

Rotary Joint || BN 522214



Radio frequency characteristics

Channel designation	Channel 1 to channel 4
Interface type / material / surface finish	SMA-f (50 Ω) / copper alloy / gold plated
Frequency range	DC to 4 GHz
Peak power rating	1 kW
Average power rating	50 W @ DC to 1 GHz 30 W @ 1 GHz to 2.5 GHz 25 W @ 2.5 GHz to 4.0 GHz
VSWR, max. / typ.	1.3 / 1.2 @ 0 to 1 GHz 1.5 / 1.4 @ 1 to 2 GHz 1.6 / 1.5 @ 2 to 4 GHz
VSWR variation over rotation, max. / typ.	0.10 / 0.07 @ 0 to 1 GHz 0.15 / 0.10 @ 1 to 2 GHz 0.25 / 0.20 @ 2 to 3 GHz 0.50 / 0.40 @ 3 to 4 GHz
Insertion loss, max. / typ.	0.3 dB / 0.2 dB @ 0 to 1 GHz 0.4 dB / 0.3 dB @ 1 to 2 GHz 0.6 dB / 0.4 dB @ 2 to 4 GHz
Insertion loss variation over rotation, max. / typ.	0.10 dB / 0.05 dB @ 0 to 1 GHz 0.15 dB / 0.15 dB @ 1 to 3 GHz 0.30 dB / 0.20 dB @ 3 to 4 GHz
Phase variation over rotation, max. / typ.	7 deg. / 5 deg. @ 0 to 2 GHz 9 deg. / 7 deg. @ 2 to 4 GHz
Isolation, min./typ.	50 dB / 65 dB

Mechanical characteristics

Rotating speed, max. / nominal	60 rpm / 30 rpm
Life, min.	5 x 10 ⁶ revolutions
Torque (room / min. temperature), max.	15 Ncm / 15 Ncm @ start-up 15 Ncm / 15 Ncm @ rotation
Interface loads, max.	no loads allowed
Case material	aluminum alloy

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Template TD-00015N

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Case surface finish	chromate conversion coat
IP protection level	IP60
Weight, approx.	0.5 kg
Marking	adhesive label

Environmental conditions

Operation	
Operating altitude, max.	3.000 m
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	522214-0E, Issue A
Technical information	"Rotary Joints – Glossary", Technical Document TD-00021, Spinner GmbH

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