

PDF technical sheet FWBC510ZZ1/5K



Single row deep groove ball bearings

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

Product definition	
d	0.1969 "
D	0.3937 "
B	0.1575 "
rs min	0.0315 "
Radial clearance class	CN
Mass	3.10 oz
Brand	NTN



Product performance	
Dynamic load, C	0.72 kN
Static load, C0	0.28 kN
Fatigue limit load, Cu	0.01 kN
f0	13.7
Nlim (oil)	52,000 RPM
Nlim (grease)	45,000 RPM
Min operating temperature, Tmin	-4 °C
Max operating temperature, Tmax	248 °C



Abutment dimensions

da min	0.3740 "
Da max	0.2165 "
ra max	0.0315 "

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 $P_0 = F_r$