

FRJ1-50000-56

Single Channel, DC~50GHz, 56mm

Features:
 * Low VSWR
 * Low VSWR Flatness
 * Low Insertion Loss Flatness

Applications:
 * High Speed Digital Signal Transmission
 * Analog Signal Transmission

Electrical (Rotary Joint)

Frequency: DC~50GHz
 VSWR: 1.7 max.
 VSWR Flatness: 0.2 max.
 Insertion Loss: 0.9dB max.
 Insertion Loss Flatness: 0.1 dB max..
 Phase Flatness: 2° max.
 Average Power: 50W max. @1GHz
 15W max. @10GHz
 5W max. @26.5GHz
 3W max. @50GHz
 Peak Power: 500W max.
 IP Grade: IP40 acc. EN 60529

Mechanical (Rotary Joint)

Connectors: 2.4mm female
 Rotating Speed: 150RPM max.
 Starting Torque: 0.5N.cm max.
 Connector Axial Load: ±0.1N max.
 Rotating Torque: 0.5N.cm max.
 Connector Radial Load: ±0.1N max.
 Operation Life: 10M Cycles
 Dielectric: PTFE

Environmental

Temperature (Rotary Joint): -55~+85°C
 Temperature (Slip Ring): -30~+80°C

Electrical (Slip Ring)

Voltage (Power/Signal): 0~440V/0~240V
 Impedance of Dielectric: 500/300MΩ min.
 (Power/Signal):
 Lead Wire (Power): AWG#17 Silver plated Teflon
 Lead Wire (Signal): AWG#22 Silver plated Teflon
 Dielectric Resistance: 500V AC @50Hz, 60s
 Electrical Noise: 0.01Ω max.
 IP Grade: IP51

Mechanical (Slip Ring)

Operation Life: 10M Cycles
 Rotating Speed: 250RPM max.
 Contact Material: Gold
 Housing: Aluminum alloy
 Torque: 0.01N.m @6 Channels + 0.05N.m

How To Order

FRJ1-50000-56-X-Y

X: Power Circuits

For example:

0610 - 6 circuits@10A

Y: Signal Circuits

For example:

06S - 6 circuits signal@2A

Customization is available upon request.

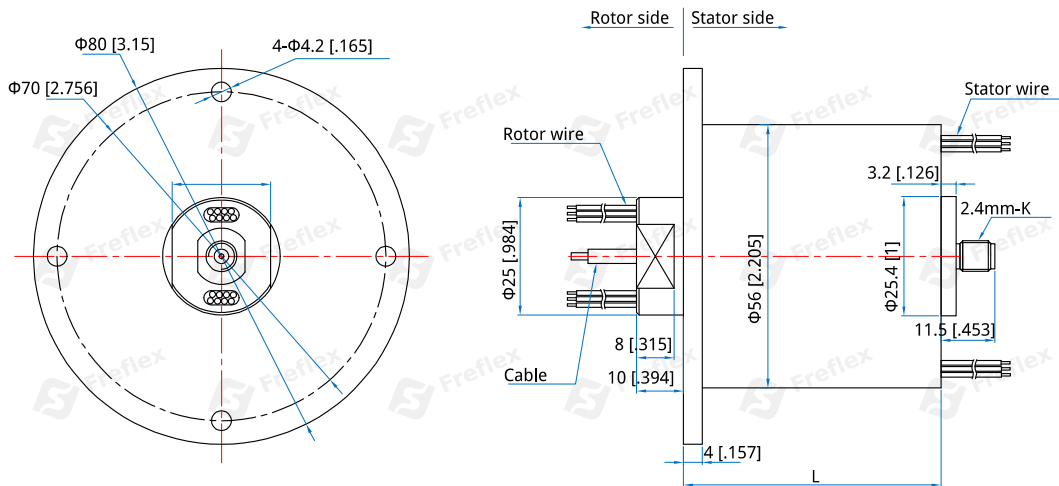
Color Code of Lead Wire

Ring	1	2	3	4	5	6	7	8	9	10	11	12
Color	BLK	BRN	RED	ORG	YEL	GRN	BLU	PUR	GRY	WHT	PINK	LGT BLU

Ring	13	14	15	16	17	18	19	20	21	22	23	24
Color	WHT/BLK	WHT/BRN	WHT/RED	WHT/ORG	WHT/YEL	WHT/GRN	WHT/BLU	WHT/PUR	WHT/GRY	BLK/RED	BLK/BRN	Transparent

Remark: "1" : the first wire from rotor side , FRJ1-50000-56-12S wire color sequence: BLK/BRN/RED/ORG/YEL/GRN/BLU/PUR/GRY/WHT/PINK/LGT BLU, 24 color wires asone group, if more than 24wires, repeat as sequence, use number tube to tell group 1#, 2#....

Outline Drawings



Unit: mm [in] Tolerance: $\pm 0.2\text{mm}$ [$\pm 0.008\text{in}$]

Standard Part Number List

Part Number	RF Channel	Frequency (GHz)	Circuits no. (10A)	Circuits no. (2A)	Length L(mm/in)
FRJ1-50000-56-0610	1	DC-50	6	0	38 [1.496]
FRJ1-50000-56-06S	1	DC-50	0	6	38 [1.496]
FRJ1-50000-56-0610-06S	1	DC-50	6	6	55 [2.165]
FRJ1-50000-56-1210	1	DC-50	12	0	55 [2.165]
FRJ1-50000-56-12S	1	DC-50	0	12	55 [2.165]
FRJ1-50000-56-0610-12S	1	DC-50	6	12	71.5 [2.815]
FRJ1-50000-56-1810	1	DC-50	18	0	71.5 [2.815]
FRJ1-50000-56-18S	1	DC-50	0	18	71.5 [2.815]
FRJ1-50000-56-0610-18S	1	DC-50	6	18	88.5 [3.484]
FRJ1-50000-56-1210-12S	1	DC-50	12	12	88.5 [3.484]
FRJ1-50000-56-2410	1	DC-50	24	0	88.5 [3.484]
FRJ1-50000-56-24S	1	DC-50	0	24	88.5 [3.484]
FRJ1-50000-56-36S	1	DC-50	0	36	122 [4.803]
FRJ1-50000-56-48S	1	DC-50	0	48	156 [6.142]