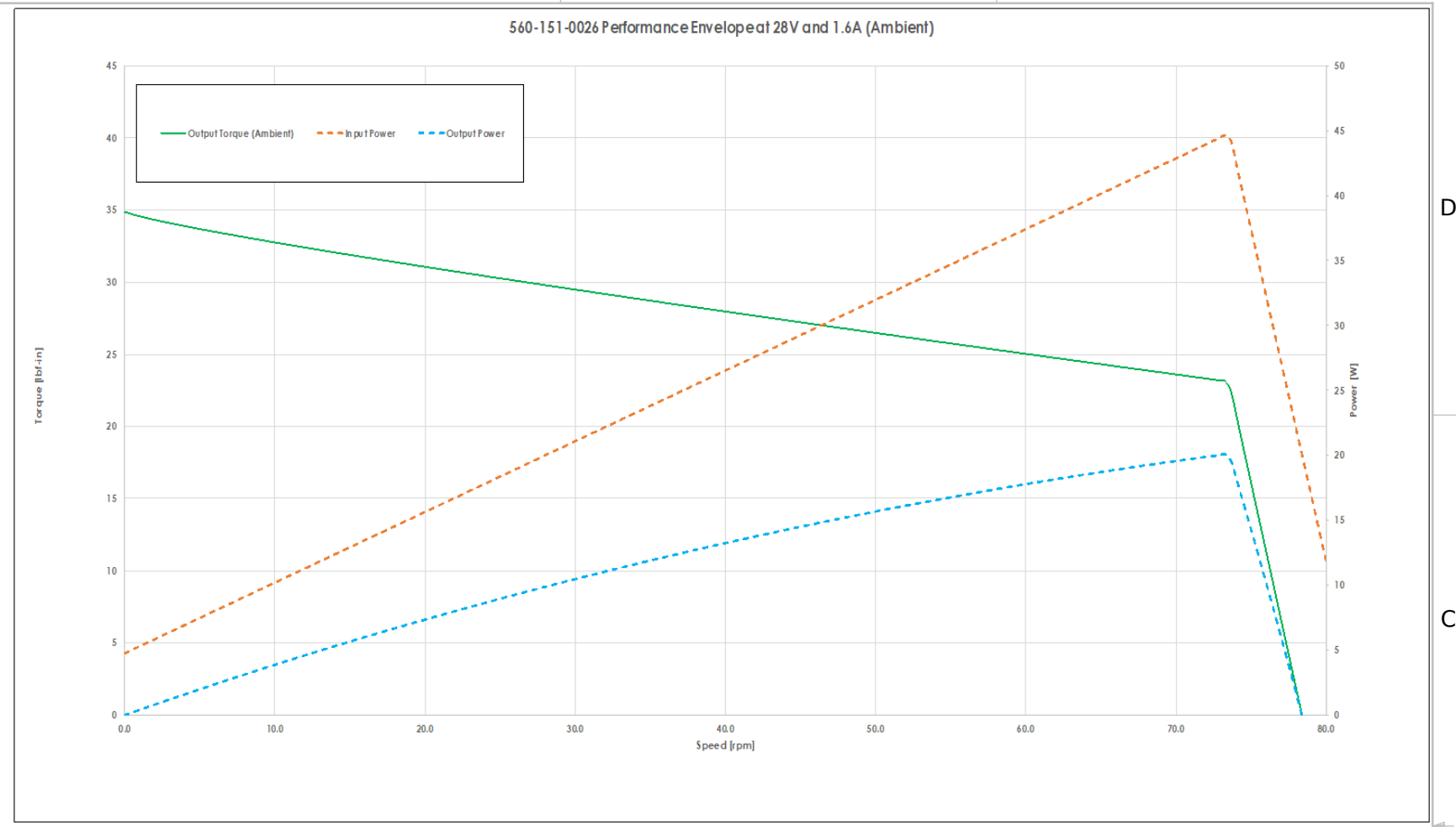
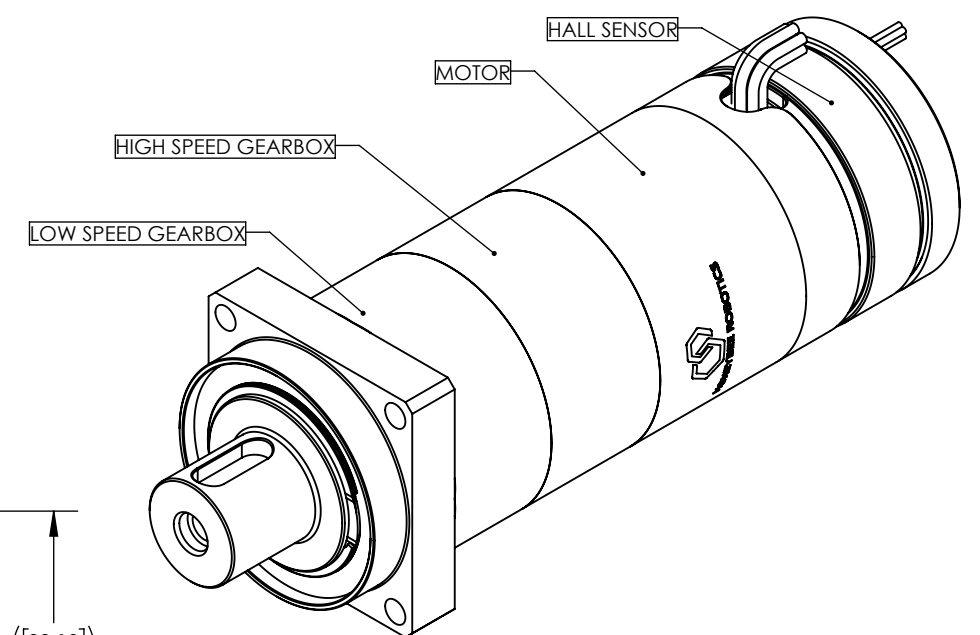
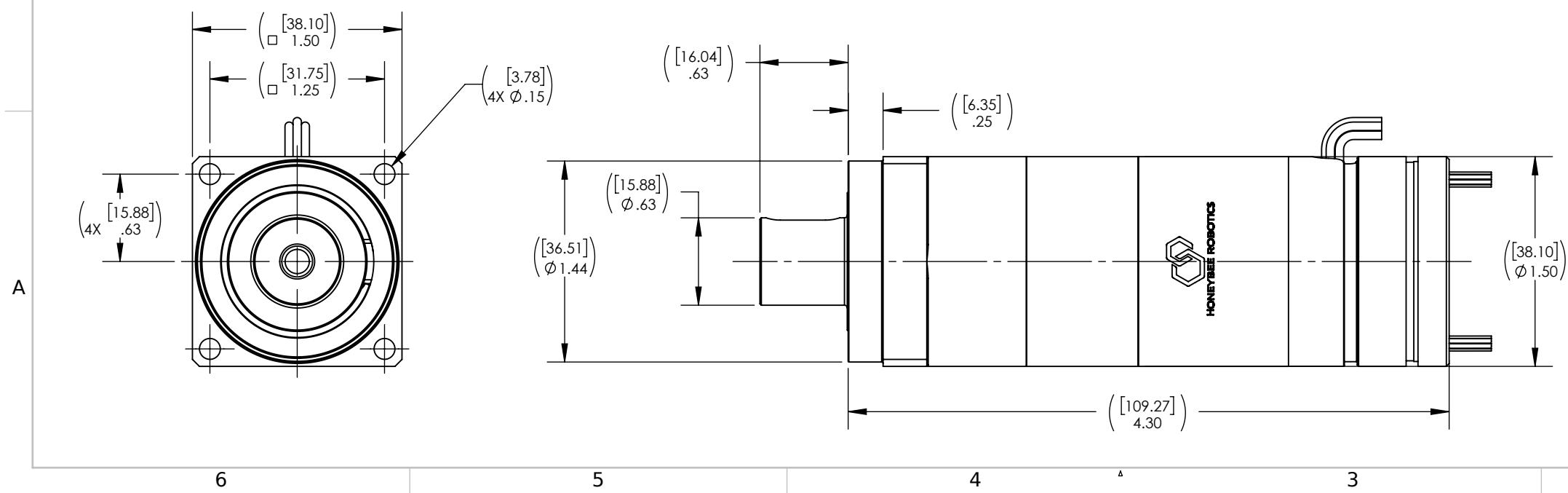


6	5	4
<b>MECHANICAL PARAMETERS</b>		<b>UNITS</b>
FRAME SIZE	-	F
MASS	lbm [kg]	1.6 [0.73]
ROTOR INERTIA	oz-in-sec <sup>2</sup> x10 <sup>-3</sup> [g·cm <sup>2</sup> ]	0.317 [22.4]
OPERATING TEMPERATURE RANGE	°C	-60 TO +200
<b>MOTOR PARAMETERS</b>		
DRIVE TYPE	-	3 PHASE - TRAPEZOIDAL (6-STEP)
NUMBER OF PHASES	-	3
NUMBER OF POLE PAIRS	-	2
REDUNDANCY	-	REDUNDANT
NO LOAD SPEED <sup>1</sup>	RPM	78.0
STALL TORQUE <sup>2</sup>	lbf-in [N·m]	35 [4.0]
STEADY STATE CURRENT LIMIT <sup>2</sup>	A	1.6
BACK EMF CONSTANT <sup>5</sup>	V <sub>peak</sub> /rad/sec	0.038
TORQUE CONSTANT <sup>5,6</sup>	lbf-in/A <sub>peak</sub> [N·m/A <sub>peak</sub> ]	0.34 [0.038]
MOTOR CONSTANT <sup>5</sup>	lbf-in/sqrt(W) [N·m/sqrt(W)]	0.23 [0.026]
RESISTANCE <sup>3</sup>	Ohms	1.6 - 2.7
INDUCTANCE <sup>3</sup>	mH	0.5 - 0.8
MAXIMUM ALLOWABLE WINDING TEMPERATURE	°C	200
<b>COMMUTATION SENSOR PARAMETERS</b>		
SENSOR TYPE	-	HALL EFFECT SENSOR
REDUNDANCY	-	REDUNDANT
EXCITATION FREQUENCY	kHz	N/A
EXCITATION VOLTAGE	V <sub>rms</sub>	4.5-24 (SUPPLY VOLTAGE)
<b>GEARBOX PARAMETERS</b>		
GEARBOX TYPE	-	PLANETARY
GEAR REDUCTION	-	85.3:1
NUMBER OF STAGES	-	2
TYPICAL MECHANICAL EFFICIENCY <sup>4</sup>	%	81
TYPICAL BACKLASH	DEGREES	1.5



- NOTES:
1. ASSUMING 28 VDC BUS VOLTAGE AT 22°C. CONTACT HBR FOR PERFORMANCE AT OTHER VOLTAGES AND TEMPERATURES.
  2. CURRENT LIMIT AND STALL TORQUE DERATED TO GEARBOX LOAD CAPACITY LIMITS, EEE-INST-0002 OR ELECTROMAGNETIC SATURATION. ACTUAL RMS CURRENT LIMIT AND STALL TORQUE WILL VARY BASED ON DUTY CYCLE AND INTERFACE TEMPERATURES. CONTACT HONEYBEE ROBOTICS FOR MORE INFORMATION.
  3. LINE TO LINE..
  4. TOTAL EFFICIENCY OF BOTH STAGES.
  5. AT MOTOR LEVEL.
  6. DERIVED FROM BACK EMF CONSTANT.
  7. STANDARD OUTPUT SHAFT GEOMETRY. CONTACT HONEYBEE ROBOTICS FOR FURTHER OPTIONS.
  8. STEP FILE ATTACHED TO PDF.



UNLESS OTHERWISE NOTED:  
**DIMENSIONS ARE IN INCHES**  
 (CRITICAL DIMENSION)  
 (ALL FEATURE CONTROL FRAME)  
 INTERPRET DRAWING PER ASME Y14.5-2018  
 LINEAR TOLERANCES:  
 .X ±.05 SURFACE  
 .XX ±.01 ROUGHNESS  
 .XXX ±.005  
 (XXX) CRITICAL  
 ANGULAR TOLERANCES:  
 ±0.5 DEGREES

63  
 MICROINCHES  
 OR BETTER

**HONEYBEE ROBOTICS**

PROJECT TITLE  
 STANDARD PRODUCT DATA SHEETS

PART NUMBER  
 560-151-0026

REVISION  
 A

PART DESCRIPTION  
 F-SIZE BLDC (HALL), 3-PHASE REDUNDANT, 85.3:1

CAGE CODE 8DSS5 | SHEET SIZE B | SHEET 1 OF 1