

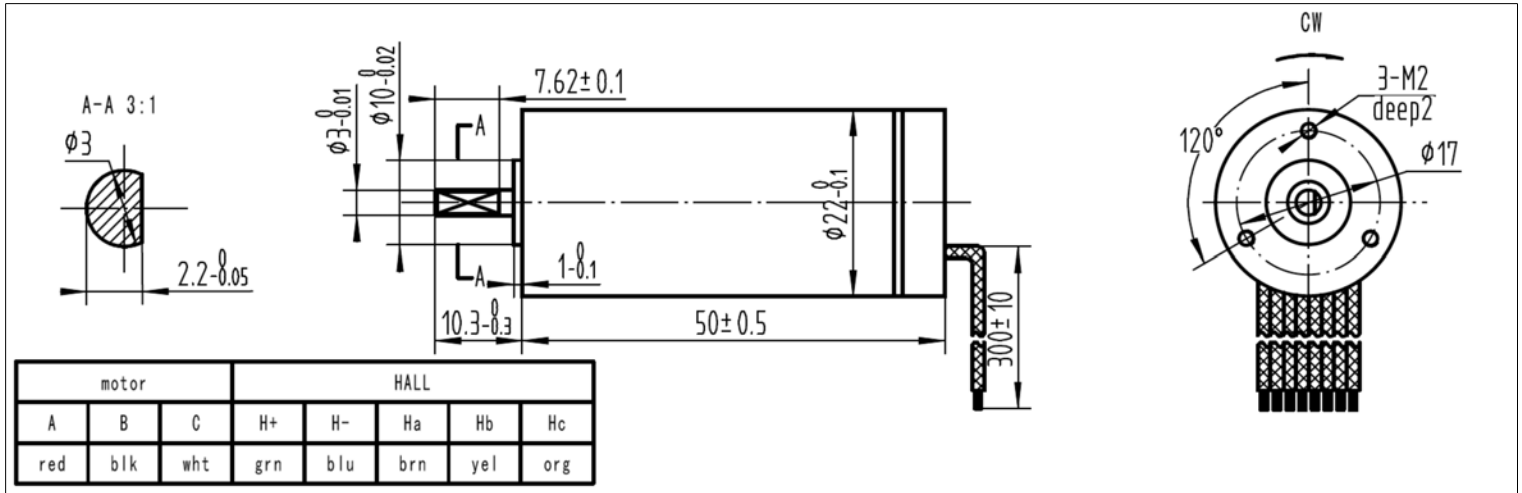
# BLDC Slotless Motor - 22 mm Ø x 50



B22E24BZ065

156.8 Watts Peak Power

Global Motion Products



Not to Scale - Dimensions in millimeters (mm)

Nominal Voltage	24.0 Volts	24.0 Volts	24.0 Volts
No-Load Speed	40,000 rpm	40,000 rpm	40,000 rpm
Stall Torque	151.2 mNm	1,542.0 gcm	21.42 oz-in
No-Load Current	0.270 Amps	0.270 Amps	0.270 Amps
Peak Output Power	156.8 Watts	156.8 Watts	156.8 Watts
Torque Constant	5.67 mNm/A	57.83 gcm/A	0.80 oz-in/A
Terminal Resistance	0.90 Ohms	0.90 Ohms	0.90 Ohms
Back-EMF Constant	0.59 V/krpm	0.59 V/krpm	0.59 V/krpm
Inductance	0.050 mH	0.050 mH	0.050 mH
Rotor Inertia	4.500 kg-m <sup>2</sup> x10 <sup>-7</sup>	4.500 gm cm <sup>2</sup>	0.637 x10 <sup>-4</sup> oz in sec <sup>2</sup>
Mechanical Time Constant	12.6 msec	12.6 msec	12.6 msec
Slope of Speed/Torque Curve	264.5 rpm/mNm	25.9 rpm/gcm	1,867.6 rpm/oz-in
Speed Constant	1,684 rpm/Volt	1,684 rpm/Volt	1,684 rpm/Volt
Motor Constant	5.98 mNm/ $\sqrt{\text{Watt}}$	60.96 gcm/ $\sqrt{\text{Watt}}$	0.85 oz-in/ $\sqrt{\text{Watt}}$

## Zero Cogging 3 Phase Brushless DC Motor featuring High Temperature Neodymium Iron Boron Magnets.

Part Number: How to Order	B22E24BZ065	Characteristics - Specifications at	22 °C
Radial Load Rating	Radial Play	Max Temperature	125 °C
Radial Load Distance	Thrust Play	Min Temperature	-30 °C
Axial Load	Magnet Type	Max Winding Temp	125 °C
Press Fit Force - Max	Bearing Type	Mass	91.0 grams
Gearbox Options	Spur and Planetary Gearboxes.		
Encoder Options	Modular 2 channel Optical Encoder with zero index.		
Options - Other	Windings, special shafts, sensorless version, lubrication, connectors.		

Global Motion Products  
 Distributed by:  
 Precision Motion Distributors: (925) 803-9565  
 Technical Support: (760) 451-2723  
<http://www.gmpwebsite.com> Email: [info@gmpwebsite.com](mailto:info@gmpwebsite.com)

Commutation Type: **Manufactured under a Certified ISO 9001:2008 Quality System**  
 Electronic - Hall Effect

**RoHS Compliant**

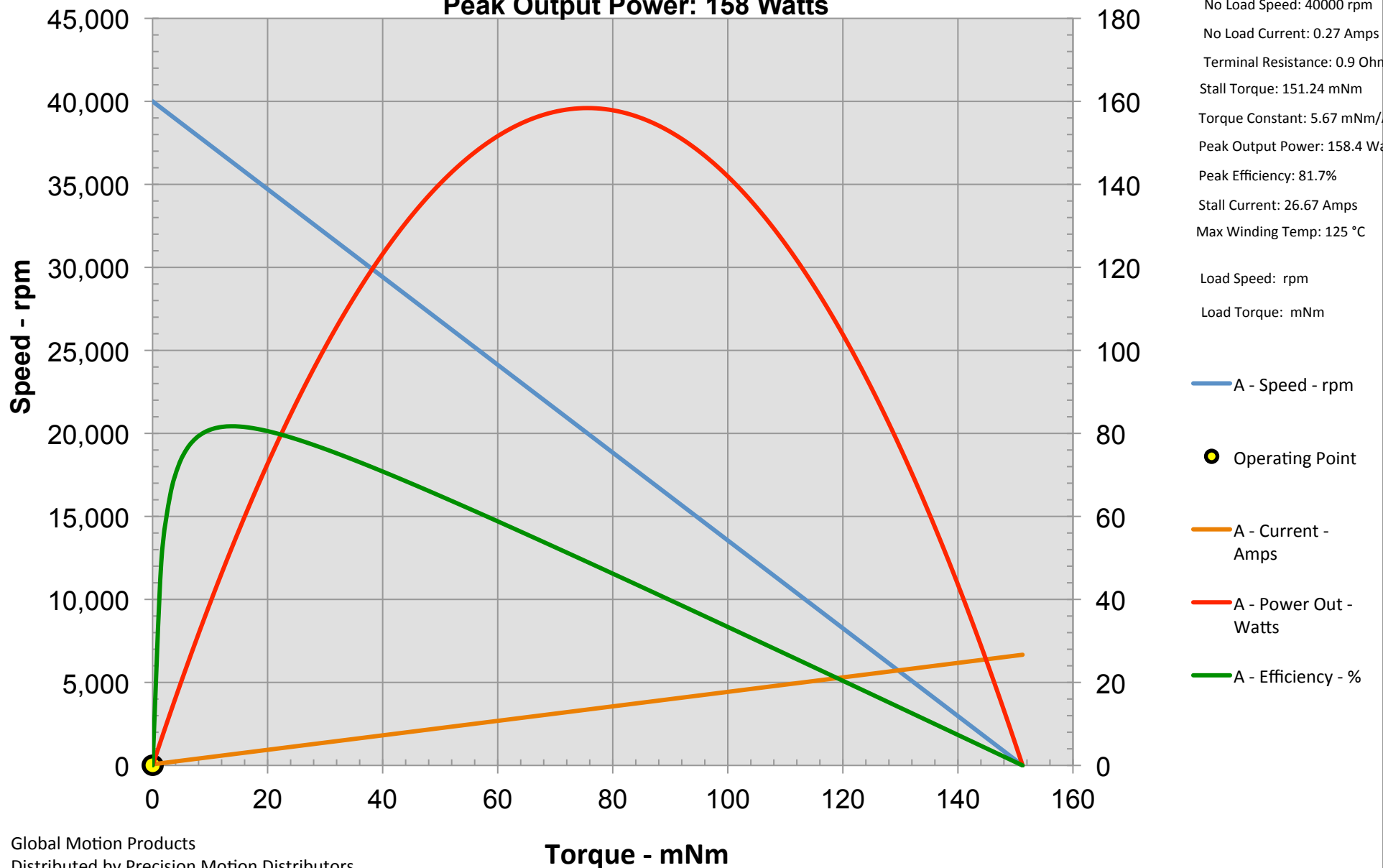
Preliminary

Specifications Subject to change without notice

**BLDC Slotless Motor - 22 mm - x 50**  
**B22E24BZ065 - - - 24 Volts**  
**Peak Output Power: 158 Watts**

**B22E24BZ065**

Voltage: 24 Volts  
 No Load Speed: 40000 rpm  
 No Load Current: 0.27 Amps  
 Terminal Resistance: 0.9 Ohm  
 Stall Torque: 151.24 mNm  
 Torque Constant: 5.67 mNm/A  
 Peak Output Power: 158.4 Watts  
 Peak Efficiency: 81.7%  
 Stall Current: 26.67 Amps  
 Max Winding Temp: 125 °C



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**IT IS NOT TEST DATA.** Stall Torque ignores motor coulomb and viscous torque losses. Voltage divided by Resistance multiplied by Torque Constant equals Stall Torque for motor only simulations. **CAUTION:** Peak Output Power is NOT a RATING. This is merely a calculated value and does not address Thermal Issues.

November 29, 2012

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