

PDF technical sheet 699ZZ/1K



Single row deep groove ball bearings

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

Product definition	
d	0.3543 "
D	0.7874 "
B	0.2362 "
rs min	0.0118 "
Radial clearance class	CN
Mass	0.03 oz
Brand	NTN



Product performance	
Dynamic load, C	2.48 kN
Static load, C0	1.09 kN
Fatigue limit load, Cu	0.05 kN
f0	13.5
Nlim (grease)	32,000 RPM
Min operating temperature, Tmin	-4 °C
Max operating temperature, Tmax	248 °C



Abutment dimensions

da min	0.4331 "
Da max	0.7087 "
ra max	0.0118 "

Calculation factors

Equivalent dynamic radial load

$$P = X \cdot Fr + Y \cdot Fa$$

$\frac{f_0 F_a}{C_0}$	e	$F_a / Fr \leq e$		$F_a / Fr > e$	
		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

$$P_0 = X_0 \cdot Fr + Y_0 \cdot Fa$$

X_0	Y_0
0.6	0.5

For single or DT bearing arrangement :

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