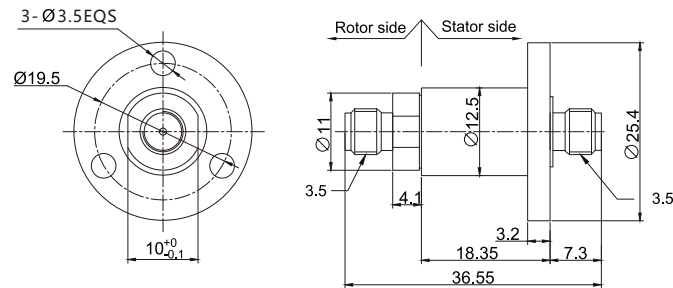
Rf channel characteristics

Channel	1
Interfaces	SMA-F(50Ω)
Frequency	0-18GHz
Average power, max.	20W@18GHz
Vswr, max.	1.35dB @DC-8GHz 1.75dB @DC-18GHz 2.5dB @DC-30GHz
Vswr wow, max	0.15dB
Impedance (W)	50
Phase stability (maximum)	1.5
Insertion loss, max.	0.4dB@DC-8GHz 1.0dB@DC-18GHz 2dB@DC-30GHz
Insertion loss wow, max.	0.15dB

General mechanical data

Rotating speed, max.	60RPM
Working life (minimum)	5 million rpm
Operation temperature	-40°C ~ +70°C
Storage temperature	-55°C ~ +85°C
IP protection level	IP61
Material	Stainless steel

MHF100-3.5-30G



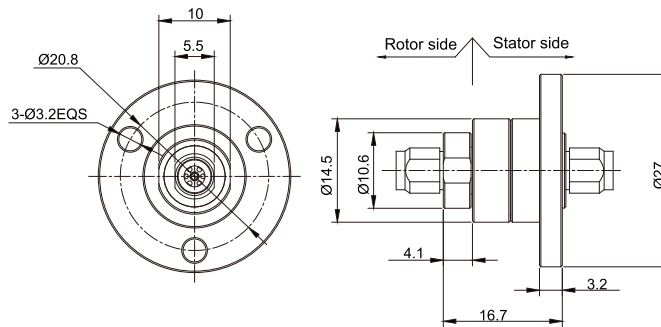
Rf Channel Characteristics

Channel	1
Interfaces	3.5(50Ω)
Frequency	0-30GHz
Average Power, Max.	20W@18GHz
Vswr, Max.	1.35dB @DC-8GHz 1.7dB5dB @DC-18GHz 2.5dB @DC-30GHz
Vswr Wow, Max	0.15dB
Impedance (W)	50
Phase Stability (maximum)	1.5
Insertion Loss, Max.	0.4@DC-8GHz 1.0@DC-18GHz 2@DC-30GHz
Insertion Loss Wow, Max.	0.15dB

General Mechanical Data

Rotating Speed, Max.	60RPM
Working Life (minimum)	5 million rpm
Operation Temperature	-40°C~+70°C
Storage Temperature	-55°C~+85°C
Ip Protection Level	IP61
Material	Stainless Steel

MHF100-2.92-40G



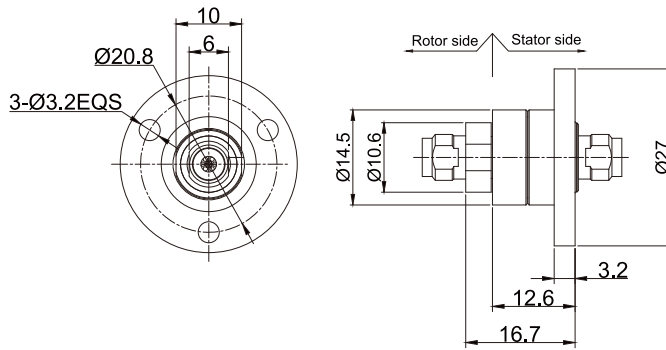
Rf Channel Characteristics

Channel	1
Interfaces	2.92 (50Ω)
Frequency	0-40GHz
Average Power, Max.	20W@18GHz
Vswr, Max.	1.4dB@DC-18GHz 1.7dB@18GHz-26.5GHz 2.5dB@26.5GHz-40GHz
Vswr Wow, Max	0.15dB
Insertion Loss, Max.	0.8dB@DC-18GHz 1.2dB@18GHz-26.5GHz 2.3dB@26.5GHz-40GHz
Insertion Loss Wow, Max.	0.15dB

General Mechanical Data

Rotating Speed, Max.	60RPM
Life	5 million rpm
Operation Temperature	-40°C ~ +70°C
Storage Temperature	-55°C ~ +85°C
Ip Protection Level	IP61
Material	Stainless Steel
Humidity	GJB150.9A-2009
Vibrate	GJB150.16A-2009
Impact	GJB150.18A-2009

MHF100-2.4-50G



Rf Channel Characteristics

Channel	1
Interfaces	2.4 (50Ω)
Frequency	0-50GHz
Average Power, Max.	20W@18GHz
Vswr, Max.	1.5dB@DC-18GHz 1.8dB@18GHz-26.5GHz 2.6dB@26.5GHz-50GHz
Vswr Wow, Max	0.15dB
Insertion Loss, Max.	0.8dB@DC-18GHz 1.2dB@18GHz-26.5GHz 2.5dB@26.5GHz-50GHz
Insertion Loss Wow, Max.	0.15dB

General Mechanical Data

Rotating Speed, Max.	60RPM
Life	5 million rpm
Operation Temperature	-40°C ~ +70°C
Storage Temperature	-55°C ~ +85°C
Ip Protection Level	IP60
Material	Stainless Steel
Humidity	GJB150.9A-2009
Vibrate	GJB150.16A-2009
Impact	GJB150.18A-2009

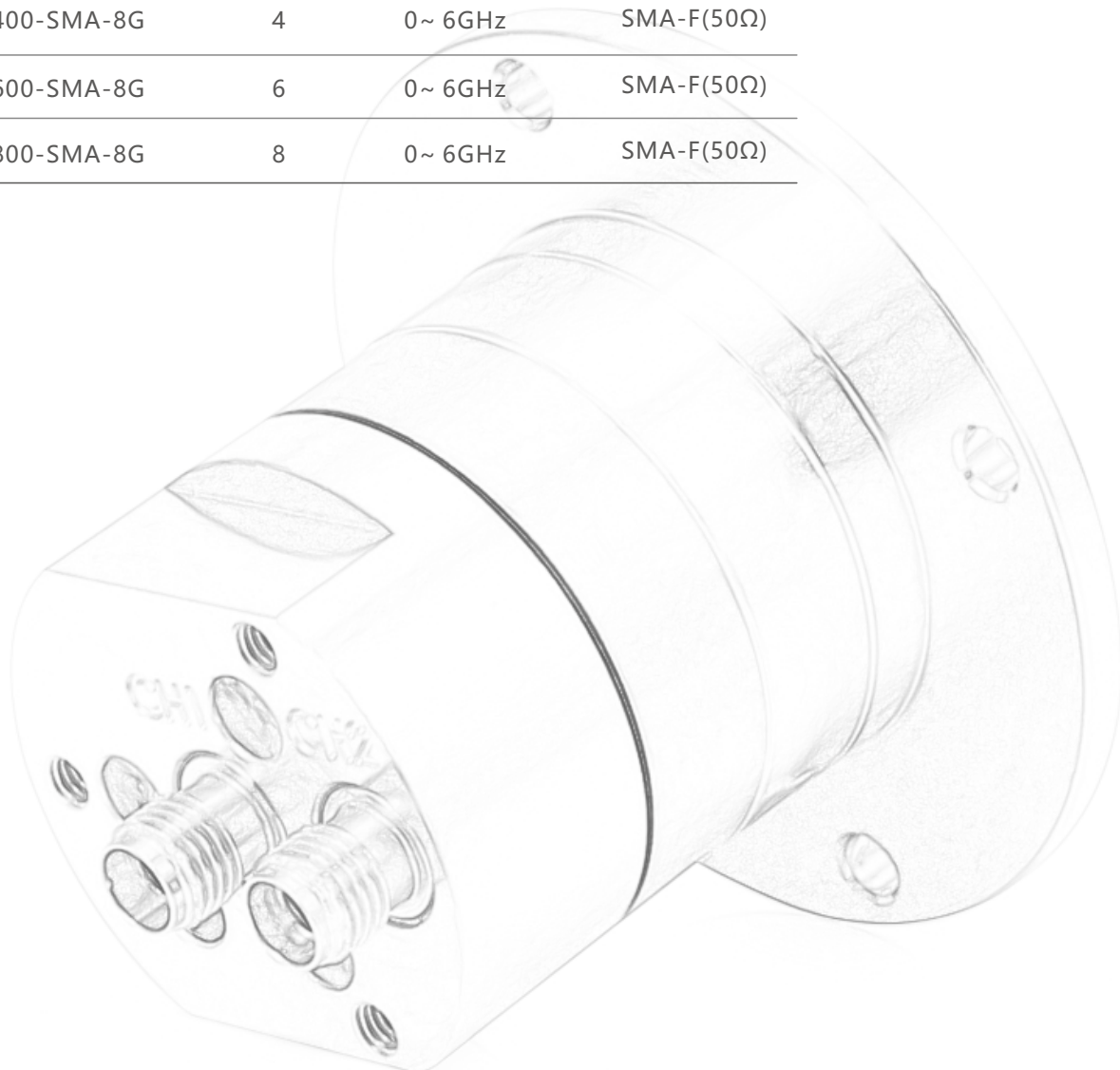
Multi-channel high-frequency rotary joint

Our multi-channel rotary joint product portfolio is designed specifically for military and satellite communication applications. Technically, we can offer combinations up to 50 Ghz. Satisfying high-speed serial digital or analog signal transmission, with a small and compact design, suitable for aviation, land, and marine applications.

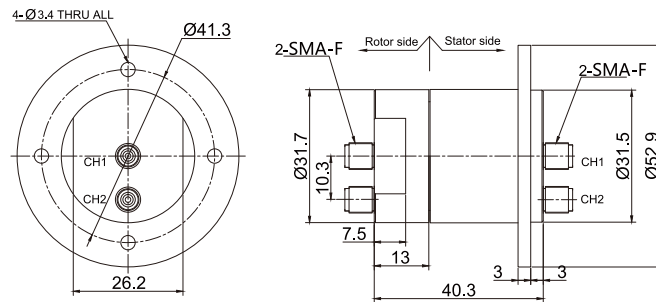
We can provide customized designs according to customer requirements. The rotary joint can be perfectly combined with the slip ring, so that it has low-frequency data and power transmission, as well as Fast Ethernet module and other transmission modules.



Model	Channel	Frequency	Interfaces
MHF200A-SMA-4.5G	2	0-4.5GHz	SMA-F(50Ω)
MHF200B-SMA-4.5G	2	0-4.5GHz	SMA-F(50Ω)
MHF200-SMA-8G	2	0-8GHz	SMA-F(50Ω)
MHF200-SMA-18G	2	0-18GHz	SMA-F(50Ω)
MHF300-SMA-5.25G	3	0~ 5.25GHz	SMA-F50Ω)
MHF300-SMA-8G	3	0~ 8GHz	SMA-F50Ω)
MHF400-SMA-4G	4	0~ 4GHz	SMA-F(50Ω)
MHF400-SMA-8G	4	0~ 6GHz	SMA-F(50Ω)
MHF600-SMA-8G	6	0~ 6GHz	SMA-F(50Ω)
MHF800-SMA-8G	8	0~ 6GHz	SMA-F(50Ω)



MHF200A-SMA-4.5G



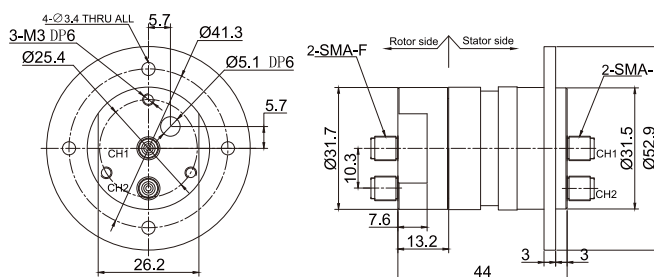
Rf channel characteristics

Channel	1	2
Interfaces	SMA-F(50Ω)	SMA-F(50Ω)
Frequency	DC-4.5GHz	DC-4.5GHz
Peak power (maximum)	1KW	1KW
Average power, max.	50W@1GHz	50W@1GHz
Vswr, max.	1.25dB	1.6dB
Vswr wow, max	0.1dB	0.2dB
Insertion loss, max.	0.2dB	0.5dB
Insertion loss wow, max.	0.15dB	0.2dB
Isolation degree (minimum value)	60dB	60dB

General mechanical data

Rotating speed, max.	50RPM
Working life (minimum)	5 million rpm
Torque (maximum)	5N.cm @At room temperature
Operation temperature	-40°C~+70°C
Storage temperature	-50°C~+85°C
Relative temperature (maximum)	95%
Ip protection level	IP51
Material	Aluminum alloy
Surface treatment	Conductive oxidation

MHF200B-SMA-4.5G



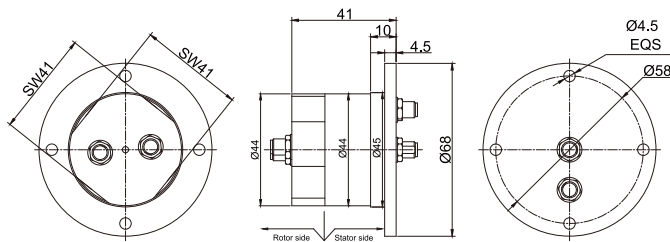
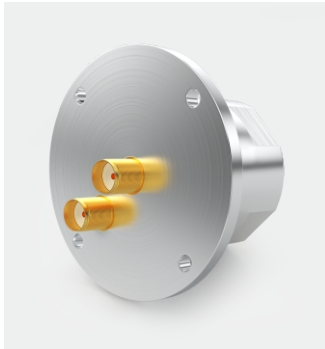
Rf channel characteristics

Channel	1	2
Interfaces	SMA-F(50Ω)	SMA-F(50Ω)
Frequency	DC-4.5GHz	DC-4.5GHz
Peak power (maximum)	1KW	1KW
Average power, max.	50W@1GHz	50W@1GHz
Vswr, max.	1.25dB	1.6dB
Vswr wow, max	0.1dB	0.2dB
Insertion loss, max.	0.2dB	0.5dB
Insertion loss wow, max.	0.15dB	0.2dB
Isolation degree (minimum value)	60dB	60dB

General mechanical data

Rotating speed, max.	50RPM
Working life (minimum)	5 million rpm
Torque (maximum)	5N.cm @At room temperature
Operation temperature	-40°C ~ +70°C
Storage temperature	-50°C ~ +85°C
Relative temperature (maximum)	95%
IP protection level	IP51
Material	aluminum alloy
Surface treatment	Conductive oxidation

MHF200-SMA-8G



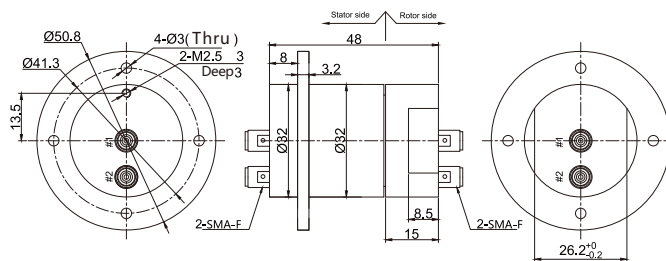
Rf channel characteristics

Channel	1	2
Interfaces	SMA-F(50Ω)	SMA-F(50Ω)
Frequency	0-8GHz	0-8GHz
Peak power (maximum)	1KW	1KW
Average power, max.	50W@1GHz	50W@1GHz
Vswr, max.	1.5dB	1.5dB
Vswr wow, max	0.1dB	0.1dB
Insertion loss, max.	1.3dB	1.3dB
Insertion loss wow, max.	0.15dB	0.15dB
Isolation degree (minimum value)	70dB	70dB

General mechanical data

Rotating speed, max.	60RPM
Working life (minimum)	5 million rpm
Torque (maximum)	≤1N.M @At room temperature
Operation temperature	-40°C~ +65°C
Storage temperature	-50°C~ +70°C
Relative temperature (maximum)	95%
IP protection level	IP65
Material	aluminum alloy
Surface treatment	Conductive oxidation
Humidity	GJB150.9A-2009
Vibrate	GJB150.16A-2009
Impact	GJB150.18A-2009

MHF200-SMA-18G



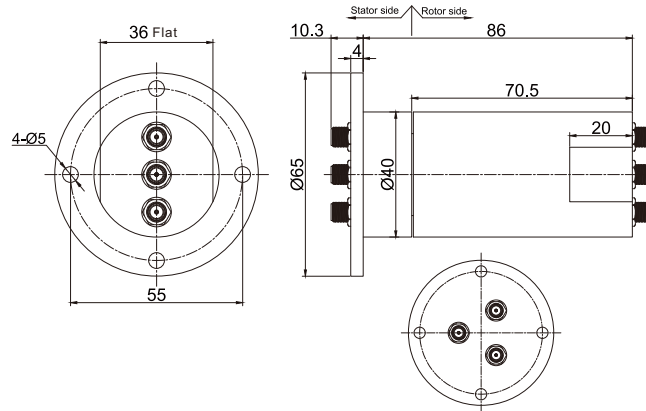
Rf channel characteristics

Channel	1	2
Interfaces	SMA-F(50Ω)	SMA-F(50Ω)
Frequency	DC-18GHz	DC-18GHz
Average power, max.	50W@1GHz	50W@1GHz
V _{swr} , max.	1.35dB@DC-8GHz 1.75dB@DC-8~18GHz	2dB@DC-4GHz 3dB@DC-4~8GHz 3.5dB@DC-8~12GHz 4.5dB@DC-12~18GHz
V _{swr} wow, max	0.05dB	0.1dB@DC-4GHz 0.35dB@DC-4~8GHz 0.8dB@DC-8~12GHz 2.0dB@DC-12~18GHz
Insertion loss, max.	0.4dB@DC-8GHz 1.0dB@DC-8~18GHz	0.75dB@DC-4GHz 1.5dB@DC-4~8GHz 2.5dB@DC-8~12GHz 3.0dB@DC-12~18GHz
Insertion loss wow, max.	0.05dB	0.1dB@DC-4GHz 0.3dB@DC-4~8GHz 0.75dB@DC-8~12GHz 1.5dB@DC-12~18GHz
Isolation degree (minimum value)	50dB	50dB

General mechanical data

Rotating speed, max.	50RPM
Working life (minimum)	5 million rpm
Operation temperature	-40°C ~ +70°C
Storage temperature	-50°C ~ +85°C
Ip protection level	IP51
Material	aluminum alloy
Surface treatment	Conductive oxidation

MHF300-SMA-5.25G



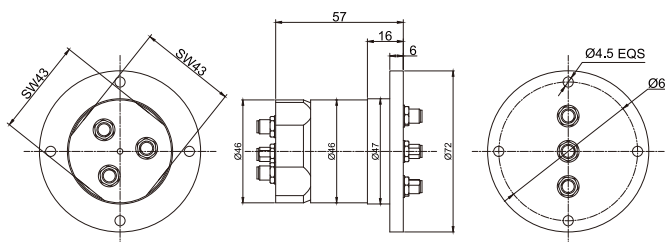
Rf channel characteristics

Channel	1	2	3
Interfaces	SMA-F(50Ω)	SMA-F(50Ω)	SMA-F(50Ω)
Frequency	1 ~ 5.25GHz	1 ~ 5.25GHz	1 ~ 5.25GHz
Average power, max.	10W	10W	10W
Vswr, max.	1.5dB	1.6dB	1.6dB
Vswr wow, max	0.1dB	0.2dB	0.2dB
Insertion loss, max.	1dB	1.2dB	1.2dB
Insertion loss wow, max.	0.3dB	0.15dB	0.3dB
Isolation degree (minimum value)	50dB	50dB	50dB
Phase stability (maximum)	±4°	±2°	±2°

General mechanical data

Rotating speed, max.	30RPM
Working life (minimum)	5 million rpm
Torque (maximum)	0.6N.m @At room temperature
Operation temperature	-40°C ~ +70°C
Storage temperature	-50°C ~ +85°C
Relative temperature (maximum)	95%
Ip protection level	IP51
Material	aluminum alloy
Surface treatment	Conductive oxidation

MHF300-SMA-8G



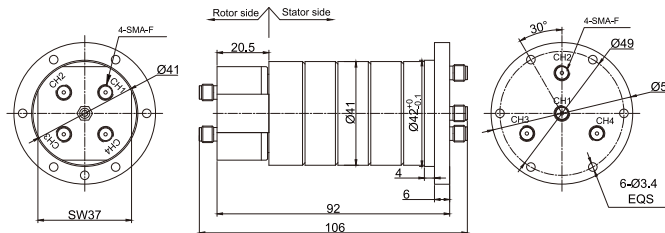
Rf channel characteristics

Channel	1	2	3
Interfaces	SMA-F(50Ω)	SMA-F(50Ω)	SMA-F(50Ω)
Frequency	0~8GHz	0~8GHz	0~8GHz
Average power, max.	10W	10W	10W
Vswr, max.	1.5dB	1.5dB	1.6dB
Vswr wow, max	0.1dB	0.1dB	0.1dB
Insertion loss, max.	1.3dB	1.3dB	1.3dB
Insertion loss wow, max.	0.15dB	0.15dB	0.15dB
Isolation degree (minimum value)	70dB	70dB	70dB
Phase stability (maximum)	±3°	±4°	±4°

General mechanical data

Rotating speed, max.	60RPM
Working life (minimum)	5 million rpm
Torque (maximum)	≤0.5N.M
Operation temperature	-40°C ~ +65°C
Storage temperature	-50°C ~ +70°C
Relative temperature (maximum)	95%
Ip protection level	IP65
Material	aluminum alloy
Surface treatment	Conductive oxidation

MHF400-SMA-4G



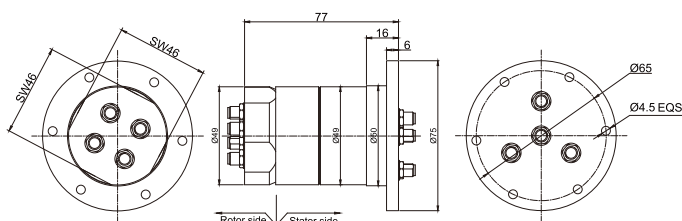
Rf channel characteristics

Channel	1	2	3	4
Interfaces	SMA-F(50Ω)	SMA-F(50Ω)	SMA-F(50Ω)	SMA-F(50Ω)
Frequency	0~ 4GHz	0~ 4GHz	0~ 4GHz	0~ 4GHz
Input power (minimum)	50W	50W	50W	50W
Vswr, max.			1.5dB	
Vswr wow, max			0.1dB	
Insertion loss, max.			1dB	
Isolation degree (minimum value)			55dB	

General mechanical data

Rotating speed, max.	60RPM
Working life (minimum)	5 million rpm
Torque (maximum)	0.3N.m @At room temperature
Operation temperature	-40°C ~ +65°C
Storage temperature	-50°C ~ +70°C
Weight (maximum)	0.8kg
Ip protection level	IP65
Humidity	GJB150.9A-2009
Vibrate	GJB150.16A-2009
Impact	GJB150.18A-2009

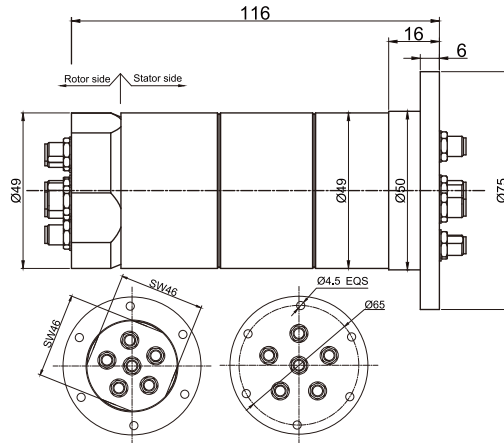
MHF400-SMA-8G6G



Rf channel characteristics								
Channel	1	2	3	4	5	6	7	8
Interfaces	SMA-F(50Ω)							
Frequency	0~ 8GHz							
Input power (minimum)	10W							
Vswr, max.	1.5dB							
Vswr wow, max	0.1dB							
Insertion loss, max.	1.4dB							
Insertion loss fluctuation	0.15dB							
Isolation degree (minimum value)	70dB							

General mechanical data	
Rotating speed, max.	60RPM
Working life (minimum)	5 million rpm
Torque (maximum)	≤0.5N.M
Relative temperature	95%
Operation temperature	-40°C + 65°C
Storage temperature	-50°C + 70°C
IP protection level	IP65
Humidity	GJB150.9A-2009
Vibrate	GJB150.16A-2009
Impact	GJB150.18A-2009

MHF600-SMA-8G6G



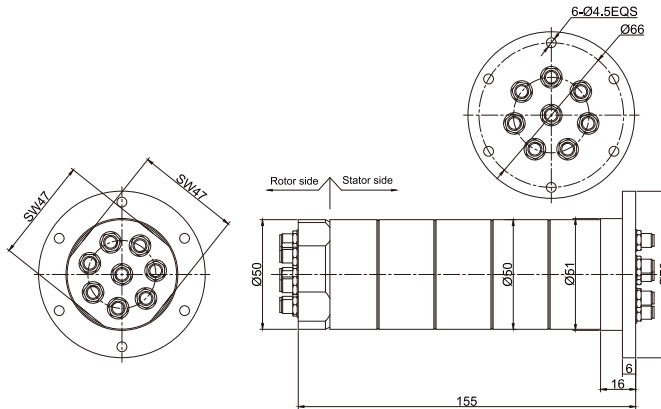
Rf channel characteristics

Channel	1	2	3	4	5	6
Interfaces	SMA-F(50Ω)					
Frequency	0~ 8GHz	0~ 8GHz	0~ 8GHz	0~ 6GHz	0~ 6GHz	0~ 6GHz
Vswr, max.	1.5dB	1.5dB	1.5dB	1.6dB	1.6dB	1.6dB
Vswr wow, Max	0.1					
Insertion loss, max.	1.4dB	1.4dB	1.5dB	1.5dB	1.5dB	1.5dB
Insertion loss fluctuation	0.15dB					
Isolation degree (minimum value)	70dB					

General mechanical data

Rotating speed, max.	60RPM
Working life (minimum)	5 million rpm
torque force	≤0.5N.M
Operation temperature	-40°C~ + 65°C
Storage temperature	-50°C~ + 70°C
Relative temperature (maximum)	95%
Ip protection level	IP65
Material	Aluminum Alloy
Humidity	GJB150.9A-2009
Vibrate	GJB150.16A-2009
Impact	GJB150.18A-2009

MHF800-SMA-8G6G



Rf channel characteristics								
Channel	1	2	3	4	5	6	7	8
Frequency	0~8Ghz			0~6Ghz				
Interfaces	SMA-F(50Ω)							
Average power, max.	10W							
Vswr, Max.	1.5dB	1.5dB	1.6dB	1.6dB	1.6dB	1.6dB	1.6dB	1.6dB
Vswr Wow, Max				0.1dB				
Insertion Loss, max.	1.4dB	1.4dB	1.5dB	1.5dB	1.5dB	1.5dB	1.5dB	1.5dB
Insertion loss Wow, max.	0.15dB							
Isolation degree (minimum value)	70dB							

General mechanical data	
Rotating speed, max.	60RPM
Torque force	≤0.51N.M
Working life (minimum)	5 million rpm
Relative temperature	95%
Operation temperature	-40°C~ + 65°C
Storage temperature	-50°C~ + 70°C
IP protection level	IP65
Humidity	GJB150.9A-2009
Vibrate	GJB150.16A-2009
Impact	GJB150.18A-2009

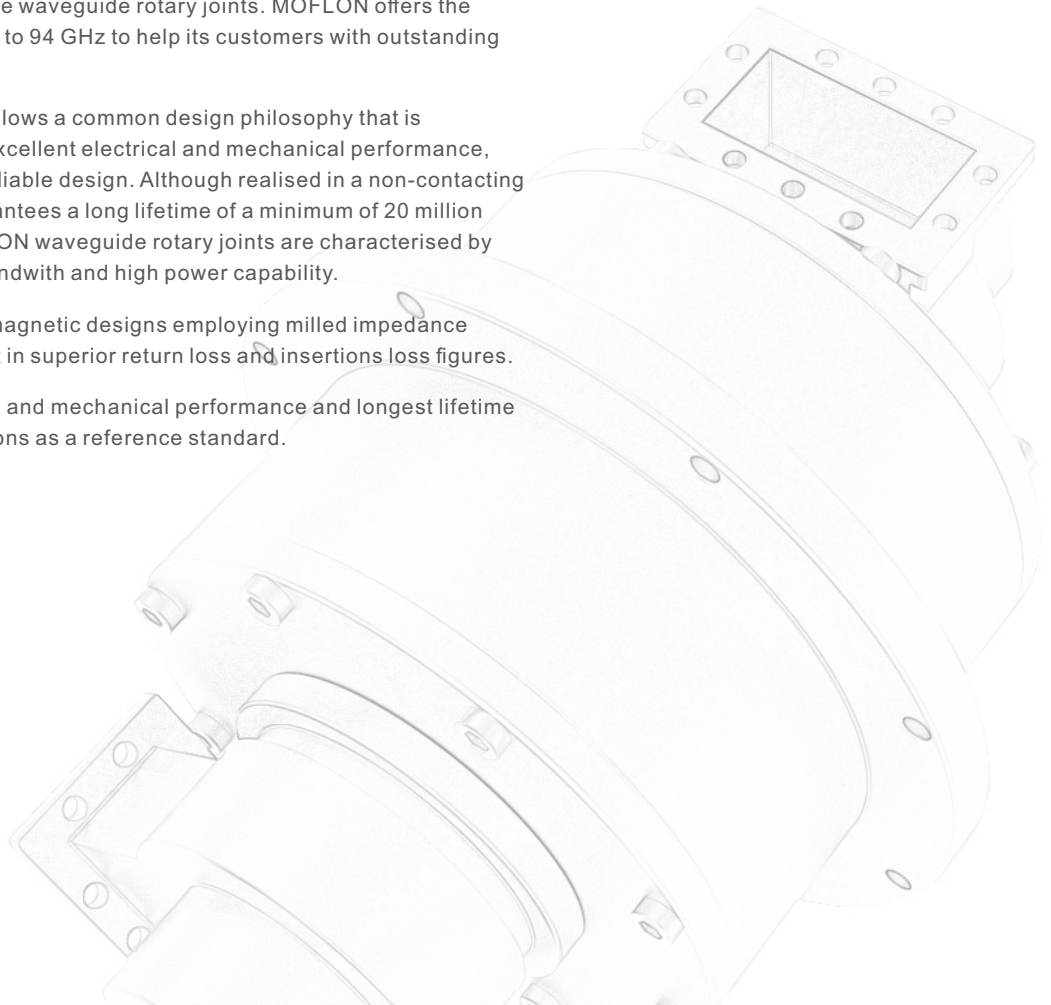
Waveguide Rotary Joints

Military and civil solutions for radar, satellite communication and space applications require waveguide rotary joints. MOFLON offers the complete range up to 94 GHz to help its customers with outstanding solutions.

The product line follows a common design philosophy that is characterized by excellent electrical and mechanical performance, allied to a highly reliable design. Although realised in a non-contacting design which guarantees a long lifetime of a minimum of 20 million revolutions, MOFLON waveguide rotary joints are characterised by large frequency bandwidth and high power capability.

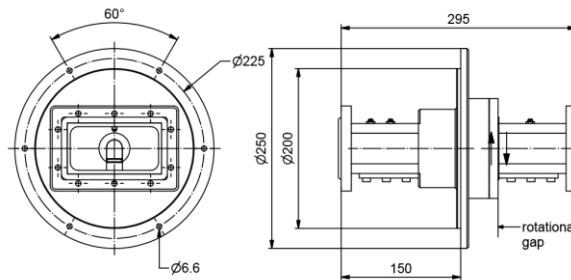
Advanced electromagnetic designs employing milled impedance transformers result in superior return loss and insertions loss figures.

Excellent electrical and mechanical performance and longest lifetime define these solutions as a reference standard.



Model	Channel	Frequency	Interfaces
MWG100-CPR430-G-2.125GHz	1	2.025-2.125GHz	CPR 430/G
MWG100-CPR284-G-2.9GHz	1	2.7-2.9GHz	CPR 284/G
MWG100-CPR187-G-5.9GHz	1	5.4-5.9GHz	CPR 187/G
MWG100-CPR159-F-7GHz	1	5.82-7GHz	CPR 159/F
MWG100L-CPR159-F-7GHz	1	5.82-7GHz	CPR 159/F
MWG100-CPR137-G-M4-7GHz	1	5.85-7GHz	CPR 137/G WITH THREAD M4
MWG100L-CPR137-G-M4-6.725GHz	1	5.85~ 6.725GHz	CPR 137/G WITH THREAD M4
MWG100L-CPR137-G-M4-7.5GHz	1	6.5-7.5GHz	CPR 137/G WITH THREAD M4
MWG100U-CPR137-G-M4-7.25GHz	1	5.6-7.25GHz	CPR 137/G WITH THREAD M4
MWG100U-UBR84-M4-8.6GHz	1	7-8.6GHz	154 IEC UBR84 WITH THREAD M4
MWG100U-UBR120-M4-14.5GHz	1	10.7-14.5GHz	UBR120 WITH THREAD M4
MWG100L-UBR120-14.5GHz	1	13.75-14.5GHz	UBR120
MWG100U-Ug387-95GHz	1	93-95GHz	UG-387/U-mod
MWG200U-R120-14.5GHz	2	14-14.5GHz DC-2.05GHz	R120(SPECIAL FLANGE) SMA-F(50Ω)

MWG100-CPR430-G-2.125GHz



Rf channel characteristics

Interfaces	CPR 430 / G
Style	I
Frequency range	2.025-2.125 GHz
Peak power , max	100 KW
Average power . max	5 KW
VSWR . max	1.1
VSWR WOW . max	0.04
Insertion loss . max	0.15 dB
Insertion loss WOW . max	0.02 dB
Phase WOW . max	2 deg .

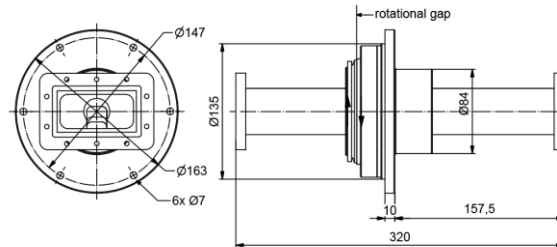
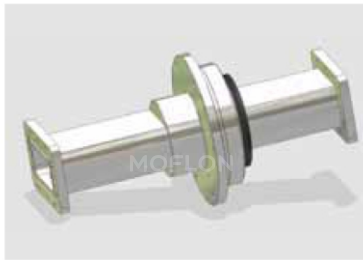
General mechanical data

Differential operating pressure, nom	0.5×10^5 Pa (0 . 5 bar)
Leakage rate, max	3 cm ³ / minute
Rotating speed, max	60 rpm
Life. min	10×10^6 revolutions
Starting torque, max	2 Nm@room temperature
Torque during rotation, max	2 Nm@room temperature
Case material	copper alloy
Case surface finish	painted dark grey (RAL 7021)
Weight, approx	14.7 Kg

General environmental conditions Operation

Ambient temperature range	-40°C+55°C
Relative humidity , max	95%
IP protection level	IP65

MWG100-CPR284-G-2.9GHz



Rf channel characteristics

Interfaces	CPR 284 / G
Style	I
Frequency range	2.70-2.90 GHz
Peak power , max	1 MW
Average power . max	1 kw
VSWR . max	1.2
VSWR WOW . max	0.05
Insertion loss . max	0.2 dB
Insertion loss WOW . max	0.05 dB
Phase WOW . max	3 deg

Conditions: Operating altitude if not pressurized, max 2000 m

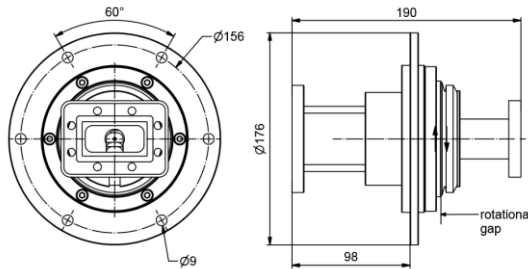
General mechanical data

Differential operating pressure, nom	2×10^5 Pa (2 . 1 bar)
Leakage rate, max	20 cm ³ / minute
Rotating speed, max	10 rpm
Life. min	6×10^6 revolutions
Starting torque, max	5Nm@ room temperature
Torque during rotation, max	5Nm@room temperature
Case material	aluminum alloy
Case surface finish	painted dark grey (RAL 7021)
Weight, approx	2.4 kg

General environmental conditions Operation

Ambient temperature range	0°C~+55°C
Relative humidity , max	95%
IP protection level	IP65

MWG100-CPR187-G-5.9GHz



Rf channel characteristics

Interfaces	CPR 187 / G
Style	I
Frequency range	5.4-5.9 GHz
Peak power , max	1.1 MW
Average power . max	4 KW
VSWR . max	1.2
VSWR WOW . max	1.05
Insertion loss . max	0.2 dB
Insertion loss WOW . max	0.05 dB
Phase WOW . max	3 deg

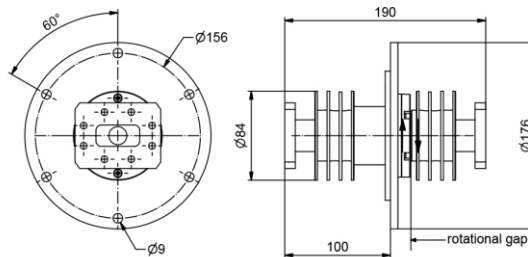
General mechanical data

Differential operating pressure, nom	2.1×10^5 Pa(2.1bar)
Leakage rate, max	20 cm ³ /minute
Rotating speed, max	10 rpm
Life. min	6×10^6 revolutions
Starting torque, max	5 Nm@room temperature
Torque during rotation, max	5 Nm@room temperature
Case material	aluminum alloy
Case surface finish	painted dark grey (RAL 7021)
Weight, approx	2.4kg

General environmental conditions Operation

Ambient temperature range	0°C+55°C
Relative humidity , max	95%
IP protection level	IP65

MWG100-CPR159-F-7GHz



Rf channel characteristics

Interfaces	CPR 159 / F
Style	I
Frequency range	5.82-7.00 GHZ
Peak power , max	70 kw
Average power . max	10 KW
VSWR . max	1.15
VSWR WOW . max	0.04
Insertion loss . max	0.15 dB
Insertion loss WOW . max	0.04 dB
Phase WOW . max	2 deg

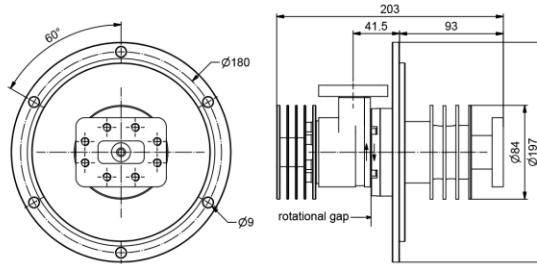
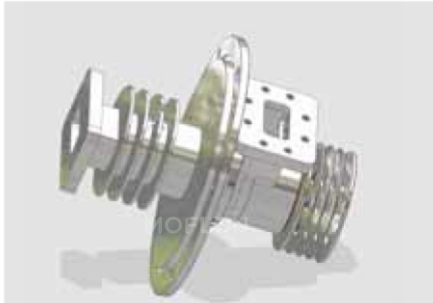
General mechanical data

Differential operating pressure, nom	0.5×10^5 Pa(0.5bar)
Leakage rate, max	3 cm ³ /minute
Rotating speed, max	60 rpm
Life. min	10×10^6 revolutions
Starting torque, max	2 Nm @ room temperature
Torque during rotation, max	2 Nm @ room temperature
Case material	aluminum alloy
Case surface finish	painted black(RAL 9005)
Weight, approx	3kg

General environmental conditions Operation

Ambient temperature range	-40°C~+70°C
Relative humidity , max	95%
IP protection level	IP64

MWG100L-CPR159-F-7GHz



Rf channel characteristics

Interfaces	CPR 159 / F
Style	L
Frequency range	5.82-7.0 GHz
Peak power , max	70 KW
Average power . max	10 KW
VSWR . max	1.15
VSWR WOW . max	0.04
Insertion loss . max	0.15 dB
Insertion loss WOW . max	0.04 dB
Phase WOW . max	2 deg

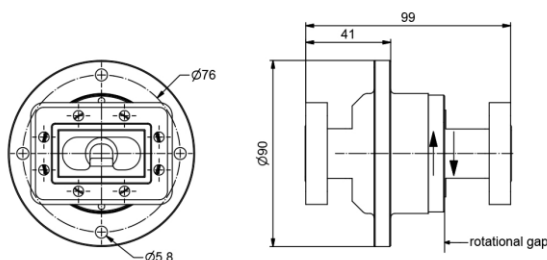
General mechanical data

Differential operating pressure, nom	0.5X10 ⁵ Pa(0.5bar)
Leakage rate, max	3 cm ³ /minute
Rotating speed, max	60 rpm
Life. min	10 x 10 ⁶ revolutions
Starting torque, max	2Nm @ room temperature
Torque during rotation, max	2Nm @ room temperature
Case material	aluminum alloy
Case surface finish	painted black (RAL 9005)
Weight, approx	3 kg

General environmental conditions Operation

Ambient temperature range	-40°C+70°C
Relative humidity , max	95%
IP protection level	IP64

MWG100-CPR137-G-M4-7GHz



Rf channel characteristics

Interfaces	CPR 137 / G with thread M4
Style	I
Frequency range	5.85-7.00 GHz
Peak power , max	10 kw
Average power . max	3.5 kw
VSWR . max	1.15
VSWR WOW . max	0.05
Insertion loss . max	0.1 dB
Insertion loss WOW . max	0.05 dB
Phase WOW . max	2 deg

Conditions : Operating altitude if not pressurized , max 3000 m ; Load VSWR , max 2.0

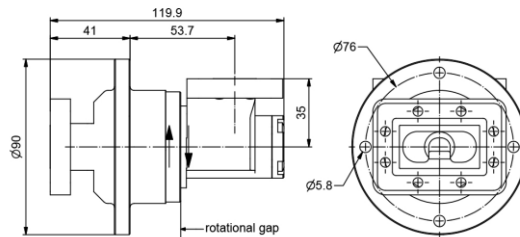
General mechanical data

Differential operating pressure, nom	2×10^5 Pa (2.0 bar)
Leakage rate, max	10 cm ³ / minute
Rotating speed, max	120 rpm
Life. min	10×10^6 revolutions
Starting torque, max	0.7 Nm @ room temperature
Torque during rotation, max	0.8 Nm @ room temperature
Case material	aluminum alloy
Case surface finish	chromate conversion coat
Weight, approx	0.7 kg

General environmental conditions Operation

Ambient temperature range	-40°C~+70°C
Relative humidity , max	95%
IP protection level	IP64

MWG100L-CPR137-G-M4-6.725GHz



Rf channel characteristics

Interfaces	CPR 137 / G with thread M4
Style	L with corpus interface in-line
Frequency range	5.850-6.725 GHz
Peak power , max	10 KW
Average power . max	3.5 kw
VSWR . max	1.15
VSWR WOW . max	0.05
Insertion loss . max	0.1 dB
Insertion loss WOW . max	0.05 dB
Phase WOW . max	2 deg

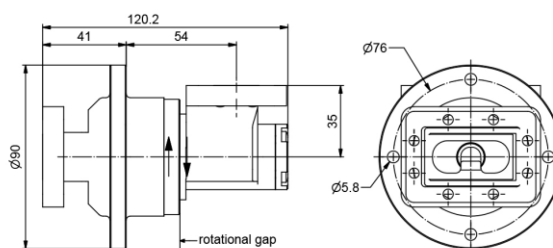
General mechanical data

Differential operating pressure, nom	2 x 10 ⁵ Pa (2 . 0 ban)
Leakage rate, max	10 cm ³ / minute
Rotating speed, max	120 rpm
Life. min	10 x 10 ⁶ revolutions
Starting torque, max	0.7 Nm@room temperature
Torque during rotation, max	0.8 Nm@ room temperature
Case material	aluminum alloy
Case surface finish	chromate conversion coat
Weight, approx	0 . 8 kg

General environmental conditions Operation

Ambient temperature range	-40°C+70°C
Relative humidity , max	95%
IP protection level	IP64

MWG100L-CPR137-G-M4-7.5GHz



Rf channel characteristics

Interfaces	CPR 137 / G with thread M4
Style	L
Frequency range	6.5-7.5 GHz
Peak power , max	10 kw
Average power . max	3.5 kw
VSWR . max	1.15
VSWR WOW . max	0.05
Insertion loss . max	0.1 dB
Insertion loss WOW . max	0.05 dB
Phase WOW . max	2 deg

onditions : Operating altitude if not pressurized , max 3000 m ; Load VSWR , max 2.0

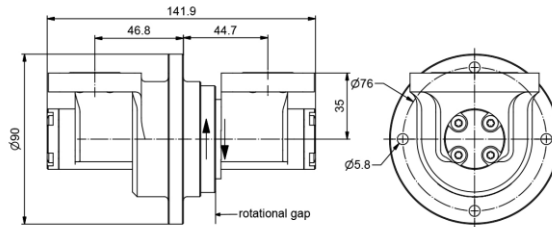
General mechanical data

Differential operating pressure, nom	2×10^5 Pa (2 . 0 bar)
Leakage rate, max	$10 \text{ cm}^3 / \text{minute}$
Rotating speed, max	120 rpm
Life. min	10×10^6 revolutions
Starting torque, max	0.7 Nm@room temperature
Torque during rotation, max	0.8 Nm@room temperature
Case material	aluminum alloy
Case surface finish	chromate conversion coat
Weight, approx	0.8 kg

General environmental conditions Operation

Ambient temperature range	-40°C~+70°C
Relative humidity , max	95%
IP protection level	IP64

MWG100U-CPR137-G-M4-7.25GHz



Rf channel characteristics

Interfaces	CPR 137 / G with thread M4
Style	U
Frequency range	5.6-7.25 GHz
Peak power , max	10 KW
Average power . max	3.5 KW
VSWR . max	1.15
VSWR WOW . max	0.05
Insertion loss . max	0.1 dB
Insertion loss WOW . max	0.05 dB
Phase WOW . max	2 deg

onditions : Operating altitude if not pressurized , max 3000 m ; Load VSWR , max 2.0

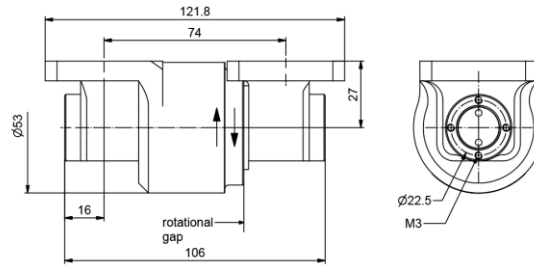
General mechanical data

Differential operating pressure, nom	2×10^5 Pa (2.0 bar)
Leakage rate, max	10 cm ³ / minute
Rotating speed, max	120 rpm
Life. min	10×10^6 revolutions
Starting torque, max	0.7 Nm@room temperature
Torque during rotation, max	0.8 Nm@room temperature
Case material	aluminum alloy
Case surface finish	chromate conversion coat
Weight, approx	0.92 kg

General environmental conditions Operation

Ambient temperature range	-40°C+70°C
Relative humidity , max	95%
IP protection level	IP64

MWG100U-UBR84-M4-8.6GHz



Rf channel characteristics

Interfaces	154 IEC UBR84 with thread M4
Style	U
Frequency range	7.0-8.6 GHz
Peak power , max	10 kw
Average power . max	1 KW
VSWR . max	1.15
VSWR WOW . max	0.05
Insertion loss . max	0.15 dB
Insertion loss WOW . max	0.05 dB
Phase WOW . max	2 deg

onditions : Operating altitude if not pressurized , max 3000 m ; Load VSWR , max 2.0

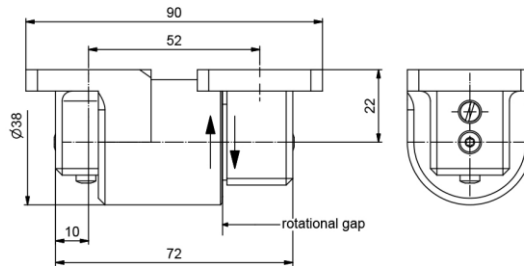
General mechanical data

Differential operating pressure, nom	2×10^5 Pa (2 bar)
Leakage rate, max	10 cm ³ / minute
Rotating speed, max	120 rpm
Life. min	20 X 10 ⁶ revolutions
Starting torque, max	0.6 Nm@room temperature
Torque during rotation, max	0.7 Nm@room temperature
Case material	aluminum alloy
Case surface finish	chromate conversion coat
Weight, approx	0.55 kg

General environmental conditions Operation

Ambient temperature range	-40°C~+70°C
Relative humidity , max	95%
IP protection level	IP65

MWG100U-UBR120-M4-14.5GHz



Rf channel characteristics

Interfaces	UBR120 with thread M4
Style	U
Frequency range	10.70-14.50 GHz
Peak power , max	5 kw
Average power . max	750W
VSWR . max	1.2
VSWR WOW . max	0.05
Insertion loss . max	0.2 dB
Insertion loss WOW . max	0.1 dB
Phase WOW . max	2 deg

Conditions : Operating altitude , max 2000 m

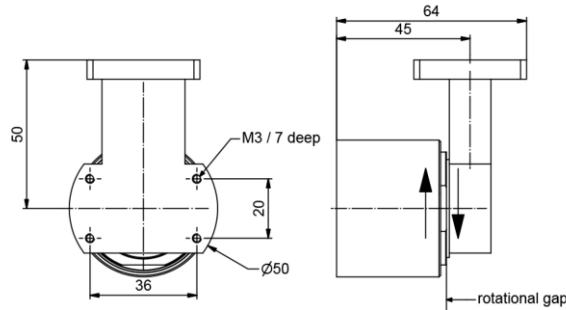
General mechanical data

Differential operating pressure, nom	2×10^5 Pa (2 bar)
Leakage rate, max	10 cm ³ / minute
Rotating speed, max	120 rpm
Life. min	20 X 10 ⁶ revolutions
Starting torque, max	0.35 Nm@room temperature
Torque during rotation, max	0.30 Nm@room temperature
Case material	aluminum alloy
Case surface finish	chromate conversion coat per MIL-C-5541
Weight, approx	0.24 kg

General environmental conditions Operation

Ambient temperature range	-40°C+70°C
Relative humidity , max	95%
IP protection level	IP65

MWG100L-UBR120-14.5GHz



Rf channel characteristics

Interfaces	UBR120
Style	L
Frequency range	13.75-14.50 GHZ
Peak power , max	5 kw at sea level
Average power . max	100 W
VSWR . max	1.2
VSWR WOW . max	0.1
Insertion loss . max	0.2 db
Insertion loss WOW . max	0.05 db

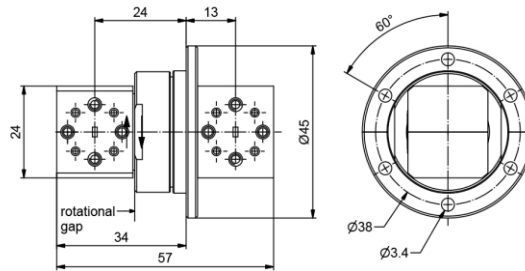
General mechanical data

Rotating speed . max	50 rom
Life . min	10 x 10 ⁶ revolutions
Starting torque , max	0.25 Nm@room temperature
Torque during rotation , max	0.20 Nm@room temperature
Case material	aluminum alloy
Case surface finish	chromate conversion coat per MIL-C-5541
Weight , approx	0.3 kg

General environmental conditions Operation

Ambient temperature range	-40°C~+70°C
Relative humidity , max	95%
IP protection level	IP41

MWG100U-UG387-95GHz



Rf channel characteristics

Interface , per M3922 / 67-010	UG-387 / U-mod
Style / interface in-line	U
Frequency range	93.0 - 95.0 GHz
Peak power , max	250 W
Average power . max	10 W
VSWR . max	1.5
VSWR WOW . max	0.2
Insertion loss . max	1.2dB
Insertion loss WOW . max	0.2dB

Conditions : Operating altitude if not pressurized , max 3000 m ; Load VSWR , max 2.0

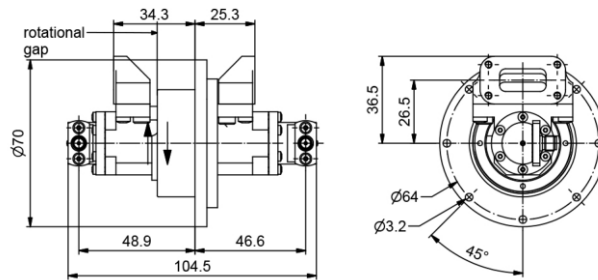
General mechanical data

Rotating speed . max	300 rpm
Life . min	20 x 10 ⁶ revolutions
Starting torque , max	0.2 Nm@room temperature
orque during rotation , max	0.2 Nm@room temperature
Case material	copper alloy
Case surface finish	gold plated
Weight , approx	0.25 kg

General environmental conditions Operation

Ambient temperature range	-40°C+70°C
Relative humidity , max	95%
IP protection level	IP40

MWG200U-R120-14.5GHz



Rf channel characteristics

Channel designation	Channel 1	Channel 2
Interfaces	R120 special flange	SMA-F (50Ω)
Style	I	U
Frequency range	14.0-14.5 GHz	DC-2.05 GHz
Peak power , max	10 KW	-
Average power , max	100 W	10W
VSWR , max .	1.2	1.2
VSWR WOW . max	0.1	0.05
Insertion loss . max	0.2dB	0.4dB
Insertion loss WOW . max	0.05dB	0.1dB
solation	60dB	60dB
Phase WOW . ma	1 deg	1 deg

Conditions : Operating altitude if not pressurized max 1000 m

General mechanical data

Rotating speed . max	60 rpm
Life . min	10 x 10 ⁶ revolutions
Torque . max	0.20 Nm@room temperature
Case material	aluminum alloy
Case surface finish	chromate conversion coat
Weight , approx	0.4 kg

General environmental conditions Operation

Ambient temperature range	-40°C~+70°C
Relative humidity , max	95%
IP protection level	IP64



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