

PDF technical sheet 6080



Single row deep groove ball bearings

Deep groove ball bearing, radial contact, pressed steel cage, open

Product definition

d	15.7480 "
D	23.6220 "
B	3.5433 "
rs min	0.1969 "
Radial clearance class	CN
Mass	309.00 oz
Brand	NTN



Product performance

Dynamic load, C	510 kN
Static load, C0	825 kN
Fatigue limit load, Cu	16.80 kN
f0	15.7
Nlim (oil)	1,100 RPM
Nlim (grease)	930 RPM
Min operating temperature, Tmin	-4 °C
Max operating temperature, Tmax	248 °C
Characteristic cage frequency, FTF	0.44 Hz
Characteristic rolling element frequency, BSF	7.75 Hz
Characteristic outer ring frequency, BPF0	5.68 Hz
Characteristic inner ring frequency, BPFI	7.33 Hz



Abutment dimensions

da min	16.5354 "
Da max	22.8346 "
ra max	0.1575 "

Calculation factors

Equivalent dynamic radial load

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

$\frac{f_0 F_a}{C_0}$	e	$F_a / Fr \leq e$		$F_a / Fr > e$	
		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 $P_0 = Fr$