

PDF technical sheet 6234C3



Single row deep groove ball bearings

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

Product definition

d	170 mm
D	310 mm
B	52 mm
rs min	4 mm
Radial clearance class	C3
Mass	14.50 kg
Brand	NTN



Product performance

Dynamic load, C	212 kN
Static load, C0	223 kN
Fatigue limit load, Cu	6.50 kN
f0	15.3
Nlim (oil)	2,400 Tr/min
Nlim (grease)	2,000 Tr/min
Min operating temperature, Tmin	-20 °C
Max operating temperature, Tmax	120 °C
Characteristic cage frequency, FTF	0.43 Hz
Characteristic rolling element frequency, BSF	6.73 Hz
Characteristic outer ring frequency, BPF0	5.13 Hz
Characteristic inner ring frequency, BPF1	6.87 Hz



Abutment dimensions

da min	186 mm
Da max	294 mm
ra max	3 mm

Calculation factors

Equivalent dynamic radial load

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

$\frac{f_0 F_a}{C_0}$	e	$F_a / Fr \leq e$		$F_a / Fr > e$	
		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_0	Y_0
0.6	0.5

For single or DT bearing arrangement :

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