



Technical datasheet

6311ZZC4/5K

Single row deep groove ball bearings

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

Visual(s)



Product definition

d	55 mm
D	120 mm
B	29 mm
rs min	2 mm
Radial clearance class	C4
Mass	1.37 kg
Brand	NTN

Product performance

Dynamic load, C	71.5 kN
Static load, C₀	45 kN
Fatigue limit load, C_u	2.05 kN
f₀	13.2
N_{lim} (grease)	5,800 rpm
Min operating temperature, T_{min}	-20 °C
Max operating temperature, T_{max}	120 °C
Characteristic cage frequency, FTF	0.38 Hz
Characteristic rolling element frequency, BSF	4.08 Hz
Characteristic outer ring frequency, BPF₀	3.07 Hz
Characteristic inner ring frequency, BPF_i	4.93 Hz

Abutment dimensions

da min	64 mm
Da max	111 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 $P_0 = F_r$