

PDF technical sheet 6013NRC3



Single row deep groove ball bearings

Product definition	
d	65 mm
D	100 mm
B	18 mm
a min	2.67 mm
a max	2.87 mm
Ca min	5.03 mm
Ca max	5.33 mm
rs min	1.10 mm
rNs min	0.50 mm
D3 max	96.80 mm
b min	2.70 mm
b max	3 mm
r0 max	0.60 mm
D4 max	106.50 mm
f	2.46 mm
Snap ring reference	R100
Radial clearance class	C3
Mass	0.42 kg
Brand	NTN



Product performance	
Dynamic load, C	30.50 kN
Static load, C0	25.20 kN
Fatigue limit load, Cu	1.15 kN
f0	15.8
Nlim (oil)	7,700 Tr/min
Nlim (grease)	6,500 Tr/min
Min operating temperature, Tmin	-60 °C
Characteristic cage frequency, FTF	0.44 Hz
Characteristic rolling element frequency, BSF	7.87 Hz
Characteristic outer ring frequency, BPF0	6.56 Hz
Characteristic inner ring frequency, BPFI	8.44 Hz



Abutment dimensions

da min	71.50 mm
Da max	93.50 mm
ra max	1 mm
rNa max	0.50 mm
Db min	108 mm

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 $P_0 = Fr$