

# RS775-4538 DC Motor Datasheet

## 1. General Information

|                |                                |
|----------------|--------------------------------|
| Product Name   | RS775-4538 DC Motor            |
| Motor Type     | Brushed DC Motor               |
| Application    | Power tools, e-bikes, robotics |
| Mounting Type  | Flange                         |
| Shaft Type     | Round / D-shaped               |
| RoHS Compliant | Yes                            |

## 2. Electrical Specifications (at Rated Voltage)

|                 |                  |
|-----------------|------------------|
| Rated Voltage   | 12 - 24 VDC      |
| No-load Speed   | 12000 +/-10% RPM |
| No-load Current | <= 2.5 A         |
| Rated Speed     | 9000 RPM         |
| Rated Current   | 10 A             |
| Rated Torque    | 500 mN.m         |
| Stall Torque    | ~2500 mN.m       |
| Stall Current   | ~80 A            |
| Output Power    | 150 W            |
| Efficiency      | ~75 %            |

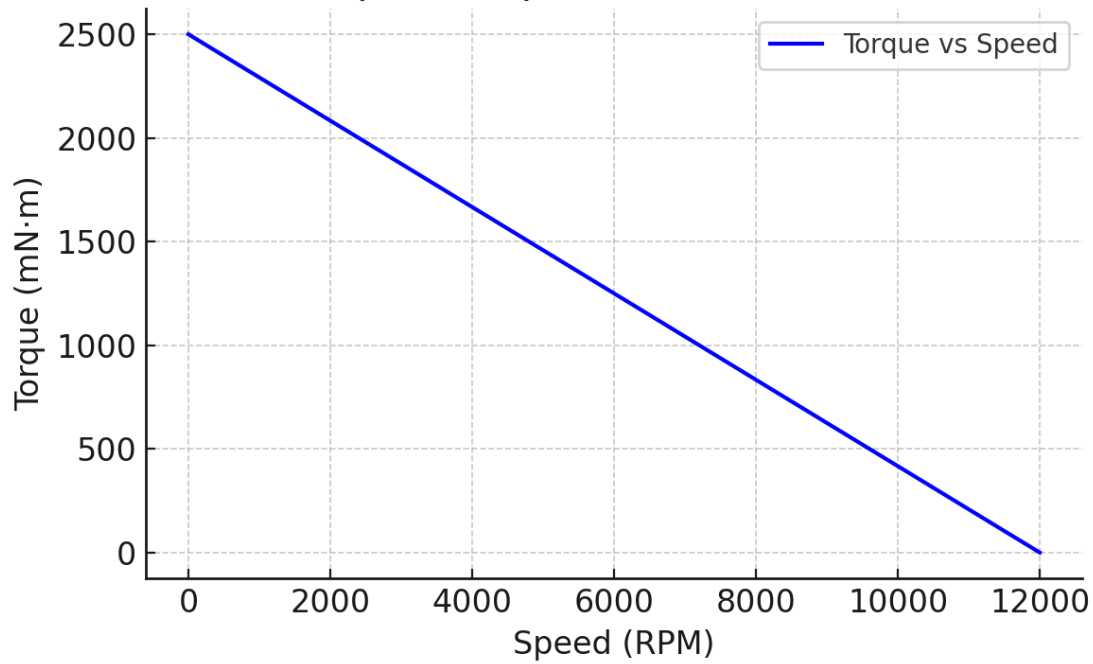
## 3. Mechanical Specifications

|                        |        |
|------------------------|--------|
| Motor Diameter         | 42 mm  |
| Motor Length           | 66 mm  |
| Shaft Diameter         | 5 mm   |
| Shaft Length           | 17 mm  |
| Mounting Hole Diameter | 3.2 mm |
| Weight                 | ~300 g |

## 4. Performance Curve

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### Torque vs Speed Curve (at 24V)



### 5. Recommended Operating Practices

- Use current limiting driver circuits.
- Ensure proper mounting and ventilation.
- Avoid long stalling and overcurrent.
- Use flyback diodes for switching.
- Periodically inspect for brush wear.