



14203S010

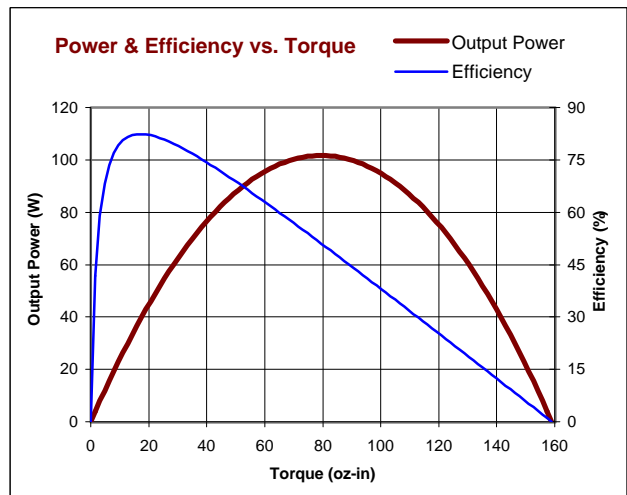
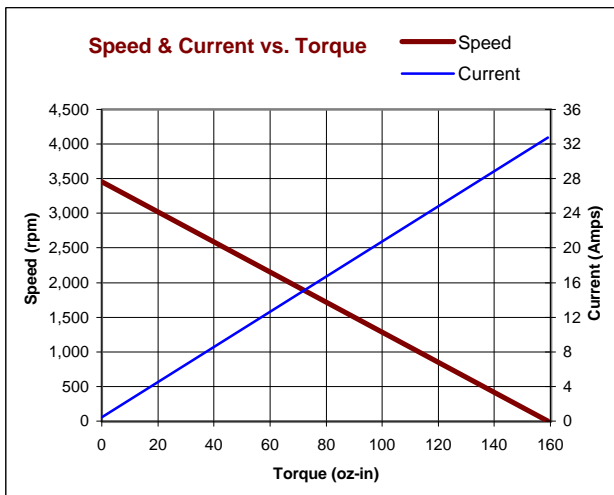
Lo-Cog® DC Motor

Assembly Data	Symbol	Units	Value	
Reference Voltage	E	V	12	
No-Load Speed	S _{NL}	rpm (rad/s)	3,456	(362)
Continuous Torque (Max.) ¹	T _C	oz-in (N-m)	21	(1.5E-01)
Peak Torque (Stall) ²	T _{PK}	oz-in (N-m)	159	(1.1E+00)
Weight	W _M	oz (g)	31	(885)
Motor Data				
Torque Constant	K _T	oz-in/A (N-m/A)	4.63	(3.27E-02)
Back-EMF Constant	K _E	V/krpm (V/rad/s)	3.42	(3.27E-02)
Resistance	R _T	Ω	0.37	
Inductance	L	mH	0.56	
No-Load Current	I _{NL}	A	0.48	
Peak Current (Stall) ²	I _P	A	32.7	
Motor Constant	K _M	oz-in/√W (N-m/√W)	7.88	(5.56E-02)
Friction Torque	T _F	oz-in (N-m)	1.6	(1.1E-02)
Rotor Inertia	J _M	oz-in-s ² (kg-m ²)	3.0E-03	(2.1E-05)
Electrical Time Constant	τ _E	ms	1.64	
Mechanical Time Constant	τ _M	ms	6.8	
Viscous Damping	D	oz-in/krpm (N-m-s)	0.18	(1.2E-05)
Damping Constant	K _D	oz-in/krpm (N-m-s)	46	(3.1E-03)
Maximum Winding Temperature	θ _{MAX}	°F (°C)	311	(155)
Thermal Impedance	R _{TH}	°F/watt (°C/watt)	46.6	(8.10)
Thermal Time Constant	τ _{TH}	min	26.0	
Gearbox Data				
Encoder Data				

Included Features
2-Pole Stator
Ceramic Magnets
Heavy-Gauge Steel Housing
11-Slot Armature
Silicon Steel Laminations
Stainless Steel Shaft
Copper-Graphite Brushes
Diamond Turned Commutator
Motor Ball Bearings

Customization Options
Alternate Winding
Sleeve or Ball Bearings
Modified Output Shaft
Custom Cable Assembly
Special Brushes
EMI/RFI Suppression
Spur or Planetary Gearbox
Special Lubricant
Optional Encoder
Fail-Safe Brake

1 - Specified at max. winding temperature at 25°C ambient without heat sink. 2 - Theoretical values supplied for reference only.



All values are nominal. Specifications subject to change without notice. Graphs are shown for reference only.

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