

PDF technical sheet 6307L1C3

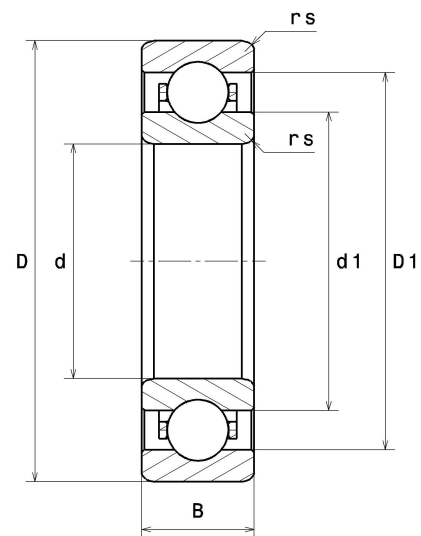


Single row deep groove ball bearings

Deep groove ball bearing, radial contact, machined cage, open

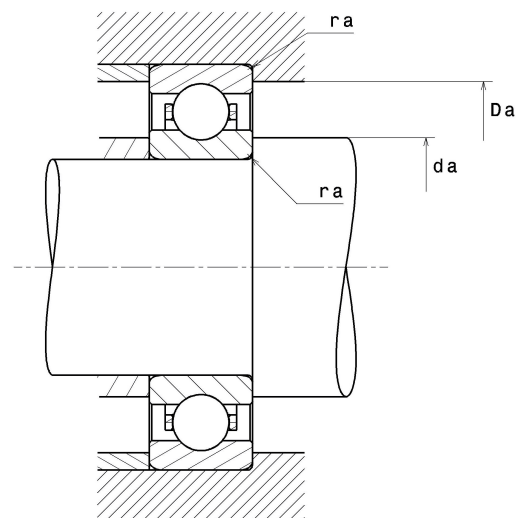
Product definition

d	35 mm
D	80 mm
B	21 mm
rs min	1.50 mm
Radial clearance class	C3
Mass	0.46 kg
Brand	NTN



Product performance

Dynamic load, C	33.50 kN
Static load, C0	19.10 kN
Fatigue limit load, Cu	0.87 kN
f0	13.1
Nlim (oil)	10,000 Tr/min
Nlim (grease)	8,800 Tr/min
Min operating temperature, Tmin	-60 °C
Characteristic cage frequency, FTF	0.38 Hz
Characteristic rolling element frequency, BSF	4.03 Hz
Characteristic outer ring frequency, BPF0	3.06 Hz
Characteristic inner ring frequency, BPF1	4.94 Hz



Abutment dimensions

da min	43 mm
Da max	72 mm
ra max	1.50 mm

Calculation factors

Equivalent dynamic radial load

$$P = X \cdot Fr + Y \cdot Fa$$

$\frac{f_0 F_a}{C_0}$	e	Fa / Fr ≤ e		Fa / Fr > 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

$$P_0 = X_0 \cdot Fr + Y_0 \cdot Fa$$

X ₀	Y ₀
0.6	0.5

For single or DT bearing arrangement:

If $P_0 < Fr$, then use $P_0 = Fr$