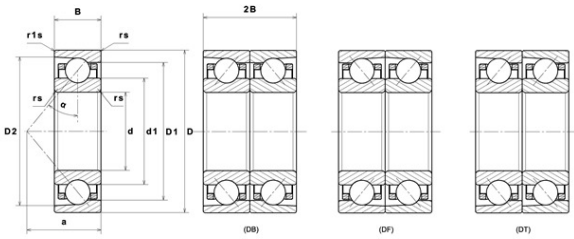
PDF technical sheet
7200CG1UJ74

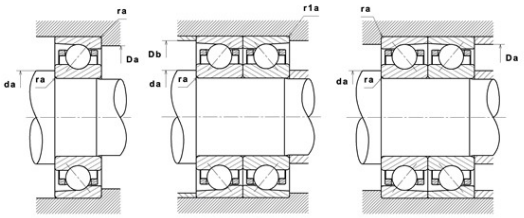
High precision angular contact ball bearings

High precision angular contact ball bearing, laminated resin cage centred on outer ring

Product definition	
d	0.3937 "
D	1.1811 "
B	0.3543 "
d1	0.6299 "
D1	0.9626 "
D2	1.0272 "
a	0.2756 "
Contact angle, a	15 °
rs min	0.0236 "
r1s min	0.0236 "
f0	12.343
Precision class	P4
Mass	0.11 oz
Brand	SNR



Product performance	
Dynamic load, C	7.40 kN
Static load, C0	3.70 kN
Fatigue limit load, Cu	0.21 kN
Nlim (oil)	82,000 RPM
Nlim (grease)	53,000 RPM
Axial displacement K Factor	2.25
Preload level	7
Peload value	40 kN
axial rigidity	23 N/μm
radial rigidity	129 N/μm
Min operating temperature, Tmin	−22 °C
Max operating temperature, Tmax	248 °C
Characteristic cage frequency, FTF	0.37 Hz
Characteristic rolling element frequency, BSF	3.35 Hz
Characteristic outer ring frequency, BPF0	3.66 Hz
Characteristic inner ring frequency, BPFI	6.34 Hz



Abutment dimensions	
da min	0.5709 "
db min	0.5709 "
Da max	1.0039 "
Db max	1.0039 "
r1a max	0.0236 "
ra max	0.0236 "
D6	0.7205 "

Calculation factors

Equivalent dynamic radial load

P = X.Fr + Y.Fa

Series		e	Single or DT bearing arrangement				DB or DF arrangement			
			Fa / Fr ≤ e		Fa / Fr > e		Fa / Fr ≤ e		Fa / Fr > e	
			X	Y	X	Y	X	Y	X	Y
70 (NTN & SNR) 72 (NTN & SNR) 78 (NTN) 79 (NTN) 719 (SNR)	15°	0.38	1	0	0.44	1.47	1	1.65	0.72	2.39
		0.4				1.4		1.57		2.28
		0.43				1.3		1.46		2.11
		0.46				1.23		1.38		2
		0.47				1.19		1.34		1.93
		0.5				1.12		1.26		1.82
		0.55				1.02		1.14		1.66
		0.56						1.12		1.63
		0.56				1		1.12		1.63
	25°	0.68			0.41	0.87		0.92	0.67	1.41
	30°	0.8			0.39	0.76		0.78	0.63	1.24

Equivalent static radial load

$P_o = X_o.Fr + Y_o.Fa$

Series		Single or DT bearing arrangement		DB or DF arrangement	
		X_0	Y_0	X_0	Y_0
70 (NTN & SNR) 72 (NTN & SNR) 78 (NTN) 79 (NTN) 719 (SNR)	15°	0.5	0.46	1	0.92
	25°		0.38		0.76
	30°		0.33		0.66

For single or DT bearing arrangement :

If Po <Fr, then use Po = Fr