

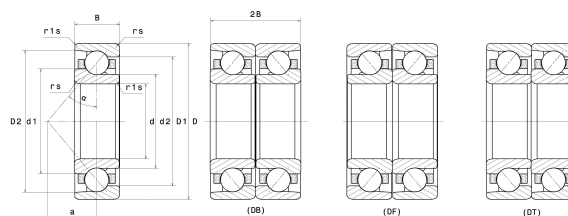
PDF technical sheet 7221BL1G



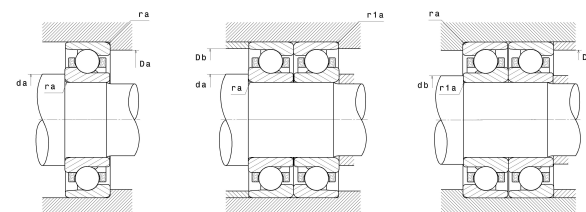
Single row or matched pairs of angular contact ball bearings

Angular contact ball bearing, brass cage inner ring guided

Product definition	
d	4.1339 "
D	7.4803 "
B	1.4173 "
a	3.1496 "
Contact angle, α	40 °
rs min	0.0827 "
r1s min	0.0433 "
Radial clearance class	CN
Mass	15.34 oz
Brand	NTN



Product performance	
Dynamic load, C	142 kN
Static load, C0	129 kN
Fatigue limit load, Cu	4.85 kN
Nlim (oil)	4,300 RPM
Nlim (grease)	3,200 RPM
Min operating temperature, Tmin	-40 °C
Max operating temperature, Tmax	248 °C



Abutment dimensions	
da min	4.6063 "
db min	4.4094 "
Da max	7.0079 "
Db max	7.2047 "
r1a max	0.0394 "
ra max	0.0787 "

Calculation factors

Equivalent dynamic radial load

$$P = X.F_r + Y.F_a$$

	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
30°	0.8	1	0	0.9	0.76	1	0.78	0.63	1.24
40°	1.14			0.35	0.57		0.55	0.57	0.93

Equivalent static radial load

$$P_0 = X_0.F_r + Y_0.F_a$$

a	Single or DT bearing arrangement		DB or DF arrangement	
	X ₀	Y ₀	X ₀	Y ₀
30°	0.5	0.33	1	0.66
40°		0.26		0.52

For single or DT bearing arrangement :

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