

1

2

3

4

5

Epoxy mark denotes North Pole

$\phi .251$ [6.4] THRU

[34.3]
 $\phi 1.350$

Power Leads (Red and Black)

4-40 Tapped Hole
to the $\phi .251$ Hole

[55.9]
 $\phi 2.200$

[36.8]
 $\phi 1.450$

[6.4]
.250

[10.2]
.400

WITH + to Red and - to Black
ROTOR TURNS CLOCKWISE
(when seen from this view)

A

A

B

B

C

C

D

D



H2W Technologies, Inc.
Santa Clarita, CA 91350 USA
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UNLESS SPECIFIED OTHERWISE:
All dimensions are in inches
Standard Tolerances are as follows
.XXX $\pm .005$ ANGLES $\pm 1^\circ$
.XX $\pm .010$ FILLETS .010
.X $\pm .020$ CORNERS .010
Remove All Burrs and Sharp Edges

**RELEASED FOR
MANUFACTURING**
[Signature]
10-17-07

MATERIAL
FINISH

TITLE
Limited Angle Torque Motor
TMR-020-22-006-4

DWG # **80-0181**
REV **----**
DATE **10-10-07** SHEET **1 of 2**

1

2

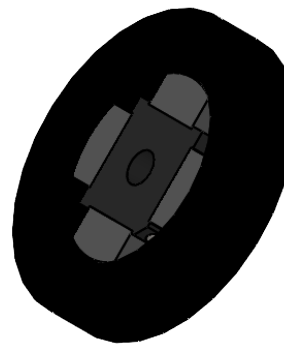
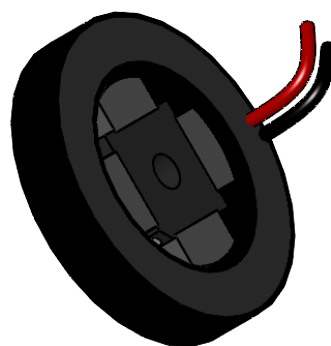
3

4

5

LIMITED ANGLE TORQUE MOTOR SPECIFICATIONS

Motor P/N	TMR-020-22-006-4	
Device Type	MR	
Stroke	20 degrees	0.34 radians
Radial Clearance	0.050 in	1.27 mm
Housed with Bearings	No	
Rotor Inertia	0.27 oz-in ²	4.9 E-6 kg-m ²
Total Mass	3.4 oz	95 grams
Resistance @ 20C	2.8 ohms	
Inductance @ 20C	1.0 mH	
Electrical Time Constant	0.36 msec	
Motor Constant	2.7 in-oz/sqrt(watt)	1.9 N-cm/sqrt(watt)
Torque Constant	4.5 in-oz/amp	3.2 N-cm/amp
Back EMF	0.06 V/rpm	0.6 V/rad/sec
Torque @ 100% Duty	6.0 in-oz	4.2 N-cm
Power @ 100% Duty	5 watts	
Current @ 100% Duty	1.3 amps	
Torque @ 10% Duty	18.0 in-oz	12.7 N-cm
Power @ 10% Duty	44 watts	
Current @ 10% Duty	4 amps	



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 .XXX ±.005 ANGLES ±.1°
 .XX ±.010 FILLETS .010
 .X ±.020 CORNERS .010
 Remove All Burrs and Sharp Edges

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 TMR-020-22-006-4

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SHEET

2 of 2