

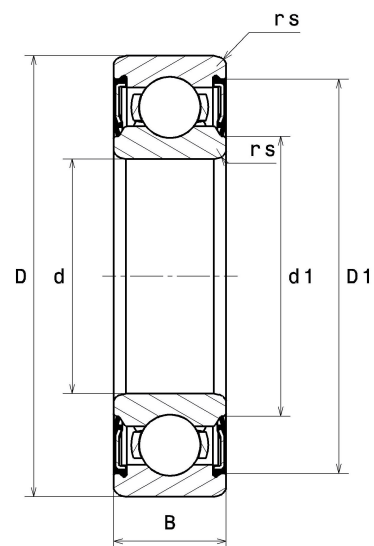
PDF technical sheet 6209EEC4



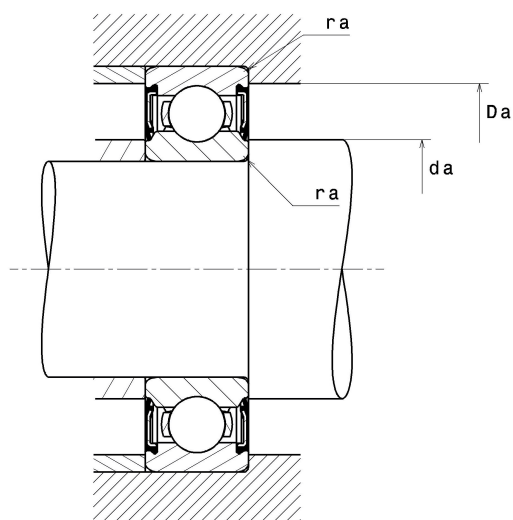
Single row deep groove ball bearings

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

Product definition	
d	45 mm
D	85 mm
B	19 mm
d1	54.50 mm
D1	75.60 mm
rs min	1.10 mm
Radial clearance class	C4
Mass	0.40 kg
Brand	SNR



Product performance	
Dynamic load, C	32.20 kN
Static load, C0	20.40 kN
Fatigue limit load, Cu	0.93 kN
f0	14.1
Nlim	5,300 Tr/min
Min operating temperature, Tmin	-20 °C
Max operating temperature, Tmax	120 °C
Characteristic cage frequency, FTF	0.40 Hz
Characteristic rolling element frequency, BSF	4.92 Hz
Characteristic outer ring frequency, BPF0	3.62 Hz
Characteristic inner ring frequency, BPF1	5.38 Hz



Abutment dimensions

da min	51.50 mm
da max	54.50 mm
Da max	78.50 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 $P_0 = F_r$