

BRUSHED MOTOR SPECIFICATIONS

Product No.: 38NBD80-406-057

Customer:

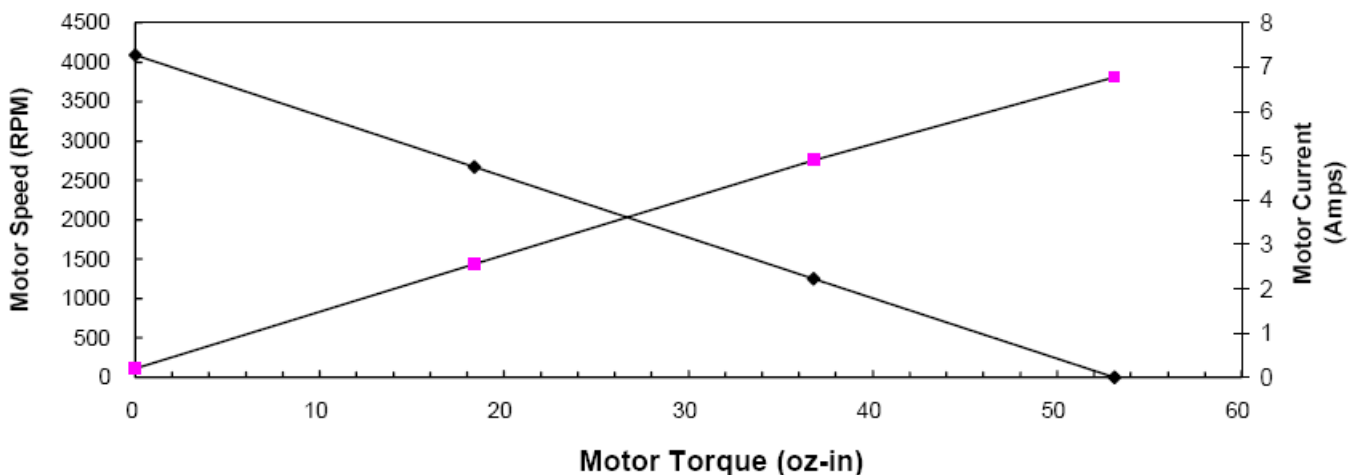
RFQ

Date: 2014.08.08

This is a calculation data sheet

SPECS	Series	Frame	Length Code	Winding	Part No	Options	Gear Ratio
MODEL #	NBD	38	06	O	057		0
V input =	23.7	Vdc			Input Voltage	90% Efficiency	
Ke =	5.8	V/krpm			Voltage Constant		
Kt =	7.8	Oz-in/A			Torque Constant		
Rt =	3.5	Ohms (@20° C)			Terminal Resistance+Amplifier		
Io=	0.2	Amps			No load current		
RPM nl =	4086	RPM			No Load RPM		
T 1 =	18.4	Oz-in	0.13 Nm		Torque-1	0.0 Nm	
I 1 =	2.55	Amps			Current @ Torque=T1		
RPM 1 =	2671	RPM			RPM @ T-1	#DIV/0! RPM	
P1=	36	W			Power Out		
T 2 =	36.8	Oz-in	0.26Nm		Torque-2		
I 2 =	4.9	Amps			Current @ Torque=T2		
RPM 2=	1255	RPM	#DIV/0! RPM		RPM @ T-2		
T st =	53	Oz-in	0.38 Nm		Stall Torque (@ E in)		
I samp =	6.8	Amps			Stall Current		
R th =	5	°C/W			Thermal Resistance		
T rise@T1 =	120	°C			Temperature Rise (above ambient)		
Tw@T1=	98	°C			Winding Temperature Rise (above ambient)		

Speed Current Torque Curve

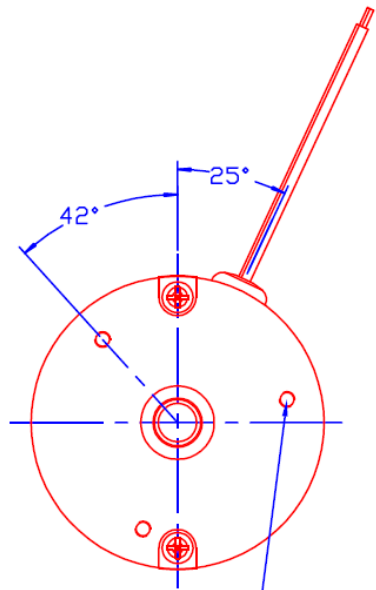


Calculation data

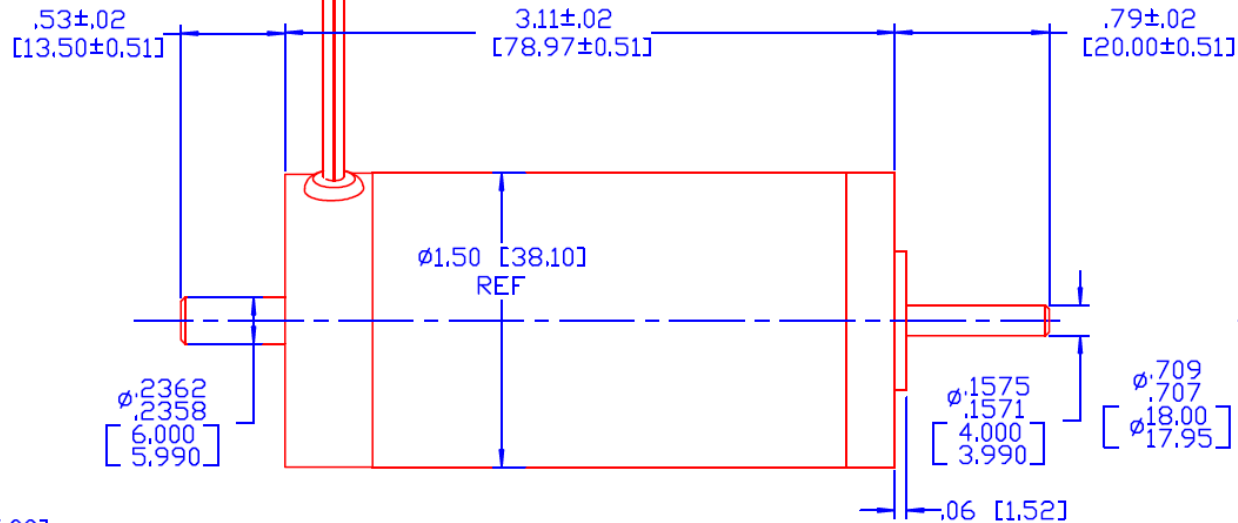
Voltage	Torque	RPM	Amp	Efficiency	Watts Out
23.7	0	4086	0.2	0.00%	0
23.7	18	2671	2.5	60.10%	36
23.7	37	1255	4.9	29.40%	34
23.7	53	0	6.8	0.00%	0

REVISIONS			
REV	DESCRIPTION	APPROVED	DATE
A	PROTOTYPE	GAO	2014/10/27

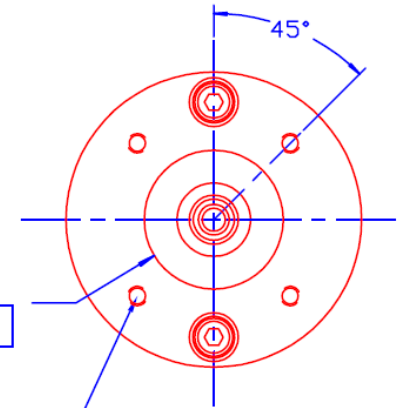
MOTOR LEADS: 22 AWG, TEFLON
 39.4" ±1" LONG
 COLOR FUNCTION
 RED MOTOR (+)
 BLACK MOTOR (-)
 STRIP BACK LEADS .3" ±.1"



M2X.197[5.00]
 (3) HOLES 120° APART
 ON A Ø1.142[29.00] B.C



DIRECTION
 OF ROTATION



M3X.197[5.00]
 (4) HOLES 90° APART
 ON A Ø1.102[28.00] B.C

MOTOR SPECIFICATIONS:
 TORQUE CONSTANT (Kt) = 7.8 ±10% OZ-IN/AMP
 VOLTAGE CONSTANT (Ke) = 5.8 ±10% VOLTS/KRPM

NOTE: MOTOR ROTATION IS CLOCKWISE WHEN VIEWED FROM
 OUTPUT SHAFT WITH POSITIVE VOLTAGE APPLIED TO RED LEAD.

UNLESS OTHERWISE SPECIFIED TOLERANCES			Motion Control Products Ltd. Tel.: 01202 599922		APPROVALS	DATE
DECIMALS	INCH	MM	TITLE MOTOR ASSEMBLY		DRAWN	2014/10/27
.0	±.020	±0.50			CHECKED	
.00	±.010	±0.25			APPROVED	
.000	±.005	±0.13	SIZE D	DWG. NO.	REV A	
ANGLES	± 1/2°	± 1/2°	USED ON 38NBD80-406-057		This drawing contains information that is proprietary to Motion Control Products Ltd. and should not be used without written permission.	
BREAK ALL SHARP EDGES			SCALE 1:1	SHEET 1 OF 2		
PROJECTION						

