

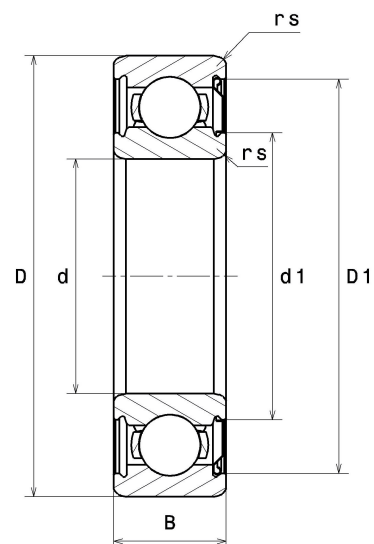
PDF technical sheet 6314Z



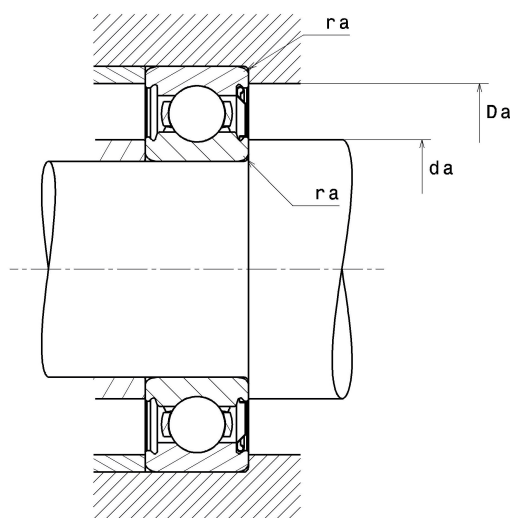
Single row deep groove ball bearings

Deep groove ball bearing, radial contact, pressed steel cage, shield on one side

Product definition	
d	2.7559 "
D	5.9055 "
B	1.3780 "
d1	3.4961 "
D1	5.1457 "
rs min	0.0827 "
Radial clearance class	CN
Mass	9.05 oz
Brand	SNR



Product performance	
Dynamic load, C	104 kN
Static load, C0	68.20 kN
Fatigue limit load, Cu	2.95 kN
f0	13.2
Nref	6,100 RPM
Nlim	7,500 RPM
Min operating temperature, Tmin	-40 °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	3.4961 "
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 $P_0 = F_r$