

Characteristics:

Compact DC Motor, High Power Density, High Efficiency

**Specifications:**

Dimensions (mm)	: Ø 27.5 X 32.5 mm
Shaft Diameter (mm)	: Ø 2.305 mm
Input Voltage (V)	: 12.0 V DC
No Load Speed (rpm)	: 4900 rpm
No Load Current (A)	: 0.08 A
Nominal Speed (rpm)	: 3900 rpm
Nominal Torque (mNm)	: 4.10 mNm
Nominal Current (mA)	: 0.27 A
Stall Torque (mNm)	: 20.10 mNm
Stall Current (A)	: 1.00 A
Maximum Output Power (W)	: 2.50 W
Maximum Efficiency (%)	: 51.80%
Torque at Max Efficiency (mNm)	: 4.4 mNm
Speed at Max Efficiency (rpm)	: 3809 rpm
Life (Typical)	: 1000 hr
Weight (g)	: 56.00 g
Operating Temperature Range (°C)	: -10 to 55 °C
Storage Temperature Range (°C)	: -20 to 80 °C
Electrical Connection	: Terminals

Performance Data:

	No Load	Stall	Max. Efficiency	Max. Power
Current (A)	0.08	1.00	0.29	0.54
Efficiency (%)	-	-	51.80	39.60
Output Power (W)	-	-	1.80	2.50
Speed (rpm)	4900.00	-	3809.00	2449.00
Torque (mNm)	-	20.10	4.47	10.10

Application Examples:

Robotic Vacuum Cleaners

Technical drawing of a 1000 Series Motor, showing three views: a side view (top left), a front view (bottom left), and a rear view (right).

Dimensions:

- Top view (SECTION A-A): 2.8 TYP.
- Front view: 2.305, 5.5 TYP., 0.5 TYP., 22.0 REF., 32.5, DIM."A", DIM."B"
- Rear view: 16, $\phi 27.5$

Labels:

- SECTION A-A
- LASER ENGRVING (RED DOT FOR SAMPLE)
- ROTATION
- 2-M2.5 TAPPED HOLES
- $\phi 2.7$ PILOT HOLE

The graph displays the performance characteristics of a motor. The primary x-axis is Torque (m-Nm) from 0 to 25. The left y-axis is Speed (rpm) from 0 to 6000. The right y-axis has three scales: Efficiency (%) from 0 to 100, Current (A) from 0 to 2, and Power (W) from 0 to 4. The curves are:

- N (No-load speed):** A blue line starting at 5000 rpm at 0 torque and decreasing linearly to 0 rpm at 20 m-Nm.
- EIT (Efficiency):** A red curve starting at 0% at 0 torque, peaking at approximately 50% efficiency around 5 m-Nm, and returning to 0% at 20 m-Nm.
- P (Power):** A green curve starting at 0 W at 0 torque, peaking at approximately 2.5 W around 10 m-Nm, and returning to 0 W at 20 m-Nm.
- I (Current):** A black line starting at 0 A at 0 torque and increasing linearly to 2 A at 20 m-Nm.

 A point is marked on the Power curve (P) at approximately 10 m-Nm torque and 2.5 W power.