

PDF technical sheet 6314ZZC3



Single row deep groove ball bearings

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

Product definition	
d	2.7559 "
D	5.9055 "
B	1.3780 "
d1	3.5945 "
D1	5.0906 "
rs min	0.0827 "
Radial clearance class	C3
Mass	8.71 oz
Brand	SNR



Product performance	
Dynamic load, C	103 kN
Static load, C0	68.20 kN
Fatigue limit load, Cu	2.95 kN
f0	13.2
Nref	6,100 RPM
Nlim	6,000 RPM
Min operating temperature, Tmin	-4 °C
Max operating temperature, Tmax	248 °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, BPF1	4.92 Hz



Abutment dimensions

da min	3.1890 "
da max	3.5945 "
Da max	5.4724 "
ra max	0.0787 "

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 $P_0 = F_r$