

PDF technical sheet 6415C3



Single row deep groove ball bearings

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

Product definition

d	2.9528 "
D	7.4803 "
B	1.7717 "
rs min	0.1181 "
Radial clearance class	C3
Mass	20.18 oz
Brand	NTN



Product performance

Dynamic load, C	138 kN
Static load, C0	99 kN
Fatigue limit load, Cu	3.90 kN
f0	12.7
Nlim (oil)	4,500 RPM
Nlim (grease)	3,800 RPM
Min operating temperature, Tmin	-76 °C
Characteristic cage frequency, FTF	0.37 Hz
Characteristic rolling element frequency, BSF	3.72 Hz
Characteristic outer ring frequency, BPF0	2.62 Hz
Characteristic inner ring frequency, BPF1	4.38 Hz



Abutment dimensions

da min	3.4646 "
Da max	6.9685 "
ra max	0.0984 "

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 $P_0 = F_r$