

Rotary Joint || BN 153146



**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 L	style L
Frequency range	DC to 14.5 GHz	DC to 13 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 14.5 GHz	10 W
VSWR, max.	1.5	2.0
VSWR variation over rotation, max.	0.1	0.5
Insertion loss, max.	1.0 dB	1.0 dB
Insertion loss variation over rotation, max.	0.06 dB	0.40 dB
Phase variation over rotation, max.	0.5 deg. @ DC to 8 GHz 1.0 deg. @ 8 to 14.5 GHz	4 deg. @ DC to 8 GHz 10 deg. @ 8 to 13 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 <sup>6</sup> 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**

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

**Applicable Documents**

Drawing	153146-0E Issue C
Technical information	"Rotary Joints – Glossary", Technical Document TD-00021, Spinner GmbH