

LTR	ECO NO.	DESCRIPTION	DRN	APP'D	DATE
1	590XXX	INITIAL RELEASE	JWT		

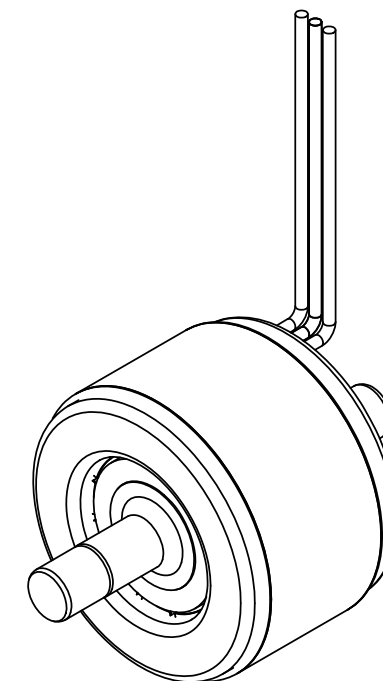
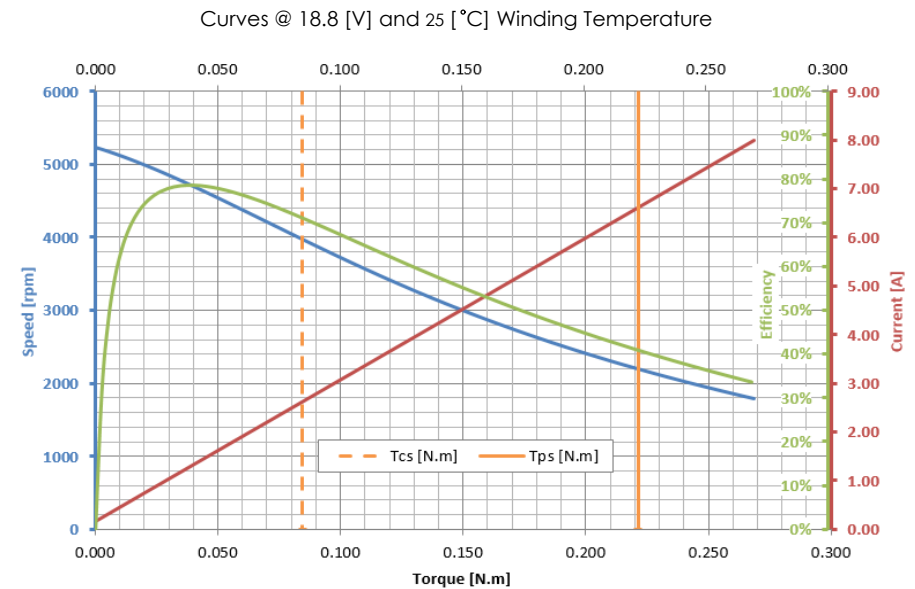
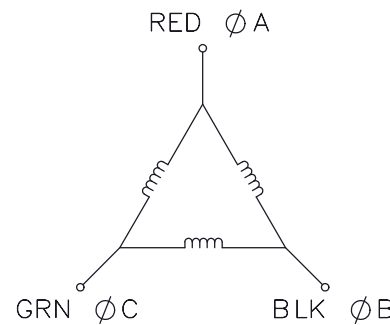
Winding Constants *	Units	Tol	Symbol	Wdg	Z
DC Resistance	$\Omega$	$\pm 12.5\%$	$R_A$	0.85	
Voltage @ $T_{PS}$	V	NOMINAL	$V_{PS}$	6.39	
Current @ $T_{PS}$	A	NOMINAL	$I_{PS}$	7.51	
Current @ $T_{CS}$	A	NOMINAL	$I_{CS}$	2.86	
Torque Sensitivity, No Load	oz/A	$\pm 10\%$	$K_{TO}$	4.84	
	N.m/A	$\pm 10\%$		0.034	
Torque Sensitivity, Peak	oz/A	$\pm 10\%$	$K_{TP}$	4.67	
	N.m/A	$\pm 10\%$		0.033	
BEMF Constant	V/(rad/s)	$\pm 10\%$	$K_B$	0.034	
Inductance	mH	$\pm 30\%$	L	0.5	

Motor Parameters *	Units	Symbol	Nom. Value
Peak Stall Torque	oz.in	$T_{PS}$	36.3
	N.m		0.26
Continuous Stall Torque **	oz.in	$T_{CS}$	13.8
	N.m		0.1
Motor Constant	oz.in/ $\sqrt{W}$	$K_M$	5.29
	N.m/ $\sqrt{W}$		0.037
Electrical Time Constant	ms	$T_e$	0.68
Mechanical Time Constant	ms	$T_m$	0.13
Theoretical Acceleration @ $T_p$	rad/s <sup>2</sup>	$\alpha_p$	251000
Damping Factor (Zero impedance)	oz.in/(rad/s)	$F_O$	0.194
	N.m/(rad/s)		0.001
Rotor Inertia	oz.in.s <sup>2</sup>	$J_M$	$2.12 \times 10^{-5}$
	kg.m <sup>2</sup>		$1.5 \times 10^{-7}$
Max permissible Speed	rpm	$\omega_{max}$	6700
Max permissible Voltage	V	$V_{MAX}$	24
Thermal Resistance	$^{\circ}C/W$	$\theta_{th}$	12.5
Friction Torque @ No Load	oz.in	$T_F$	0.775
	N.m		0.005
Maximum Allowable Motor Temp	$^{\circ}C$	$T_W$	155
Number of Phases/Winding Type	-	-	3/ $\Delta$
Number of Poles	-	p	8
Mass, total	oz	$M_T$	2.9
	kg		0.082
Rotation Direction	Facing Lead Wires		CW

DISCLAIMERS  
 \* 25[ $^{\circ}C$ ] AMBIENT TEMPERATURE  
 \*\* 25[ $^{\circ}C$ ] AMBIENT & 155[ $^{\circ}C$ ] WINDING TEMPERATURE  
 \*\*\* 10[s] @ 25[ $^{\circ}C$ ] & 155[ $^{\circ}C$ ] WINDING TEMPERATURE

CONNECTION	COLOR	TERMINAL	WIRE GAUGE
PHASE A	RED	1	22 AWG
PHASE B	BLACK	2	22 AWG
PHASE C	GREEN	3	22 AWG

Other	Units	Tol	Nom. Value



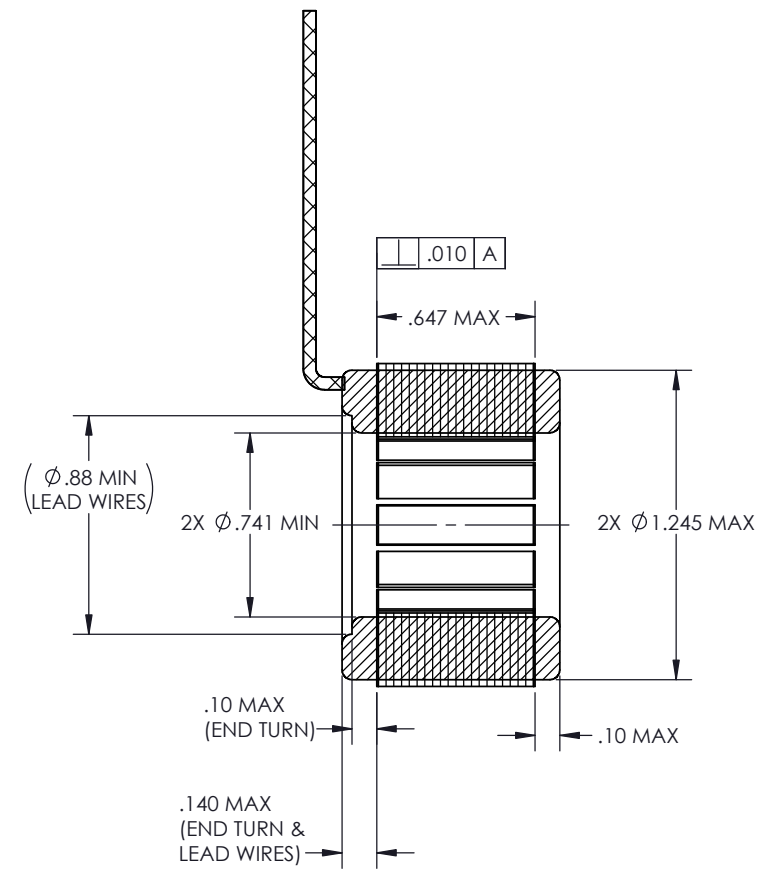
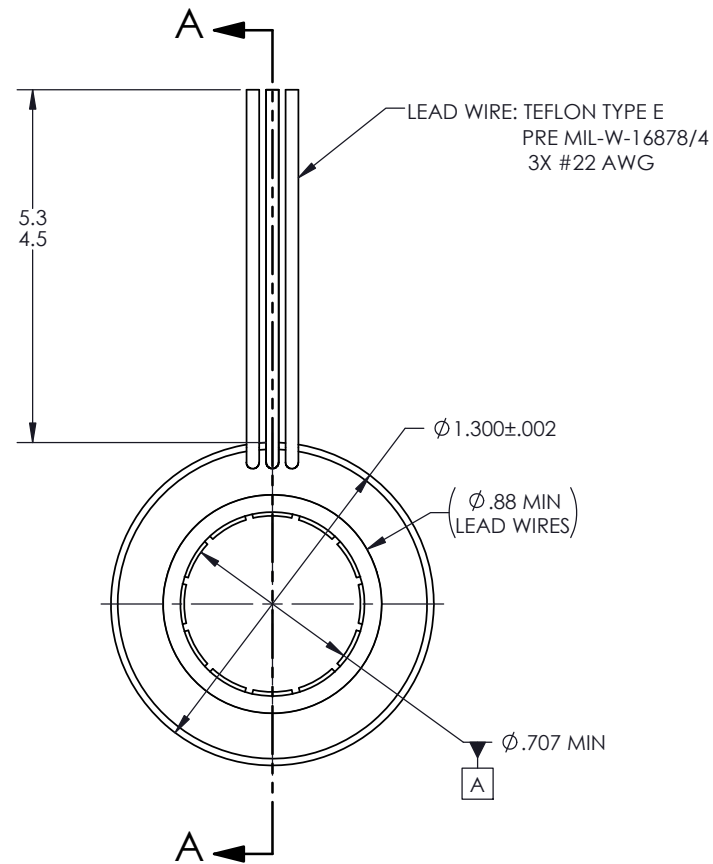
SOLIDWORKS

FOR REFERENCE ONLY, CHECK LATEST REVISION BEFORE USE.

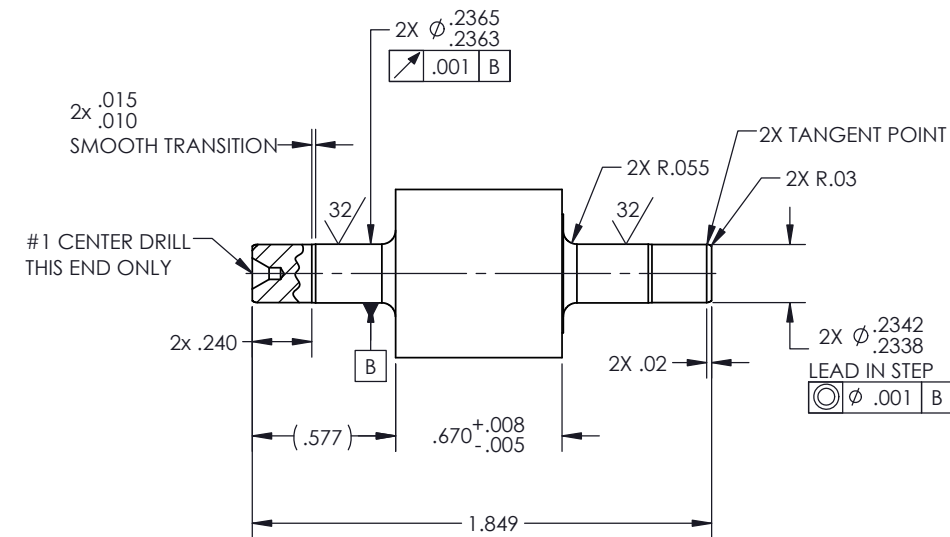
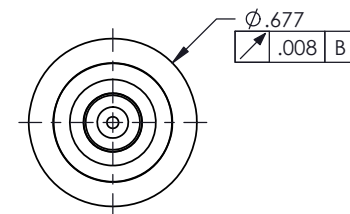
DRAWN J. THOMPSON	X.X $\pm$ 0.03    X.X* $\pm$ 0*30' X.XX $\pm$ 0.01 X.XXX $\pm$ 0.005
DATE 03/14/24	
ENGINEER	
DATE	INTERPRET DIMENSIONING AND TOLERANCING PER ASME Y14.5-2009. UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. SENSATA TECHNOLOGIES PROPRIETARY AND CONFIDENTIAL. NEITHER THIS PRINT NOR THE INFORMATION CONTAINED HEREON IS TO BE USED AGAINST THE INTERESTS OF SENSATA TECHNOLOGIES OR AGAINST THE INTERESTS OF ANY OF ITS AFFILIATED COMPANIES OR WHOLLY OWNED SUBSIDIARIES.
APPROVED	
DATE	
APPROVED TOLERANCES	
DECIMALS	
DATE	DO NOT SCALE DRAWING THIRD ANGLE PROJECTION

		1499 POINSETTIA AVENUE SUITE 160 VISTA, CA. 92081
TITLE <b>BRUSHLESS DC MOTOR PART SET</b>		
SIZE C	DWG NO. DIP13-09-001A	REV. 1
SCALE: NONE   SHEET 1 OF 2		

REVISION HISTORY
SEE PAGE 1



SECTION A-A



**Sensata Technologies**  
BEI Kimco

1499 POINSETTIA AVENUE  
SUITE 160  
VISTA, CA. 92081

SIZE	DWG NO.	REV.
C	DIP13-09-001A	1

SCALE: NONE | SOLIDWORKS | SHEET 2 OF 2

