

PDF technical sheet 16028C3



Single row deep groove ball bearings

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

Product definition	
d	140 mm
D	210 mm
B	22 mm
rs min	1.10 mm
Radial clearance class	C3
Mass	2.45 kg
Brand	NTN



Product performance	
Dynamic load, C	82 kN
Static load, C0	85 kN
Fatigue limit load, Cu	2.90 kN
f0	16.4
Nlim (oil)	3,500 Tr/min
Nlim (grease)	3,000 Tr/min
Min operating temperature, Tmin	-60 °C
Characteristic cage frequency, FTF	0.45 Hz
Characteristic rolling element frequency, BSF	9.92 Hz
Characteristic outer ring frequency, BPF0	7.65 Hz
Characteristic inner ring frequency, BPF1	9.35 Hz



Abutment dimensions

da min	146.50 mm
Da max	203.50 mm
ra max	1 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 $P_0 = F_r$