



## Technical data

### 6809JRZZ/5K

Single row deep groove ball bearings

Deep groove ball bearing, radial contact, pressed steel cage, shields on both sides

## Visual(s)



## Product definition

|                               |         |
|-------------------------------|---------|
| <b>d</b>                      | 45 mm   |
| <b>D</b>                      | 58 mm   |
| <b>B</b>                      | 7 mm    |
| <b>rs min</b>                 | 0.3 mm  |
| <b>Radial clearance class</b> | CN      |
| <b>Mass</b>                   | 0.04 kg |
| <b>Brand</b>                  | NTN     |

## Product performance

|                                                             |               |
|-------------------------------------------------------------|---------------|
| <b>Dynamic load, C</b>                                      | 5.35 kN       |
| <b>Static load, C<sub>0</sub></b>                           | 4.95 kN       |
| <b>Fatigue limit load, C<sub>u</sub></b>                    | 0.23 kN       |
| <b>f<sub>0</sub></b>                                        | 16.1          |
| <b>N<sub>lim</sub> (grease)</b>                             | 11,000 Tr/min |
| <b>Min operating temperature, T<sub>min</sub></b>           | -20 °C        |
| <b>Max operating temperature, T<sub>max</sub></b>           | 120 °C        |
| <b>Characteristic cage frequency, FTF</b>                   | 0.47 Hz       |
| <b>Characteristic rolling element frequency, BSF</b>        | 14.65 Hz      |
| <b>Characteristic outer ring frequency, BPF<sub>0</sub></b> | 11.65 Hz      |
| <b>Characteristic inner ring frequency, BPF<sub>I</sub></b> | 13.35 Hz      |

## Abutment dimensions

|               |        |
|---------------|--------|
| <b>da min</b> | 47 mm  |
| <b>Da max</b> | 56 mm  |
| <b>ra max</b> | 0.3 mm |

## Calculation factors

Equivalent dynamic radial load

$$P = X.F_r + Y.F_a$$

| $\frac{f_0 F_a}{C_0}$ | e    | Fa / Fr ≤ e |   | Fa / Fr > e |      |
|-----------------------|------|-------------|---|-------------|------|
|                       |      | X           | Y | X           | Y    |
| 0.172                 | 0.19 | 1           | 0 | 0.56        | 2.3  |
| 0.345                 | 0.22 |             |   |             | 1.99 |
| 0.689                 | 0.26 |             |   |             | 1.71 |
| 1.03                  | 0.28 |             |   |             | 1.55 |
| 1.38                  | 0.3  |             |   |             | 1.45 |
| 2.07                  | 0.34 |             |   |             | 1.31 |
| 3.45                  | 0.38 |             |   |             | 1.15 |
| 5.17                  | 0.42 |             |   |             | 1.04 |
| 6.89                  | 0.44 |             |   |             | 1    |

Equivalent static radial load

$$P_0 = X_0.F_r + Y_0.F_a$$

|       |       |
|-------|-------|
| $X_0$ | $Y_0$ |
| 0.6   | 0.5   |

For single or DT bearing arrangement :

If  $P_0 < F_r$ , then use  $P_0 = F_r$