



## Technical data

### 6209LLUC3/5K

Single row deep groove ball bearings

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

## Visual(s)



## Product definition

|                               |        |
|-------------------------------|--------|
| <b>d</b>                      | 45 mm  |
| <b>D</b>                      | 85 mm  |
| <b>B</b>                      | 19 mm  |
| <b>rs min</b>                 | 1.1 mm |
| <b>Radial clearance class</b> | C3     |
| <b>Mass</b>                   | 0.4 kg |
| <b>Brand</b>                  | NTN    |

## Product performance

|                                                      |              |
|------------------------------------------------------|--------------|
| <b>Dynamic load, C</b>                               | 32.5 kN      |
| <b>Static load, C0</b>                               | 20.4 kN      |
| <b>Fatigue limit load, Cu</b>                        | 0.93 kN      |
| <b>f0</b>                                            | 14.1         |
| <b>Nlim (grease)</b>                                 | 5,200 Tr/min |
| <b>Min operating temperature, Tmin</b>               | -25 °C       |
| <b>Max operating temperature, Tmax</b>               | 110 °C       |
| <b>Characteristic cage frequency, FTF</b>            | 0.4 Hz       |
| <b>Characteristic rolling element frequency, BSF</b> | 4.92 Hz      |
| <b>Characteristic outer ring frequency, BPF0</b>     | 3.62 Hz      |
| <b>Characteristic inner ring frequency, BPFI</b>     | 5.38 Hz      |

## Abutment dimensions

|               |         |
|---------------|---------|
| <b>da min</b> | 51.5 mm |
| <b>da max</b> | 55.5 mm |
| <b>Da max</b> | 78.5 mm |
| <b>ra max</b> | 1 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  $P_0 = F_r$