

PDF technical sheet 6221C3



Single row deep groove ball bearings

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

Product definition

d	105 mm
D	190 mm
B	36 mm
rs min	2.10 mm
Radial clearance class	C3
Mass	3.70 kg
Brand	NTN



Product performance

Dynamic load, C	133 kN
Static load, C0	105 kN
Fatigue limit load, Cu	3.95 kN
f0	14.4
Nlim (oil)	4,000 Tr/min
Nlim (grease)	3,400 Tr/min
Min operating temperature, Tmin	-60 °C
Characteristic cage frequency, FTF	0.41 Hz
Characteristic rolling element frequency, BSF	5.28 Hz
Characteristic outer ring frequency, BPF0	4.09 Hz
Characteristic inner ring frequency, BPF1	5.92 Hz



Abutment dimensions

da min	116 mm
Da max	179 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 $P_0 = F_r$