

PDF technical sheet 6314NRC3



Single row deep groove ball bearings

Product definition	
d	70 mm
D	150 mm
B	35 mm
a min	4.65 mm
a max	4.90 mm
Ca min	7.47 mm
Ca max	7.72 mm
rs min	2.10 mm
rNs min	0.50 mm
D3 max	145.24 mm
b min	3.10 mm
b max	3.40 mm
r0 max	0.60 mm
D4 max	159.70 mm
f	2.82 mm
Snap ring reference	R150
Radial clearance class	C3
Mass	2.52 kg
Brand	NTN



Product performance	
Dynamic load, C	104 kN
Static load, C0	68 kN
Fatigue limit load, Cu	2.95 kN
f0	13.2
Nlim (oil)	5,400 Tr/min
Nlim (grease)	4,600 Tr/min
Min operating temperature, Tmin	-60 °C
Characteristic cage frequency, FTF	0.39 Hz
Characteristic rolling element frequency, BSF	4.10 Hz
Characteristic outer ring frequency, BPF0	3.08 Hz
Characteristic inner ring frequency, BPFI	4.92 Hz



Abutment dimensions

da min	81 mm
Da max	139 mm
ra max	2 mm
rNa max	0.50 mm
Db min	162 mm

Calculation factors

Equivalent dynamic radial load

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

$\frac{f_0 F_a}{C_0}$	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

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

X_0	Y_0
0.6	0.5

For single or DT bearing arrangement:

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