| Motor Assembly Data to                     | r: DC040A-2     | ( 4.14 V/krpi   | m)                     |
|--|-----------------|-----------------|------------------------|
| ltage Constant                             |                 | 0.0395          | V/rad/s                |
| Voltage Constant                           | K <sub>E</sub>  | 4.14            | V/krpm                 |
| Torque Constant                            | Κ <sub>T</sub>  | 0.0395          | Nm/A                   |
| Torque Constant                            | N <sub>T</sub>  | 5.6             | oz-in/A                |
| Rated Voltage                              | V <sub>r</sub>  | 24              | VDC                    |
| Rated Torque <sup>1,3</sup> T <sub>r</sub> | т               | 0.76            | Nm                     |
|  | ۲               | 107.5           | oz-in                  |
| Rated Speed <sup>1,3</sup>                 | ω <sub>r</sub>  | 64              | rpm                    |
| Rated Current <sup>1,3</sup>               | l <sub>r</sub>  | 0.70            | А                      |
| Rated Power <sup>1,3</sup>                 | P <sub>r</sub>  | 5               | W                      |
| No-Load Speed <sup>2</sup>                 | ω <sub>nl</sub> | 82              | rpm                    |
| No-Load Current <sup>2</sup>               | I <sub>nl</sub> | 0.14            | А                      |
| Resistance (L-L)                           | R <sub>mt</sub> | 8.33            | Ohms                   |
| Inductance (L-L)                           | L               | 6.17            | mH                     |
| Rotor Inertia                              | J <sub>r</sub>  | 0.0000028       | kg-m <sup>2</sup>      |
|  |                 |                 | oz-in-sec <sup>2</sup> |
| Max Winding Temp                           | $\theta_{max}$  | 155             | °C                     |
| Hall Sensor Spacing                        |                 | TBD (60 or 120) | °Elec                  |
| Poles                                      |                 | 2               |                        |
| Winding Configuration                      |                 | N/A             |                        |
| Direction of Rotation                      |                 | Elec. Rev.      | lead end               |
| Weight                                     | W <sub>m</sub>  | 440             | g                      |
| Weight                                     | vvm             | 16              | OZ                     |

## Motor Assembly Data for: DC040A-2 ( 4.14 V/krpm)

## Gearbox Data for: G51A (65.5:1)

| Rated Torque | 1.2  | Nm    |
|--------------|------|-------|
|              | 175  | oz-in |
| Gear Ratio   | 65.5 |       |
| Efficiency   | 0.66 |       |

## **Encoder Data for: None**

| Rated Voltage   | N/A | VDC |
|-----------------|-----|-----|
| Resolution      | N/A | CPR |
| Output Channels | N/A |     |
| Output Type     | N/A |     |

## Brake Data for: None

| Rated Voltage | N/A | VDC   |
|---------------|-----|-------|
| Rated Torque  | N/A | Nm    |
|               | N/A | oz-in |

<sup>1</sup> Recorded at maximum winding temperature at 25 deg C ambient and without heat sink.

- <sup>2</sup> Recorded at Rated Voltage.
- <sup>3</sup> Based on thermal limitations of motor only. See Maximum Speed and Gearbox Rated Torque if applicable for possible additional limitations.

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MOTOR ELECTRICAL AND PERFORMANCE OUTLINE

GM9213S435