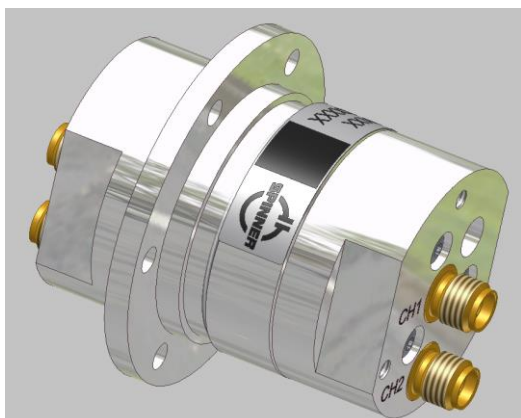


Rotary Joint || BN 153176



Radio frequency characteristics

| Channel designation | Inner channel (CH1) | Outer channel (CH2) |
|--|---|---|
| Interface type / material / surface finish | SMA-f (50 Ω) / copper alloy / gold plated | SMA-f (50 Ω) / copper alloy / gold plated |
| Interface orientation | style I | style I |
| Frequency range | DC to 18 GHz | DC to 18 GHz |
| Peak power capability | 1 kW | 1 kW |
| Average power capability | 100 W @ DC to 2 GHz / 60 W @ 2 to 4 GHz 35 W @ 4 to 8 GHz / 25 W @ 8 to 12 GHz 17 W @ 12 to 18 GHz | 10 W |
| VSWR, max. | 1.35 @ DC to 8 GHz 1.5 @ 8 to 18 GHz | 2.0 @ DC to 4 GHz / 2.5 @ 4 to 8 GHz 3.5 @ 8 to 12 GHz / 4.5 @ 12 to 18 GHz |
| VSWR variation over rotation, max. | 0.1 | 0.1 @ DC to 4 GHz / 0.4 @ 4 to 8 GHz 0.8 @ 8 to 12 GHz / 2.0 @ 12 to 18 GHz |
| Insertion loss, max. | 0.4 dB @ DC to 8 GHz 1.0 dB @ 8 to 18 GHz | 0.5 dB @ DC to 4 GHz / 1.0 dB @ 4 to 8 GHz 2.0 dB @ 8 to 12 GHz / 3.5 dB @ 12 to 18 GHz |
| Insertion loss variation over rotation, max. | 0.06 dB | 0.1 dB @ DC to 4 GHz / 0.35 dB @ 4 to 8 GHz 0.7 dB @ 8 to 12 GHz / 1.5 dB @ 12 to 18 GHz |
| Phase variation over rotation, max. | 0.5 deg. @ DC to 8 GHz 1.0 deg. @ 8 to 18 GHz | 4 deg. @ DC to 8 GHz 10 deg. @ 8 to 12 GHz 25 deg. @ 12 to 18 GHz |
| Isolation, min. | 50 dB | |
| DC carrying capability | 0.5 A, 48 VDC @ full RF avg. power 2 A, 48 VDC @ RF avg. power 5 W 5 A*, 48 VDC @ RF avg. power 5 W | 0.5 A, 24 VDC @ full RF avg. power |

Conditions:

DC applied to one channel only

* applied for max. 1 x 10E6 revolutions or 50 h

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Mechanical characteristics

| | |
|--|--|
| Rotating speed, max. / nominal | 60 / 30 rpm |
| Life, min. | 5 x 10 ⁶ revolutions |
| Torque (room / min. temperature), max. | 0.05 Nm / - @ start-up 0.05 Nm / - @ rotation |
| Interface loads, max. | ±5 N in axial direction ±5 N in radial direction |
| Case material | aluminum alloy |
| Case surface finish | chromate conversion coat per MIL-DTL-5541 type 1 or type 2 |
| IP protection level | IP64 |
| Weight, approx. | 0.13 kg |
| Marking | adhesive label |

Environmental conditions

| | |
|---------------------------|----------------------|
| Operation | |
| Ambient temperature range | -40 to +71°C |
| Relative humidity, max. | 95% (non-condensing) |
| Storage | |
| Ambient temperature range | -55 to +85°C |
| Relative humidity, max. | 95% (non-condensing) |

Applicable Documents

| | |
|-----------------------|---|
| Drawing | 153176-0E Issue A |
| Technical information | "Rotary Joints – Glossary", Technical Document TD-00021, Spinner GmbH |