



Technical datasheet

6221ZZ/5K

Single row deep groove ball bearings

Deep groove ball bearing, radial contact, pressed steel cage, shields on both sides

Visual(s)



Product definition

d	105 mm
D	190 mm
B	36 mm
rs min	2.1 mm
Radial clearance class	CN
Mass	3.7 kg
Brand	NTN

Product performance

Dynamic load, C	133 kN
Static load, C₀	105 kN
Fatigue limit load, C_u	3.95 kN
f₀	14.4
N_{lim} (grease)	3,400 rpm
Min operating temperature, T_{min}	-20 °C
Max operating temperature, T_{max}	120 °C
Characteristic cage frequency, FTF	0.41 Hz
Characteristic rolling element frequency, BSF	5.28 Hz
Characteristic outer ring frequency, BPF₀	4.08 Hz
Characteristic inner ring frequency, BPF_i	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	Fa / Fr ≤ e		Fa / 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

$$P_0 = X_0.F_r + Y_0.F_a$$

X ₀	Y ₀
0.6	0.5

For single or DT bearing arrangement :

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