

PDF technical sheet 6318ZZC3



Single row deep groove ball bearings

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

Product definition	
d	90 mm
D	190 mm
B	43 mm
d1	112.20 mm
D1	167.70 mm
rs min	3 mm
Radial clearance class	C3
Mass	5.02 kg
Brand	SNR



Product performance	
Dynamic load, C	142 kN
Static load, C0	107 kN
Fatigue limit load, Cu	4.10 kN
f0	13.3
Nref	5,100 Tr/min
Nlim	4,700 Tr/min
Min operating temperature, Tmin	-20 °C
Max operating temperature, Tmax	120 °C
Characteristic cage frequency, FTF	0.39 Hz
Characteristic rolling element frequency, BSF	4.18 Hz
Characteristic outer ring frequency, BPF0	3.09 Hz
Characteristic inner ring frequency, BPF1	4.91 Hz



Abutment dimensions

da min	103 mm
da max	112.20 mm
Da max	177 mm
ra max	2.50 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 $P_0 = F_r$