

## PDF technical sheet ET07097/07196



### Single row tapered roller bearings

Tapered roller bearing, pressed steel cage

| Product definition |          |
|--------------------|----------|
| d                  | 0.9843 " |
| D                  | 1.9687 " |
| B                  | 0.5614 " |
| C                  | 0.3750 " |
| T                  | 0.5313 " |
| d1                 | 1.4764 " |
| a                  | 0.4132 " |
| e                  | 0.4      |
| Y2                 | 1.49     |
| Y0                 | 0.82     |
| Mass               | 0.42 oz  |
| Brand              | NTN      |



| Product performance                           |            |
|-----------------------------------------------|------------|
| Dynamic load, C                               | 26 kN      |
| Rating life coefficient, A2                   | 1.9        |
| Static load, C0                               | 27.90 kN   |
| Fatigue limit load, Cu                        | 3.40 kN    |
| Nlim (oil)                                    | 10,000 RPM |
| Nlim (grease)                                 | 7,500 RPM  |
| Min operating temperature, Tmin               | -40 °C     |
| Max operating temperature, Tmax               | 248 °C     |
| Characteristic cage frequency, FTF            | 0.43 Hz    |
| Characteristic rolling element frequency, BSF | 6.31 Hz    |
| Characteristic outer ring frequency, BPF0     | 7.23 Hz    |
| Characteristic inner ring frequency, BPFI     | 9.77 Hz    |



| Abutment dimensions |          |
|---------------------|----------|
| ra max              | 0.0591 " |
| r1a max             | 0.0394 " |

## Calculation factors

### Equivalent dynamic radial load

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

| $F_a / F_r \leq e$ |   | $F_a / F_r > e$ |    |
|--------------------|---|-----------------|----|
| X                  | Y | X               | Y  |
| 1                  | 0 | 0.4             | Y2 |

### Equivalent static radial load

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

| $X_0$ | $Y_0$ |
|-------|-------|
| 0.5   | Y0    |

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

The values for e, Y2 and Y0 are shown in the above table