

Rotary Joint || BN 153167



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 4.5 GHz	DC to 4.5 GHz
Peak power capability	1 kW	1 kW
Average power capability	100 W @ DC to 2 GHz 60 W @ 2 to 4.5 GHz	10 W
VSWR, max.	1.2	1.5
VSWR variation over rotation, max.	0.05	0.2
Insertion loss, max.	0.25 dB	0.30 dB
Insertion loss variation over rotation, max.	0.05 dB	0.15 dB
Phase variation over rotation, max.	0.5 deg.	4 deg.
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

Further remark:
5 rpm max. @ -55°C

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Mechanical characteristics

Rotating speed, max. / nominal	60 / 30 rpm
Life, min.	5×10^6 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
IP protection level	IP64
Weight, approx.	0.13 kg
Marking	adhesive label

Environmental conditions

Operation	
Ambient temperature range	-55 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	153167-0E Issue D
Technical information	"Rotary Joints – Glossary", Technical Document TD-00021, Spinner GmbH