

PDF technical sheet 6210ZZC3



Single row deep groove ball bearings

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

Product definition	
d	50 mm
D	90 mm
B	20 mm
d1	60.60 mm
D1	80.10 mm
rs min	1.10 mm
Radial clearance class	C3
Mass	0.46 kg
Brand	SNR



Product performance	
Dynamic load, C	34.40 kN
Static load, C0	23.20 kN
Fatigue limit load, Cu	1.05 kN
f0	14.4
Nref	8,200 Tr/min
Nlim	9,500 Tr/min
Min operating temperature, Tmin	-20 °C
Max operating temperature, Tmax	120 °C
Characteristic cage frequency, FTF	0.41 Hz
Characteristic rolling element frequency, BSF	5.33 Hz
Characteristic outer ring frequency, BPF0	4.09 Hz
Characteristic inner ring frequency, BPF1	5.91 Hz



Abutment dimensions

da min	56.50 mm
da max	60.60 mm
Da max	83.50 mm
ra max	1 mm

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 $P_0 = F_r$