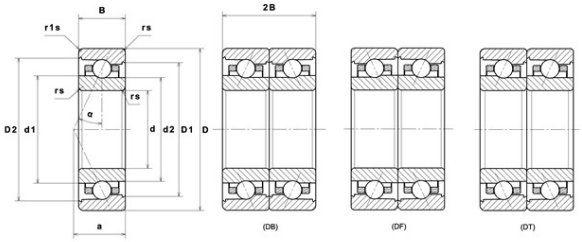
PDF technical sheet
ML7005CVUJ84S

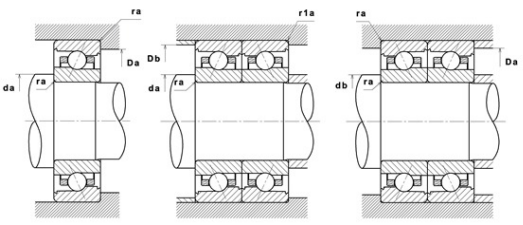
High precision angular contact ball bearings

High precision angular contact ball bearing, high speed series ML, laminated resin cage centred on outer ring

Product definition	
d	25 mm
D	47 mm
B	12 mm
d1	32.20 mm
d2	30.25 mm
D1	42.65 mm
D2	44.25 mm
a	11 mm
Contact angle, a	17 °
rs min	0.60 mm
r1s min	0.30 mm
f0	7.736
Precision class	P4S
Mass	0.08 kg
Brand	SNR



Product performance	
Dynamic load, C	7.40 kN
Static load, C0	3.90 kN
Fatigue limit load, Cu	0.23 kN
Nlim (oil)	61,000 Tr/min
Nlim (grease)	44,000 Tr/min
Axial displacement K Factor	1.53
Preload level	8
Peload value	110 kN
axial rigidity	47 N/μm
radial rigidity	218 N/μm
Min operating temperature, Tmin	−30 °C
Max operating temperature, Tmax	120 °C
Characteristic cage frequency, FTF	0.43 Hz
Characteristic rolling element frequency, BSF	6.30 Hz
Characteristic outer ring frequency, BPF0	7.24 Hz
Characteristic inner ring frequency, BPFI	9.76 Hz



NTN-SNR ROULEMENTS – www.ntn-snr.com
1 rue des Usines – 74010 Annecy Cedex – France – Tel. +33 (0)4 50 65 30 00

Abutment dimensions	
da min	29.50 mm
db min	29.50 mm
Da max	42.50 mm
Db max	42.50 mm
r1a max	0.30 mm
ra max	0.60 mm
D6	34.20 mm

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°	0.178	0.38	1	0	0.44	1.47	1	1.65	0.72	2.39
		0.357	0.4				1.4		1.57		2.28
		0.714	0.43				1.3		1.46		2.11
		1.07	0.46				1.23		1.38		2
		1.43	0.47				1.19		1.34		1.93
		2.14	0.5				1.12		1.26		1.82
		3.57	0.55				1.02		1.14		1.66
		5.35	0.56						1.12		1.63
		7.14	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

Po = Xo.Fr + Yo.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