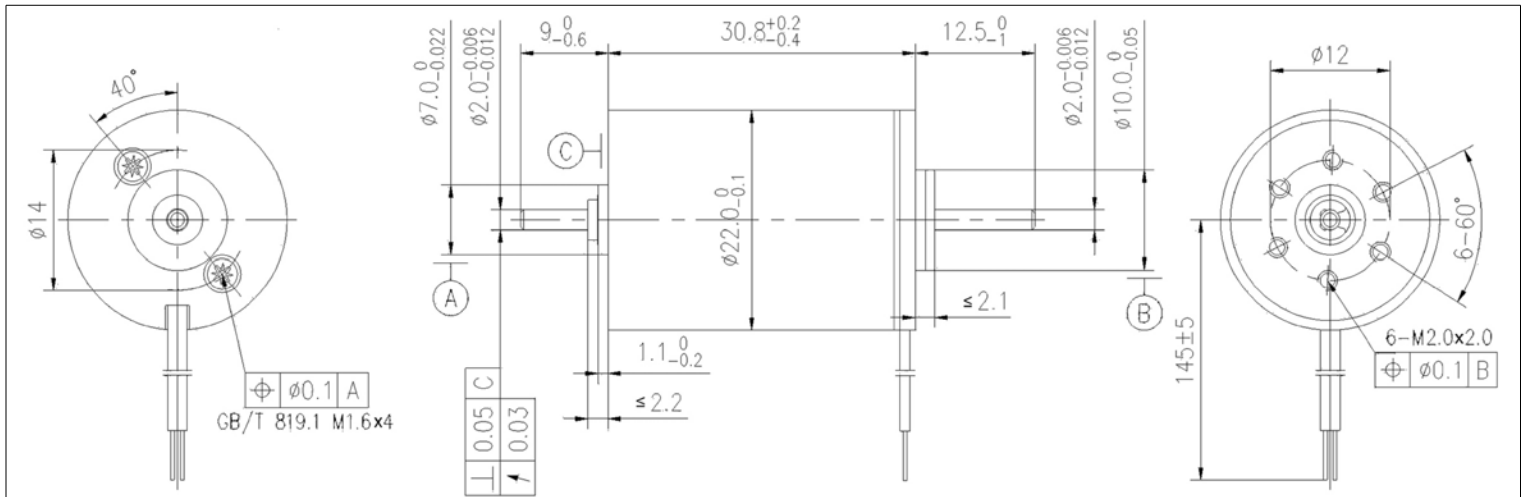


Coreless DC Motor - 22 mm Ø

C22G30SF000 16.8 Watts Peak Power



Global Motion Products



Not to Scale - Dimensions in millimeters (mm)

Nominal Voltage	30.0 Volts	30.0 Volts	30.0 Volts
No-Load Speed	8,350 rpm	8,350 rpm	8,350 rpm
Stall Torque	77.4 mNm	789.2 gcm	11.0 oz-in
No-Load Current	0.017 Amps	0.017 Amps	0.017 Amps
Peak Output Power	16.8 Watts	16.8 Watts	16.8 Watts

Torque Constant	34.05 mNm/A	347.24 gcm/A	4.82 oz-in/A
Terminal Resistance	13.20 Ohms	13.20 Ohms	13.20 Ohms
Back-EMF Constant	3.57 V/krpm	3.57 V/krpm	3.57 V/krpm
Mechanical Time Constant	7.1 msec	7.1 msec	7.1 msec
Rotor Inertia	6.22 kgm ² x10 ⁻⁷	6.22 gm cm ²	0.88 x10 ⁻⁴ oz-in-sec ²

Mechanical Time Constant	7.1 msec	7.1 msec	7.1 msec
Slope of Speed/Torque Curve	107.9 rpm/mNm	10.6 rpm/gcm	761.9 rpm/oz-in
Speed Constant	280 rpm/Volt	83 %	83 %
Motor Constant	9.37 mNm/√Watt	95.57 gcm/√Watt	1.33 oz-in/√Watt
Commutation Type	Graphite	Graphite	Graphite

Rated Power @ 6,939 rpm	9.5 Watts	9.5 Watts	9.5 Watts
Rated Torque @ 6,939 rpm	13.1 mNm	133.4 gcm	1.9 oz-in
Rated Current @ 6,939 rpm	0.384 Amps	0.384 Amps	0.384 Amps

Part Number: How to Order C22G30SF000 Ratings are at 25°C Ambient Temperature.

Radial Load Rating	2.7 N	Radial Play	0.020 mm	Max Temperature	65 °C
Radial Load Distance	4 mm	Thrust Play	0.150 mm	Min Temperature	-20 °C
Axial Load	1.00 N	Magnet Type	NdFeB	Max Winding Temp	85 °C
Press Fit Force - Max	80.00 N	Bearing Type	Sleeve Bearings	Mass	68 grams
Gearbox Options	P22 Series Planetary Gearboxes				
Encoder Options	22 mm Optical - 3 Channel				
Options - Other	Ball Bearings. Shaft length. Lubricants. Leads. Solder Tabs. Connectors.				

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Commutation Type:

Graphite

Manufactured under a
Certified ISO 9001:2008
Quality System

RoHS Compliant

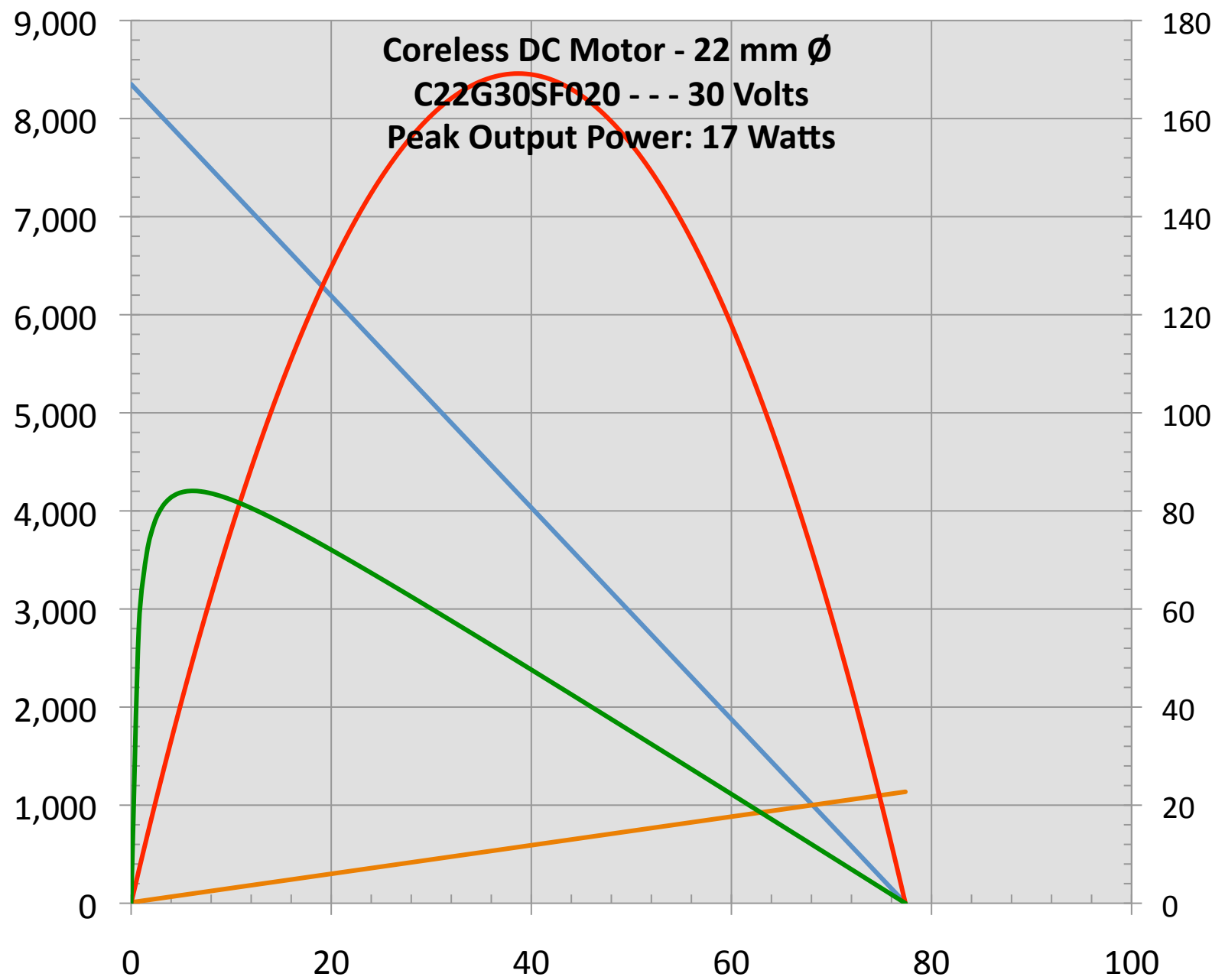
B - August 2011

Specifications Subject to change without notice

**Coreless DC Motor - 22 mm Ø
C22G30SF020 - - - 30 Volts
Peak Output Power: 17 Watts**

180 C22G30SF020
Voltage: 30 Volts
 No Load Speed: 8350 rpm
 No Load Current: 0.017 Amps
 Terminal Resistance: 13.2 Ohms
 Stall Torque: 77.39 mNm
 Torque Constant: 34.05 mNm/A
 Peak Output Power: 16.9 Watts
 Peak Efficiency: 84.1%
 Stall Current: 2.27 Amps

Speed - rpm



180
160
140
120
100
80
60
40
20
0

A - Speed - rpm
 A - Current - Amps / 10
 A - Power Out - Watts / 10
 A - Efficiency - %

Torque - mNm

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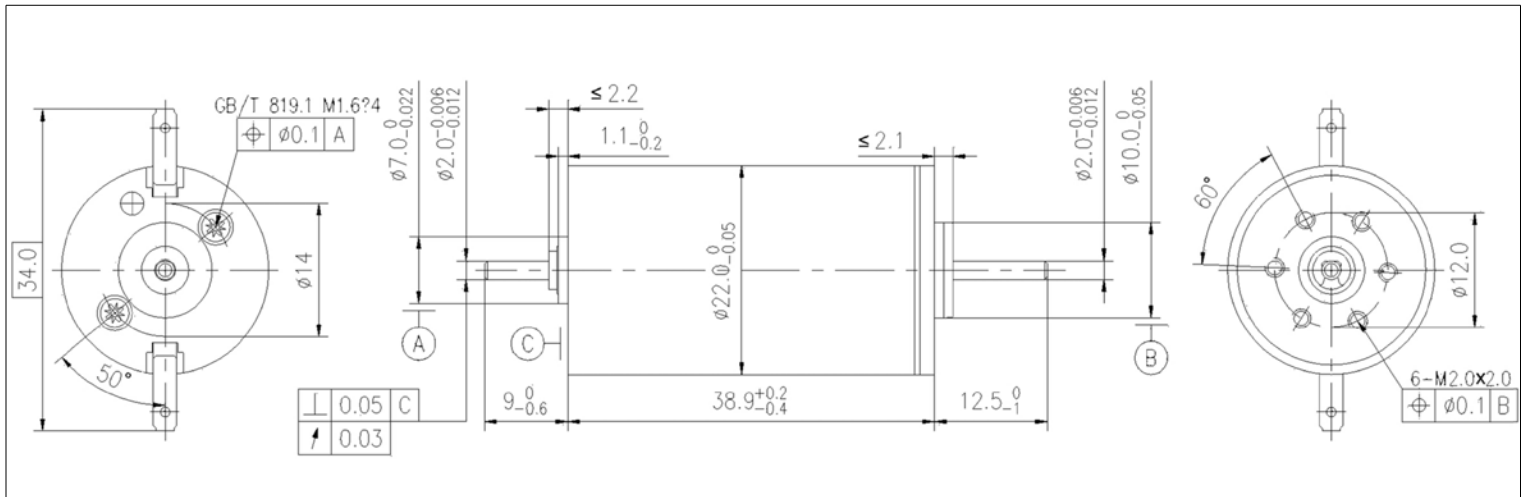
CAUTION: Peak Output Power is NOT a RATING. This is merely a calculated value and does not address Thermal Issues.

Coreless DC Motor - 22 mm Ø

C22G30SF010 16.8 Watts Peak Power



Global Motion Products



Not to Scale - Dimensions in millimeters (mm)

Nominal Voltage	30.0 Volts	30.0 Volts	30.0 Volts
No-Load Speed	8,350 rpm	8,350 rpm	8,350 rpm
Stall Torque	77.4 mNm	789.2 gcm	11.0 oz-in
No-Load Current	0.017 Amps	0.017 Amps	0.017 Amps
Peak Output Power	16.8 Watts	16.8 Watts	16.8 Watts

Torque Constant	34.05 mNm/A	347.24 gcm/A	4.82 oz-in/A
Terminal Resistance	13.20 Ohms	13.20 Ohms	13.20 Ohms
Back-EMF Constant	3.57 V/krpm	3.57 V/krpm	3.57 V/krpm
Mechanical Time Constant	7.1 msec	7.1 msec	7.1 msec
Rotor Inertia	6.22 kgm ² x10 ⁻⁷	6.22 gm cm ²	0.88 x10 ⁻⁴ oz-in-sec ²

Mechanical Time Constant	7.1 msec	7.1 msec	7.1 msec
Slope of Speed/Torque Curve	107.9 rpm/mNm	10.6 rpm/gcm	761.9 rpm/oz-in
Speed Constant	280 rpm/Volt	83 %	83 %
Motor Constant	9.37 mNm/√Watt	95.57 gcm/√Watt	1.33 oz-in/√Watt
Commutation Type	Graphite	Graphite	Graphite

Rated Power @ 6,939 rpm	9.5 Watts	9.5 Watts	9.5 Watts
Rated Torque @ 6,939 rpm	13.1 mNm	133.4 gcm	1.9 oz-in
Rated Current @ 6,939 rpm	0.384 Amps	0.384 Amps	0.384 Amps

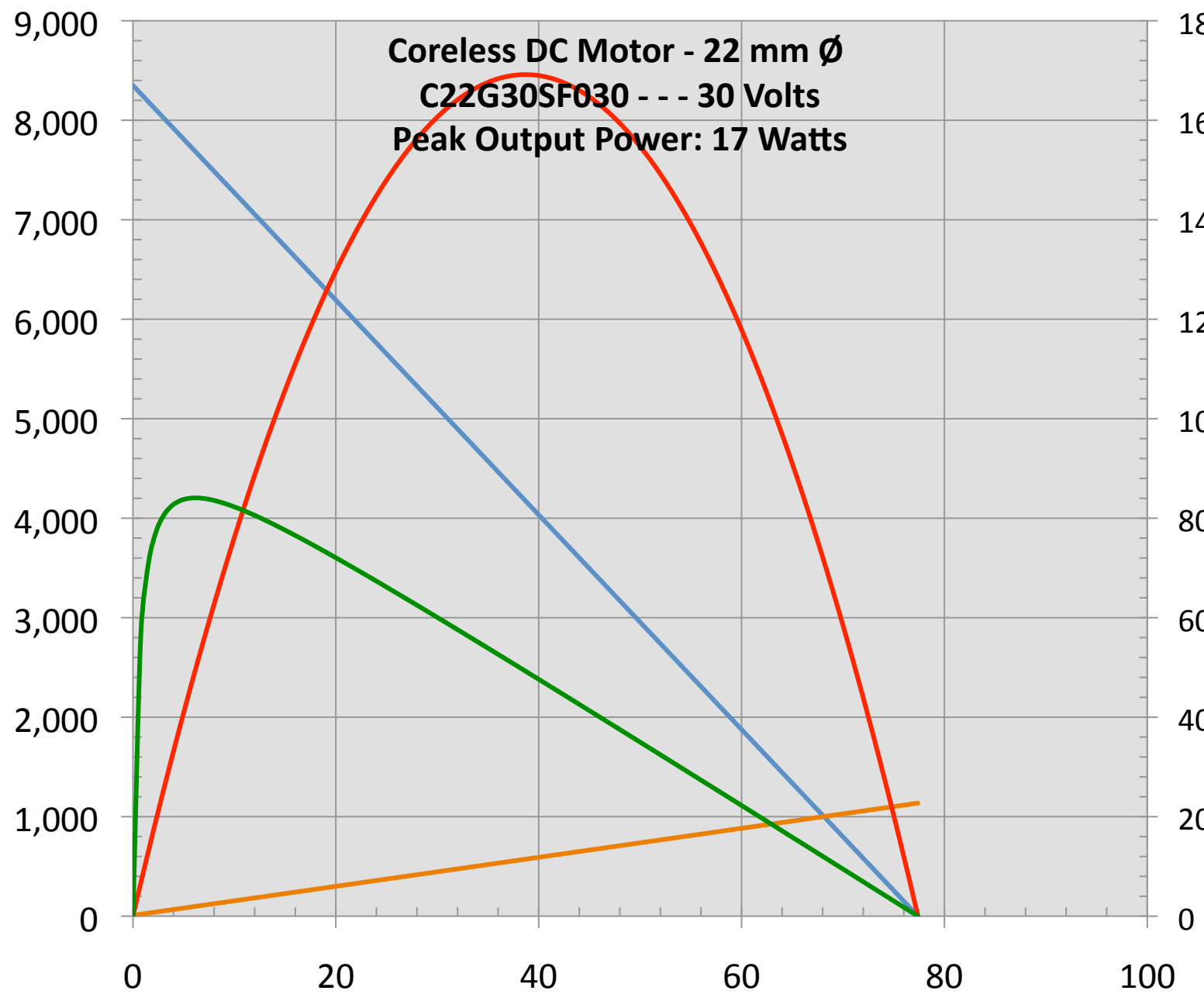
Part Number: How to Order C22G30SF010 Ratings are at 25°C Ambient Temperature.

Radial Load Rating	2.7 N	Radial Play	0.020 mm	Max Temperature	65 °C
Radial Load Distance	4 mm	Thrust Play	0.150 mm	Min Temperature	-20 °C
Axial Load	1.00 N	Magnet Type	NdFeB	Max Winding Temp	85 °C
Press Fit Force - Max	80.00 N	Bearing Type	Sleeve Bearings	Mass	68 grams
Gearbox Options	P22 Series Planetary Gearboxes				
Encoder Options	22 mm Optical - 3 Channel				
Options - Other	Ball Bearings. Shaft length. Lubricants. Leads. Solder Tabs. Connectors.				

**Coreless DC Motor - 22 mm Ø
C22G30SF030 - - - 30 Volts
Peak Output Power: 17 Watts**

180 C22G30SF030
Voltage: 30 Volts
 No Load Speed: 8350 rpm
 No Load Current: 0.017 Amps
 Terminal Resistance: 13.2 Ohms
 Stall Torque: 77.39 mNm
 Torque Constant: 34.05 mNm/A
 Peak Output Power: 16.9 Watts
 Peak Efficiency: 84.1%
 Stall Current: 2.27 Amps

Speed - rpm



180
160
140
120
100
80
60
40
20
0

A - Speed - rpm
 A - Current - Amps / 10
 A - Power Out - Watts / 10
 A - Efficiency - %

Torque - mNm

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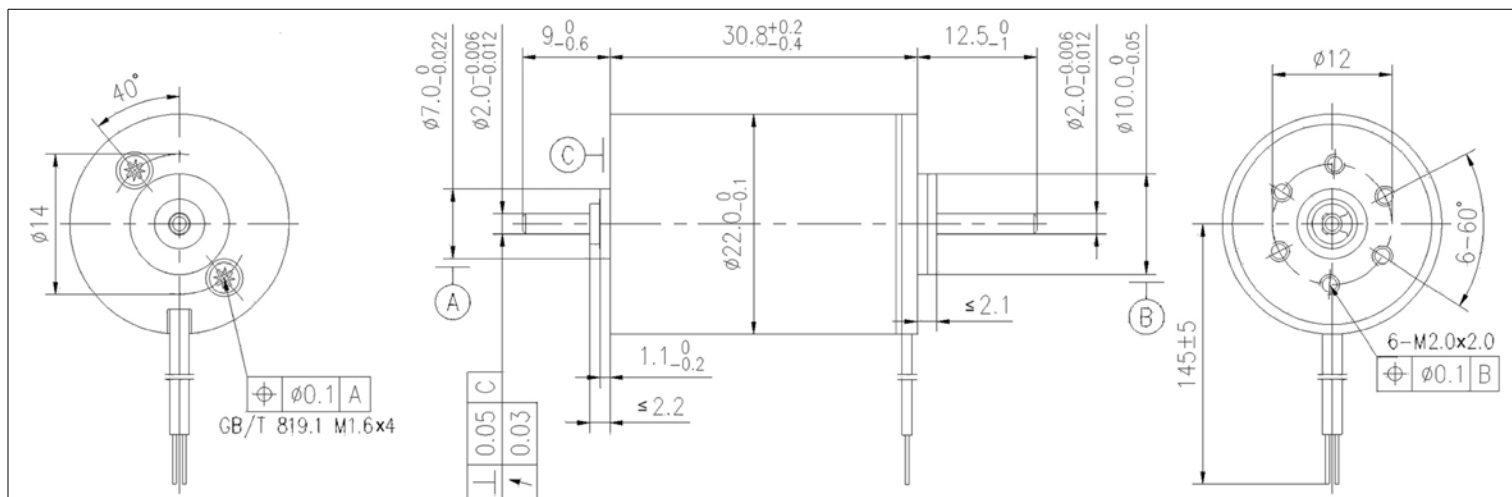
CAUTION: Peak Output Power is NOT a RATING. This is merely a calculated value and does not address Thermal Issues.

Coreless DC Motor - 22 mm Ø

C22G30SF020 16.8 Watts Peak Power



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Not to Scale - Dimensions in millimeters (mm)

Nominal Voltage	30.0 Volts	30.0 Volts	30.0 Volts
No-Load Speed	8,350 rpm	8,350 rpm	8,350 rpm
Stall Torque	77.4 mNm	789.2 gcm	11.0 oz-in
No-Load Current	0.017 Amps	0.017 Amps	0.017 Amps
Peak Output Power	16.8 Watts	16.8 Watts	16.8 Watts
Torque Constant	34.05 mNm/A	347.24 gcm/A	4.82 oz-in/A
Terminal Resistance	13.20 Ohms	13.20 Ohms	13.20 Ohms
Back-EMF Constant	3.57 V/krpm	3.57 V/krpm	3.57 V/krpm
Mechanical Time Constant	7.1 msec	7.1 msec	7.1 msec
Rotor Inertia	6.22 kgm ² x10 ⁻⁷	6.22 gm cm ²	0.88 x10 ⁻⁴ oz-in-sec ²
Mechanical Time Constant	7.1 msec	7.1 msec	7.1 msec
Slope of Speed/Torque Curve	107.9 rpm/mNm	10.6 rpm/gcm	761.9 rpm/oz-in
Speed Constant	280 rpm/Volt	83 %	83 %
Motor Constant	9.37 mNm/√Watt	95.57 gcm/√Watt	1.33 oz-in/√Watt
Commutation Type	Graphite	Graphite	Graphite
Rated Power @ 6,939 rpm	9.5 Watts	9.5 Watts	9.5 Watts
Rated Torque @ 6,939 rpm	13.1 mNm	133.4 gcm	1.9 oz-in
Rated Current @ 6,939 rpm	0.384 Amps	0.384 Amps	0.384 Amps

Part Number: How to Order C22G30SF020

Ratings are at 25°C Ambient Temperature.

Radial Load Rating	2.7 N	Radial Play	0.020 mm	Max Temperature	65 °C
Radial Load Distance	4 mm	Thrust Play	0.150 mm	Min Temperature	-20 °C
Axial Load	1.00 N	Magnet Type	NdFeB	Max Winding Temp	85 °C
Press Fit Force - Max	80.00 N	Bearing Type	Sleeve Bearings	Mass	68 grams
Gearbox Options	P22 Series Planetary Gearboxes				
Encoder Options	22 mm Optical - 3 Channel				
Options - Other	Ball Bearings. Shaft length. Lubricants. Leads. Solder Tabs. Connectors.				

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Commutation Type:

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Quality System

RoHS Compliant

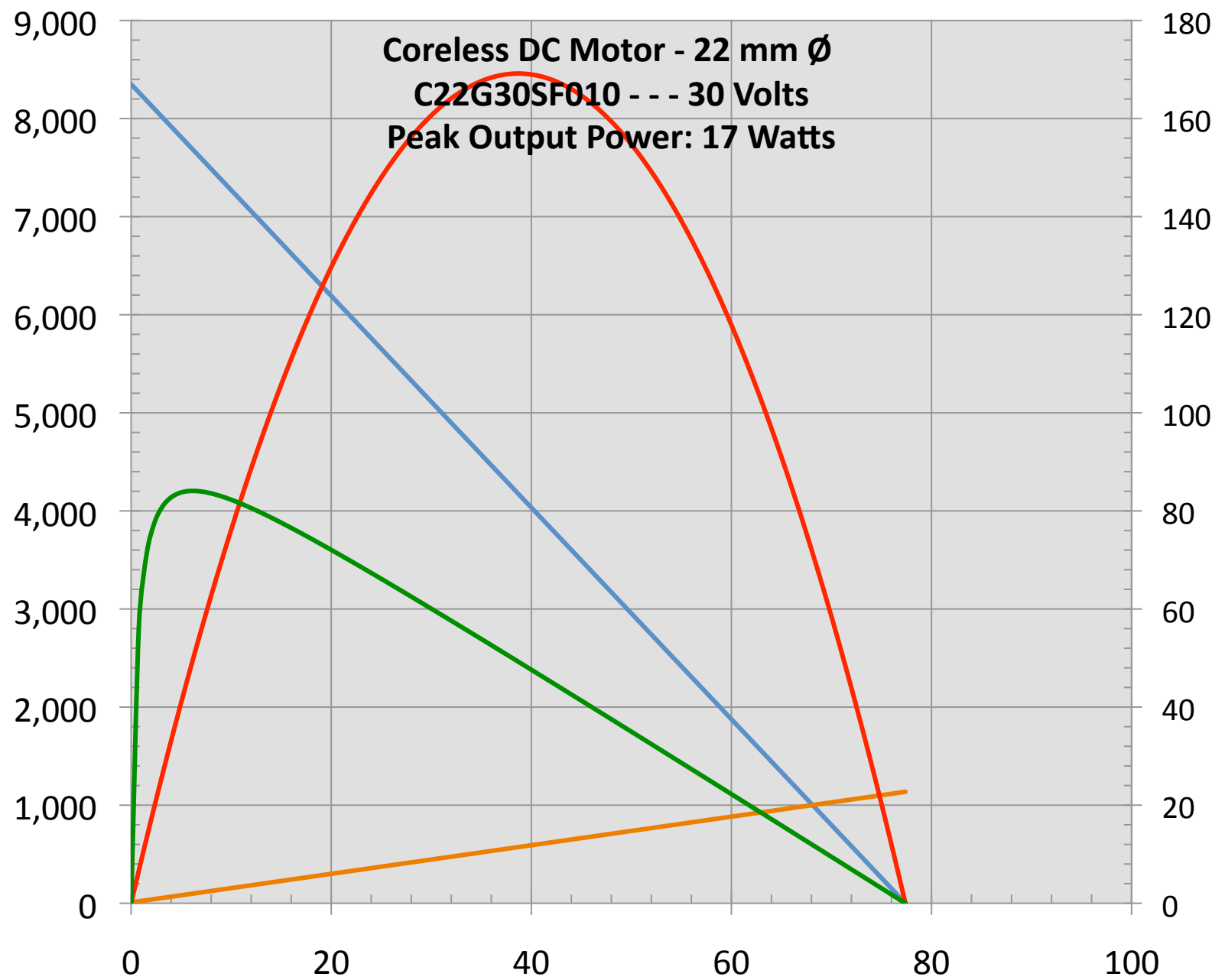
B - August 2011

Specifications Subject to change without notice

**Coreless DC Motor - 22 mm Ø
C22G30SF010 - - - 30 Volts
Peak Output Power: 17 Watts**

180 C22G30SF010
Voltage: 30 Volts
 No Load Speed: 8350 rpm
 No Load Current: 0.017 Amps
 Terminal Resistance: 13.2 Ohms
 Stall Torque: 77.39 mNm
 Torque Constant: 34.05 mNm/A
 Peak Output Power: 16.9 Watts
 Peak Efficiency: 84.1%
 Stall Current: 2.27 Amps

Speed - rpm



180
160
140
120
100
80
60
40
20
0

A - Speed - rpm
 A - Current - Amps / 10
 A - Power Out - Watts / 10
 A - Efficiency - %

Torque - mNm

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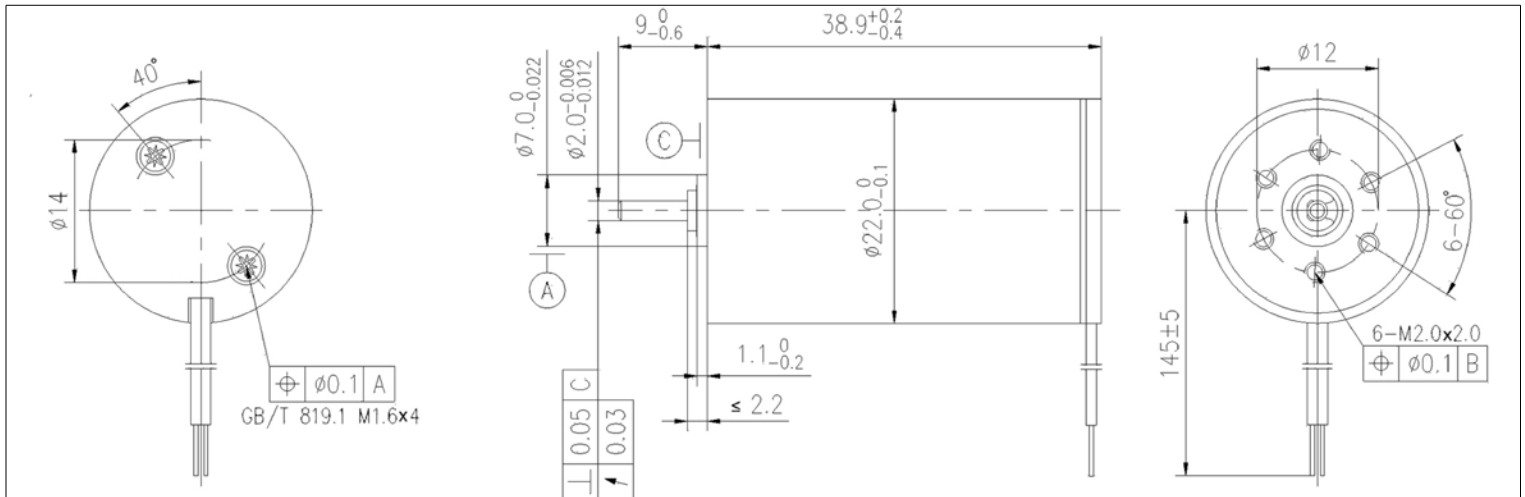
CAUTION: Peak Output Power is NOT a RATING. This is merely a calculated value and does not address Thermal Issues.

Coreless DC Motor - 22 mm Ø

C22G30SF030 16.8 Watts Peak Power



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Not to Scale - Dimensions in millimeters (mm)

Nominal Voltage	30.0 Volts	30.0 Volts	30.0 Volts
No-Load Speed	8,350 rpm	8,350 rpm	8,350 rpm
Stall Torque	77.4 mNm	789.2 gcm	11.0 oz-in
No-Load Current	0.017 Amps	0.017 Amps	0.017 Amps
Peak Output Power	16.8 Watts	16.8 Watts	16.8 Watts

Torque Constant	34.05 mNm/A	347.24 gcm/A	4.82 oz-in/A
Terminal Resistance	13.20 Ohms	13.20 Ohms	13.20 Ohms
Back-EMF Constant	3.57 V/krpm	3.57 V/krpm	3.57 V/krpm
Mechanical Time Constant	7.1 msec	7.1 msec	7.1 msec
Rotor Inertia	6.22 kgm ² x10 ⁻⁷	6.22 gm cm ²	0.88 x10 ⁻⁴ oz-in-sec ²

Mechanical Time Constant	7.1 msec	7.1 msec	7.1 msec
Slope of Speed/Torque Curve	107.9 rpm/mNm	10.6 rpm/gcm	761.9 rpm/oz-in
Speed Constant	280 rpm/Volt	83 %	83 %
Motor Constant	9.37 mNm/√Watt	95.57 gcm/√Watt	1.33 oz-in/√Watt
Commutation Type	Graphite	Graphite	Graphite

Rated Power @ 6,939 rpm	9.5 Watts	9.5 Watts	9.5 Watts
Rated Torque @ 6,939 rpm	13.1 mNm	133.4 gcm	1.9 oz-in
Rated Current @ 6,939 rpm	0.384 Amps	0.384 Amps	0.384 Amps

Part Number: **How to Order** C22G30SF030 **Ratings are at 25°C Ambient Temperature.**

Radial Load Rating	2.7 N	Radial Play	0.020 mm	Max Temperature	65 °C
Radial Load Distance	4 mm	Thrust Play	0.150 mm	Min Temperature	-20 °C
Axial Load	1.00 N	Magnet Type	NdFeB	Max Winding Temp	85 °C
Press Fit Force - Max	80.00 N	Bearing Type	Sleeve Bearings	Mass	68 grams
Gearbox Options	P22 Series Planetary Gearboxes				
Encoder Options	22 mm Optical - 3 Channel				
Options - Other	Ball Bearings. Shaft length. Lubricants. Leads. Solder Tabs. Connectors.				

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Commutation Type: Graphite
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RoHS Compliant

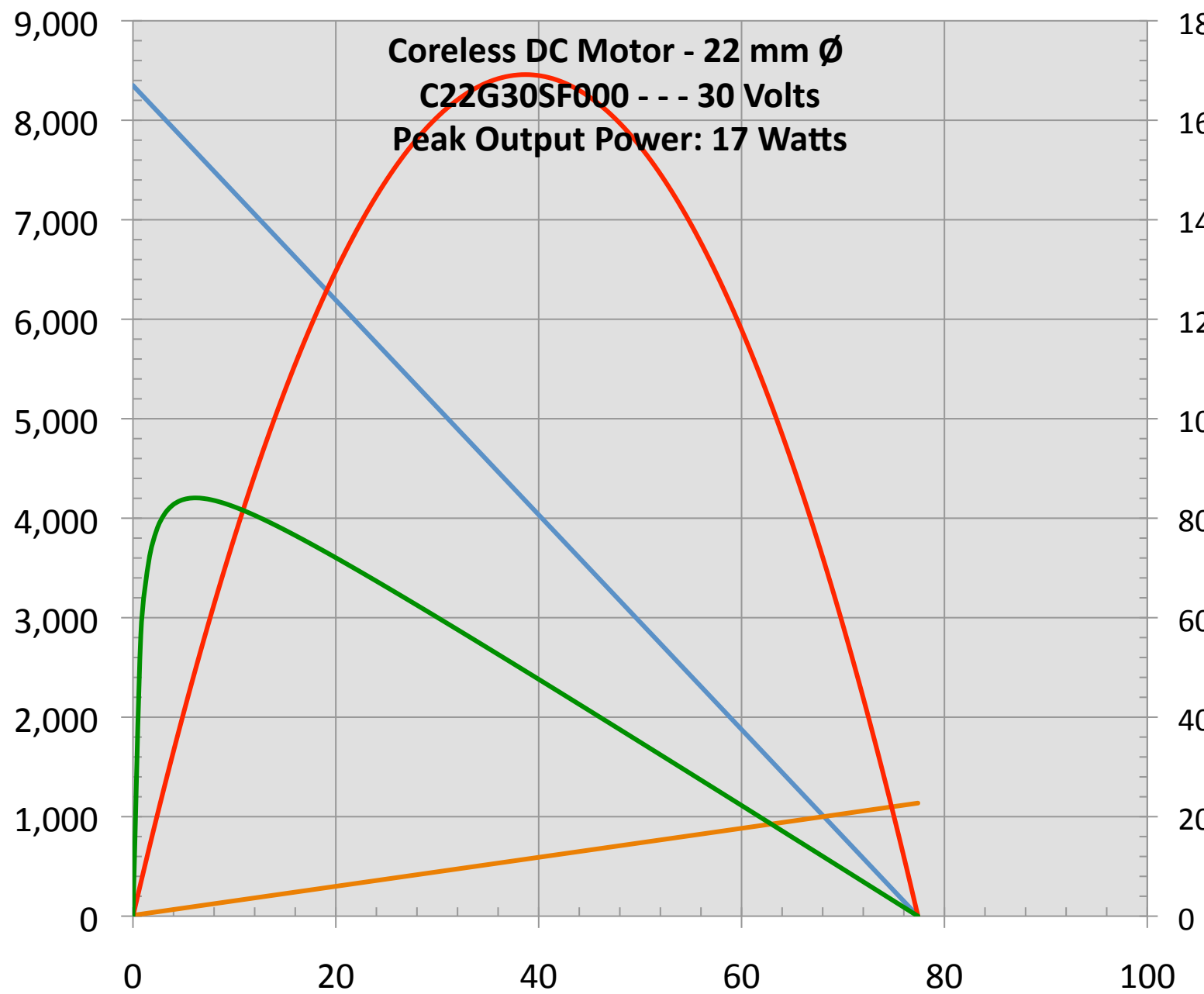
B - August 2011

Specifications Subject to change without notice

**Coreless DC Motor - 22 mm Ø
C22G30SF000 - - - 30 Volts
Peak Output Power: 17 Watts**

180 C22G30SF000
Voltage: 30 Volts
 No Load Speed: 8350 rpm
 No Load Current: 0.017 Amps
 Terminal Resistance: 13.2 Ohms
 Stall Torque: 77.39 mNm
 Torque Constant: 34.05 mNm/A
 Peak Output Power: 16.9 Watts
 Peak Efficiency: 84.1%
 Stall Current: 2.27 Amps

Speed - rpm



100 — A - Speed - rpm
 80 — A - Current - Amps / 10
 60 — A - Power Out - Watts / 10
 40 — A - Efficiency - %

Torque - mNm

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