

Rotary Joint || BN 835080

**Radio frequency characteristics**

Interface type / material / surface finish	1.85-f (50 Ω) / copper alloy / gold plated
Interface orientation	style I
Frequency range	DC to 67 GHz
Peak power capability	1 kW @ 2.000 m if not pressurized
Average power capability	10 W @ DC to 10 GHz / 5 W @ 10 to 26 GHz 3 W @ 26 to 50 GHz / 1 W @ 50 to 67 GHz
VSWR, max.	1.1 @ DC to 10 GHz / 1.2 @ 10 to 26 GHz 1.3 @ 26 to 50 GHz / 1.4 @ 50 to 67 GHz
VSWR variation over rotation, max.	0.02 @ DC to 10 GHz / 0.04 @ 10 to 26 GHz 0.08 @ 26 to 50 GHz / 0.10 @ 50 to 67 GHz
Insertion loss, max.	0.2 dB @ DC to 10 GHz / 0.3 dB @ 10 to 26 GHz 0.4 dB @ 26 to 50 GHz / 0.5 dB @ 50 to 67 GHz
Insertion loss variation over rotation, max.	0.02 dB @ DC to 10 GHz / 0.04 dB @ 10 to 26 GHz 0.08 dB @ 26 to 50 GHz / 0.10 dB @ 50 to 67 GHz
Phase variation over rotation, max.	1 deg. @ DC to 10 GHz / 2 deg. @ 10 to 26 GHz 3 deg. @ 26 to 50 GHz / 4 deg. @ 50 to 67 GHz
DC carrying capability	0.2 A

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Mechanical characteristics

Rotating speed, max. / nominal	300 / 200 rpm
Life, min.	0.2 x 10 ⁶ revolutions
Torque (room / min. temperature), max.	0.5 Ncm / - @ start-up 0.5 Ncm / - @ rotation
Interface loads, max.	±0.5 N in axial direction ±0.5 N in radial direction
Case material	copper alloy and stainless steel
Case surface finish	partially gold plated
IP protection level	IP50
Weight, approx.	0.03 kg
Marking	adhesive label

Environmental conditions

Operation	
Ambient temperature range	-40 to +60°C
Relative humidity, max.	95% (non-condensing)
Storage	
Ambient temperature range	-55 to +80°C
Relative humidity, max.	95% (non-condensing)

Applicable Documents

Drawing	835080-0E Issue A
Technical information	"Rotary Joints – Glossary", Technical Document TD-00021, Spinner GmbH