

PDF technical sheet 6040L1C3



Single row deep groove ball bearings

Deep groove ball bearing, radial contact, machined cage, open

Product definition

d	200 mm
D	310 mm
B	51 mm
rs min	2.10 mm
Radial clearance class	C3
Mass	11.90 kg
Brand	NTN



Product performance

Dynamic load, C	218 kN
Static load, C0	243 kN
Fatigue limit load, Cu	6.90 kN
f0	15.6
Nlim (oil)	2,400 Tr/min
Nlim (grease)	2,000 Tr/min
Min operating temperature, Tmin	-60 °C
Characteristic cage frequency, FTF	0.44 Hz
Characteristic rolling element frequency, BSF	7.52 Hz
Characteristic outer ring frequency, BPF0	6.09 Hz
Characteristic inner ring frequency, BPF1	7.92 Hz



Abutment dimensions

da min	211 mm
Da max	299 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 $P_0 = F_r$