

PDF technical sheet 16036C3



Single row deep groove ball bearings

Deep groove ball bearing, radial contact, pressed steel cage, open

Product definition

d	180 mm
D	280 mm
B	31 mm
rs min	2 mm
Radial clearance class	C3
Mass	6.49 kg
Brand	NTN



Product performance

Dynamic load, C	117 kN
Static load, C0	134 kN
Fatigue limit load, Cu	4 kN
f0	16.5
Nlim (oil)	2,700 Tr/min
Nlim (grease)	2,300 Tr/min
Min operating temperature, Tmin	-60 °C
Characteristic cage frequency, FTF	0.46 Hz
Characteristic rolling element frequency, BSF	11.06 Hz
Characteristic outer ring frequency, BPF0	8.65 Hz
Characteristic inner ring frequency, BPF1	10.35 Hz



Abutment dimensions

da min	189 mm
Da max	271 mm
ra max	2 mm

Calculation factors

Equivalent dynamic radial load

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

$\frac{f_0 F_a}{C_0}$	e	$F_a / F_r \leq e$		$F_a / F_r > e$	
		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 $P_0 = F_r$