



Single Channel RF Rotary Joint Operating to 18 GHz, SMA Female to SMA Female Straight Adapter

RF Rotary Joints Technical Data Sheet

RJ-RF-1C0MAJS-18G-01

Features

- Frequency Range of DC to 18 GHz
- Peak power capability:3 kW
- Straight of Connector Shape
- Female SMA Connectors
- LOW VSWR
- Rotation Speed Max(rpm):300

Applications

- Radar Systems
- Military
- Wireless Radio Systems
- Telecom Infrastructure
- Communication Systems
- R&D Labs
- Microwave Radio Systems

Description

The ZOMWAVE RF rotary joint RJ-RF-1C0MAJS-18G-01 is a single-channel straight rotary joint designed for critical radar and rotating antenna systems. Engineered to exacting radio frequency standards, it ensures reliable signal integrity in demanding applications including air traffic control, maritime, vehicular, and mobile radar platforms.

This unit features a robust SMA female to SMA female interface, providing a consistent and secure connection across its full operational bandwidth. Key performance specifications include a maximum frequency of 18 GHz and an excellent voltage standing wave ratio (VSWR) of 1.4:1, minimizing signal loss and reflection for superior system performance.

Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range	DC		18	GHz
Impedance		50		Ohms
Insertion Loss			0.4	dB
VSWR			1.40:1	
Rotation Speed Max(rpm)			300	
Peak power capability			3	kW
Average power capability		200W@1GHz		
Maximum DC Voltage (Operating)			48	V
Maximum DC Current (Operating)			5	A
Dielectric Withstand Voltage			1500	V

Electrical Specification Notes:
Average Power and Actuating Current values at 25°C.

Mechanical Specifications

Size

Length	1.37 in [35 mm]
Width	1.00 in [25 mm]
Height	1.00 in [25 mm]
Weight	0.06 lbs [25.5 g]

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Design	Single Channel
Connector Type	SMA Female
Connector Shape	Straight
Operating Life	5,000,000 Cycles

Environmental Specifications

Temperature

Temperature range	-45 to +80 deg C
Ambient temperature range	-55 to +85 deg C

Notes:

Values at 25° C, sea level.

Compliance Certifications

RoHS Compliant
REACH Compliant

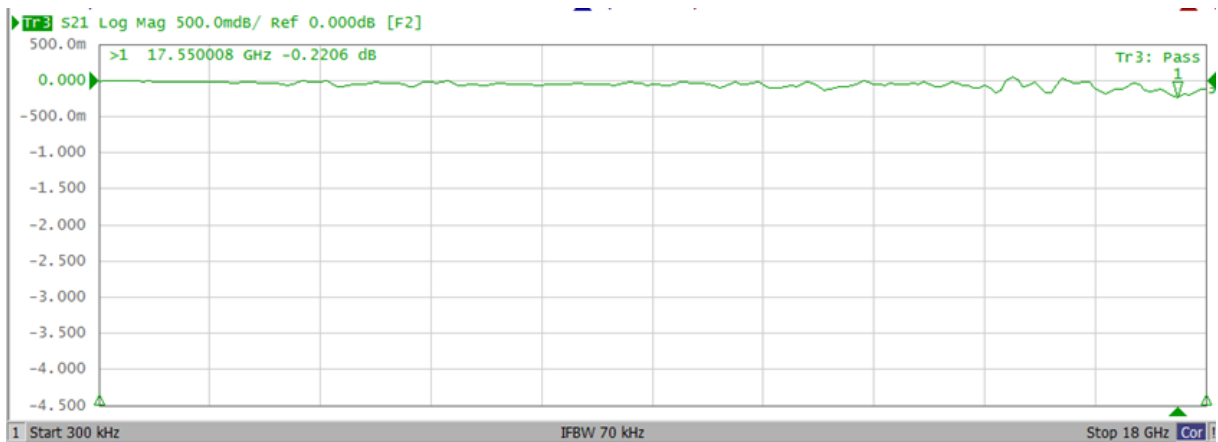
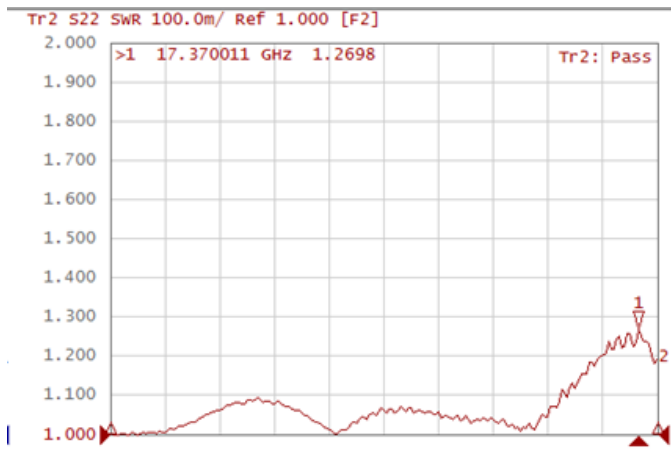
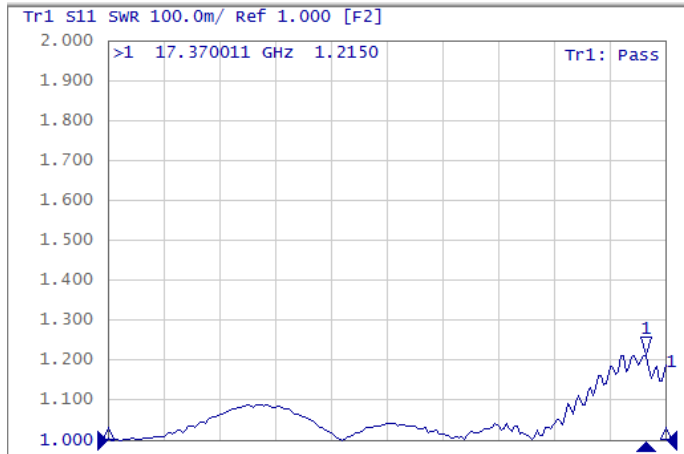
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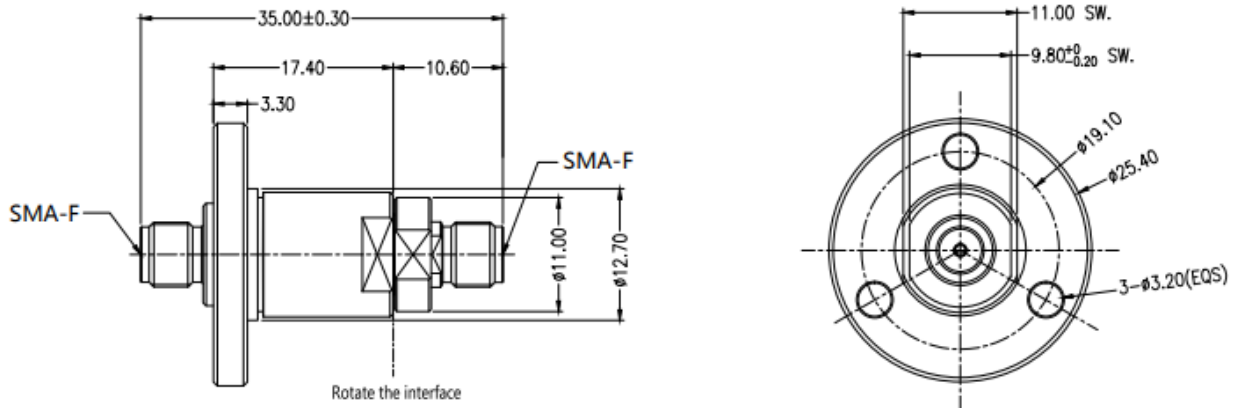
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Typical Performance data





CAD Drawing



1. Dimensions are in mm [inches]
2. Tolerances: Outline drawing ± 0.2 [0.008] Hole ± 0.2 [0.008]