

## Rotary Joint || BN 835045

**Radio frequency characteristics**

Interface type / material / surface finish	2.92mm-f (50 $\Omega$ ) / copper alloy / gold plated
Interface orientation	style I
Frequency range	DC to 40 GHz
Peak power capability	500 W
Average power capability	50 W @ DC to 2 GHz / 20 W @ 2 to 4 GHz 5 W @ 4 to 10 GHz / 2 W @ 10 to 18 GHz 1 W @ 18 to 40 GHz
VSWR, max.	1.3 @ DC to 10 GHz / 1.4 @ 10 to 18 GHz 1.7 @ 18 to 26.5 GHz / 2.0 @ 26.5 to 40 GHz
VSWR variation over rotation, max.	0.1
Insertion loss, max.	0.5 dB @ DC to 18 GHz 1.0 dB @ 18 to 26.5 GHz 1.2 dB @ 26.5 to 40 GHz
Insertion loss variation over rotation, max.	0.1 dB
Phase variation over rotation, max.	3 deg.
DC carrying capability	-

**Conditions:**

- Pulse width, max.: 6  $\mu$ s
- Operating altitude if not pressurized, max.: sea level
- 2W average power @ 40 GHz and +60°C case temperature

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**Mechanical characteristics**

Rotating speed, max. / nominal	300 / 200 rpm
Life, min.	5 x 10 <sup>6</sup> revolutions
Torque (room / min. temperature), max.	0.5 Ncm / - @ start-up 0.5 Ncm / - @ rotation
Interface loads, max.	±1 N in axial direction ±1 N in radial direction
Case material	copper alloy
Case surface finish	partially silver plated
IP protection level	IP54
Weight, approx.	0.028 kg
Marking	laser engraving

**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	835045-0E Issue D
Technical information	"Rotary Joints – Glossary", Technical Document TD-00021, Spinner GmbH