

PDF technical sheet 4T455/453X



Single row tapered roller bearings

Tapered roller bearing, pressed steel cage

Product definition	
d	2.0000 "
D	4.1250 "
B	1.1542 "
C	0.9687 "
T	1.1875 "
d1	3.1299 "
a	0.9080 "
e	0.34
Y2	1.79
Y0	0.98
Mass	4.20 oz
Brand	NTN



Product performance	
Dynamic load, C	115 kN
Rating life coefficient, A2	1.4
Static load, C0	148 kN
Fatigue limit load, Cu	18 kN
Nlim (oil)	4,700 RPM
Nlim (grease)	3,500 RPM
Min operating temperature, Tmin	-40 °C
Max operating temperature, Tmax	248 °C
Characteristic cage frequency, FTF	0.43 Hz
Characteristic rolling element frequency, BSF	6.79 Hz
Characteristic outer ring frequency, BPF0	7.73 Hz
Characteristic inner ring frequency, BPFI	10.27 Hz



Abutment dimensions	
ra max	0.0315 "
r1a max	0.1299 "

Calculation factors

Equivalent dynamic radial load

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

$F_a / F_r \leq e$		$F_a / F_r > e$	
X	Y	X	Y
1	0	0.4	Y2

Equivalent static radial load

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

X_0	Y_0
0.5	Y0

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

The values for e, Y2 and Y0 are shown in the above table