

## PDF technical sheet 6306NR



### Single row deep groove ball bearings

| Product definition     |          |
|------------------------|----------|
| d                      | 30 mm    |
| D                      | 72 mm    |
| B                      | 19 mm    |
| a min                  | 3.07 mm  |
| a max                  | 3.28 mm  |
| Ca min                 | 4.67 mm  |
| Ca max                 | 4.98 mm  |
| rs min                 | 1.10 mm  |
| rNs min                | 0.50 mm  |
| D3 max                 | 68.81 mm |
| b min                  | 1.90 mm  |
| b max                  | 2.20 mm  |
| r0 max                 | 0.60 mm  |
| D4 max                 | 78.60 mm |
| f                      | 1.70 mm  |
| Snap ring reference    | R72      |
| Radial clearance class | CN       |
| Mass                   | 0.36 kg  |
| Brand                  | NTN      |



| Product performance                           |               |
|-----------------------------------------------|---------------|
| Dynamic load, C                               | 26.70 kN      |
| Static load, C0                               | 15 kN         |
| Fatigue limit load, Cu                        | 0.68 kN       |
| f0                                            | 13.3          |
| Nlim (oil)                                    | 12,000 Tr/min |
| Nlim (grease)                                 | 10,000 Tr/min |
| Min operating temperature, Tmin               | -20 °C        |
| Max operating temperature, Tmax               | 120 °C        |
| Characteristic cage frequency, FTF            | 0.39 Hz       |
| Characteristic rolling element frequency, BSF | 4.14 Hz       |
| Characteristic outer ring frequency, BPF0     | 3.08 Hz       |
| Characteristic inner ring frequency, BPF1     | 4.92 Hz       |



### Abutment dimensions

|         |          |
|---------|----------|
| da min  | 36.50 mm |
| Da max  | 65.50 mm |
| ra max  | 1 mm     |
| rNa max | 0.50 mm  |
| Db min  | 80 mm    |

### Calculation factors

#### Equivalent dynamic radial load

$$P = X \cdot Fr + Y \cdot Fa$$

| $\frac{f_0 F_a}{C_0}$ | 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

$$P_0 = X_0 \cdot Fr + Y_0 \cdot Fa$$

| X <sub>0</sub> | Y <sub>0</sub> |
|----------------|----------------|
| 0.6            | 0.5            |

For single or DT bearing arrangement:

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