Rotary Joint || BN 153164

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 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.	1.5	1.5
VSWR variation over rotation, max.	0.1	0.5
Insertion loss, max.	0.3 dB	0.30 dB
Insertion loss variation over rotation, max.	0.15 dB	0.15 dB
Phase variation over rotation, max.	-	-
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.	5×10^6 revolutions
Torque (room / min. temperature), max.	0.05 Nm / 0.05 Nm @ start-up 0.05 Nm / 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	-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	153164-0E Issue D
Technical information	“Rotary Joints – Glossary”, Technical Document TD-00021, Spinner GmbH