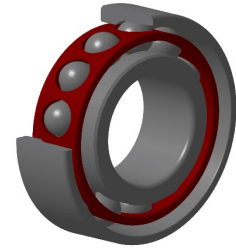


PDF technical sheet 71913HVUJ84

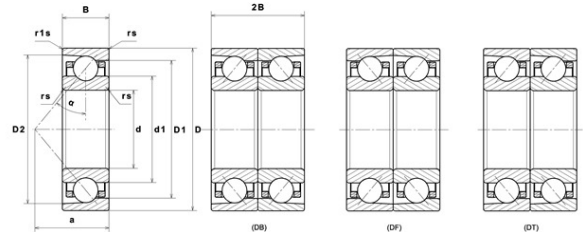


High precision angular contact ball bearings

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

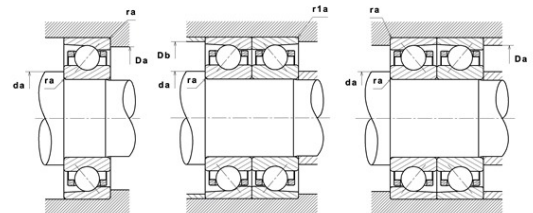
Product definition

d	2.5591 "
D	3.5433 "
B	0.5118 "
d1	2.8780 "
D1	3.2244 "
D2	3.3539 "
a	0.9843 "
Contact angle, α	25 °
rs min	0.0394 "
r1s min	0.0118 "
f0	16.792
Precision class	P4
Mass	0.74 oz
Brand	SNR



Product performance

Dynamic load, C	18.20 kN
Static load, C0	18.60 kN
Fatigue limit load, Cu	1.04 kN
Nlim (oil)	21,000 RPM
Nlim (grease)	13,500 RPM
Axial displacement K Factor	0.54
Preload level	8
Peload value	470 kN
axial rigidity	214 N/ μ m
radial rigidity	432 N/ μ m
Min operating temperature, Tmin	-22 °C
Max operating temperature, Tmax	248 °C
Characteristic cage frequency, FTF	0.46 Hz
Characteristic rolling element frequency, BSF	10.77 Hz
Characteristic outer ring frequency, BPF0	11.00 Hz
Characteristic inner ring frequency, BPF1	13.00 Hz



Abutment dimensions

da min	2.7756 "
db min	2.7756 "
Da max	3.3268 "
Db max	3.3268 "
r1a max	0.0118 "
ra max	0.0394 "
D6	2.9685 "

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

$$P_o = X_o.Fr + Y_o.Fa$$

Series	e	Single or DT bearing arrangement		DB or DF arrangement	
		X _o	Y _o	X _o	Y _o
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 $P_o < Fr$, then use $P_o = Fr$