

FRJ1-30000-86

Single Channel, DC~30GHz, 86mm

Features:

- * Low VSWR
- * Low VSWR Flatness
- * Low Insertion Loss Flatness

Applications:

- * High Speed Digital Signal Transmission
- * Analog Signal Transmission

Electrical (Rotary Joint)

Frequency:	DC~30GHz
VSWR:	1.35 max. @DC~8GHz 1.75 max. @DC~18GHz 2.5 max. @DC~30GHz
VSWR Flatness:	0.15 max.
Insertion Loss:	0.4dB max. @DC~8GHz 1.0dB max. @DC~18GHz 2.0dB max. @DC~30GHz
Insertion Loss Flatness:	0.15dB max.
Phase Flatness:	1.5° max.
Average Power:	20W max. @18GHz
Impedance:	50Ω

Mechanical (Rotary Joint)

Connectors:	SMA female (Φ3.5mm)
Rotating Speed:	150RPM
Rotating Torque:	0.1Nm +0.03Nm/Circuits no. 6
Operation Life:	5M Cycles
Contact Material:	Gold
Housing:	Aluminum alloy
IP Grade:	IP51

Environmental

Operating Temperature:	-30~+80°C -45~+85°C (Military optional)
Operating Humidity:	0~85% 0~97% (Military optional)

Electrical (Slip Ring)

Voltage:	0~440VAC/VDC
Impedance of Dielectric:	1000MΩ/500VDC min.
Lead Wire (Power):	AWG#16 Silver plated Teflon
Lead Wire (Signal):	AWG#22 Silver plated Teflon
Wire Length:	Standard length 300mm (adjustable upon request)
Dielectric Resistance:	500VAC@50Hz, 60s
Electrical Noise:	0.01Ω max.

How To Order

FRJ1-30000-86-X-Y

X: Power Circuits

For example:

0610 - 6 circuits@10A

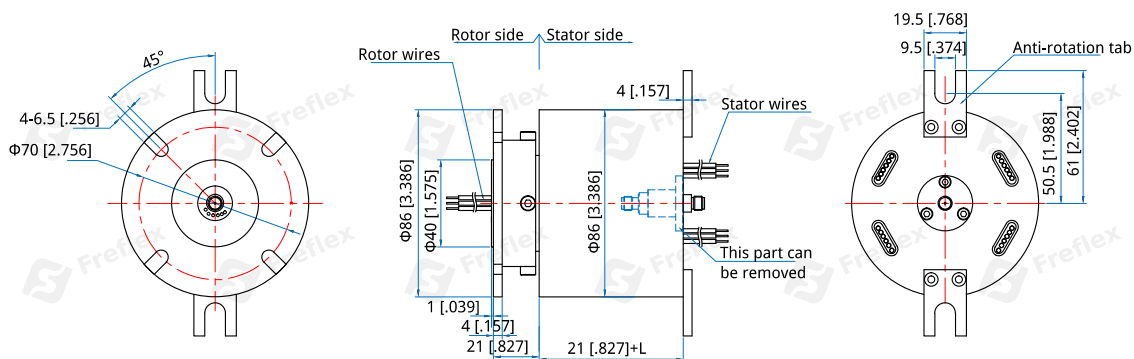
Y: Signal Circuits

For example:

06S - 6 circuits signal@5A

Customization is available upon request.

Outline Drawings



Unit: mm [in] Tolerance: ±0.2mm [±0.008in]

Standard Part Number List

Part Number	RF Channel	Frequency (GHz)	Circuits no. (10A)	Circuits no. (5A)	Length L (mm/in)
FRJ1-30000-86-02S	1	DC-30	0	2	31.6 [1.244]
FRJ1-30000-86-0210	1	DC-30	2	0	31.6 [1.244]
FRJ1-30000-86-03S	1	DC-30	0	3	35 [1.378]
FRJ1-30000-86-0310	1	DC-30	3	0	35 [1.378]
FRJ1-30000-86-06S	1	DC-30	0	6	45.2 [1.78]
FRJ1-30000-86-0210-04S	1	DC-30	2	4	45.2 [1.78]
FRJ1-30000-86-0410-02S	1	DC-30	4	2	45.2 [1.78]
FRJ1-30000-86-0610	1	DC-30	6	0	45.2 [1.78]
FRJ1-30000-86-12S	1	DC-30	0	12	65.6 [2.583]
FRJ1-30000-86-0210-10S	1	DC-30	2	10	65.6 [2.583]
FRJ1-30000-86-0310-09S	1	DC-30	3	9	65.6 [2.583]
FRJ1-30000-86-0610-06S	1	DC-30	6	6	65.6 [2.583]
FRJ1-30000-86-0810-04S	1	DC-30	8	4	65.6 [2.583]
FRJ1-30000-86-1010-02S	1	DC-30	10	2	65.6 [2.583]
FRJ1-30000-86-1210	1	DC-30	12	0	65.6 [2.583]
FRJ1-30000-86-18S	1	DC-30	0	18	86 [3.386]
FRJ1-30000-86-0210-16S	1	DC-30	2	16	86 [3.386]
FRJ1-30000-86-0410-14S	1	DC-30	4	14	86 [3.386]
FRJ1-30000-86-0610-12S	1	DC-30	6	12	86 [3.386]
FRJ1-30000-86-0810-10S	1	DC-30	8	10	86 [3.386]
FRJ1-30000-86-1010-08S	1	DC-30	10	8	86 [3.386]
FRJ1-30000-86-1210-06S	1	DC-30	12	6	86 [3.386]
FRJ1-30000-86-1410-04S	1	DC-30	14	4	86 [3.386]
FRJ1-30000-86-1610-02S	1	DC-30	16	2	86 [3.386]
FRJ1-30000-86-24S	1	DC-30	0	24	106.4 [4.189]
FRJ1-30000-86-0410-20S	1	DC-30	4	20	106.4 [4.189]
FRJ1-30000-86-0610-18S	1	DC-30	6	18	106.4 [4.189]
FRJ1-30000-86-1210-12S	1	DC-30	12	12	106.4 [4.189]
FRJ1-30000-86-1810-06S	1	DC-30	18	6	106.4 [4.189]
FRJ1-30000-86-2410	1	DC-30	24	0	106.4 [4.189]
FRJ1-30000-86-30S	1	DC-30	0	30	126.8 [4.992]
FRJ1-30000-86-0610-24S	1	DC-30	6	24	126.8 [4.992]
FRJ1-30000-86-1210-18S	1	DC-30	12	18	126.8 [4.992]
FRJ1-30000-86-1810-12S	1	DC-30	18	12	126.8 [4.992]
FRJ1-30000-86-2410-06S	1	DC-30	24	6	126.8 [4.992]
FRJ1-30000-86-3010	1	DC-30	30	0	126.8 [4.992]
FRJ1-30000-86-36S	1	DC-30	0	36	150.2 [5.913]
FRJ1-30000-86-0610-30S	1	DC-30	6	30	150.2 [5.913]
FRJ1-30000-86-1210-24S	1	DC-30	12	24	150.2 [5.913]
FRJ1-30000-86-3610	1	DC-30	36	0	150.2 [5.913]
FRJ1-30000-86-42S	1	DC-30	0	42	170.6 [6.717]

Rotary Joints

FRJ1-30000-86-0610-36S	1	DC~30	6	36	170.6 [6.717]
FRJ1-30000-86-1210-30S	1	DC~30	12	30	170.6 [6.717]
FRJ1-30000-86-48S	1	DC~30	0	48	193.2 [7.606]
FRJ1-30000-86-0610-42S	1	DC~30	6	42	193.2 [7.606]
FRJ1-30000-86-0910-39S	1	DC~30	9	39	193.2 [7.606]
FRJ1-30000-86-1210-36S	1	DC~30	12	36	193.2 [7.606]
FRJ1-30000-86-1810-30S	1	DC~30	18	30	193.2 [7.606]
FRJ1-30000-86-2410-24S	1	DC~30	24	24	193.2 [7.606]
FRJ1-30000-86-60S	1	DC~30	0	60	234 [9.213]
FRJ1-30000-86-0610-54S	1	DC~30	6	54	234 [9.213]
FRJ1-30000-86-0910-51S	1	DC~30	9	51	234 [9.213]
FRJ1-30000-86-1210-48S	1	DC~30	12	48	234 [9.213]
FRJ1-30000-86-72S	1	DC~30	0	72	277.8 [10.937]

Note: N 10A current loops combined can be used as 1 N * 10A current loop; For example, combining 2 rings of 10A together can be used as 1 circuit of 20A. The number of loops and current size can be customized. If you need assistance with selection, please contact customer service.