

# SUB 80MX ULTRA BEE

Electric Performance Motor

HIGH-EFFICIENCY EV DRIVE MOTOR



VOLTAGE

**72–108 V**

PEAK POWER

**81 kW**

PEAK TORQUE

**122 Nm**

EFFICIENCY

**≥95%**

PERFORMANCE OVERVIEW

# System Capabilities

VOLTAGE RANGE

72–108 V

PEAK POWER

81 kW

PEAK TORQUE

122 N·m

MAX PHASE CURRENT

1100 A<sub>RMS</sub>

MAX EFFICIENCY

≥95%

MAX STABLE SPEED

14,000 RPM

## APPLICATION NOTE

The SUB 80MX is engineered specifically for high-performance electric vehicle powertrains requiring sustained torque density and thermal stability. Its internal permanent magnet (IPM) architecture allows for extended field-weakening operation, making it suitable for both high-torque acceleration and high-speed cruising in light-to-medium weight EV platforms.

TECHNICAL DATA

# Specifications

## ELECTRICAL SPECIFICATIONS

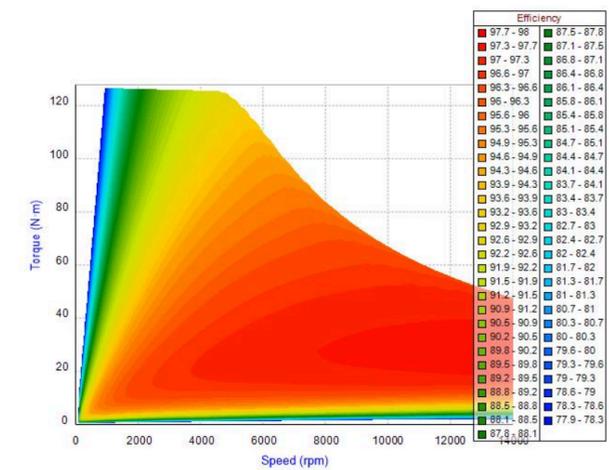
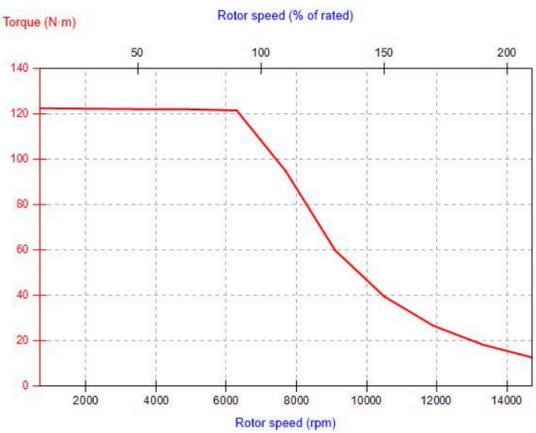
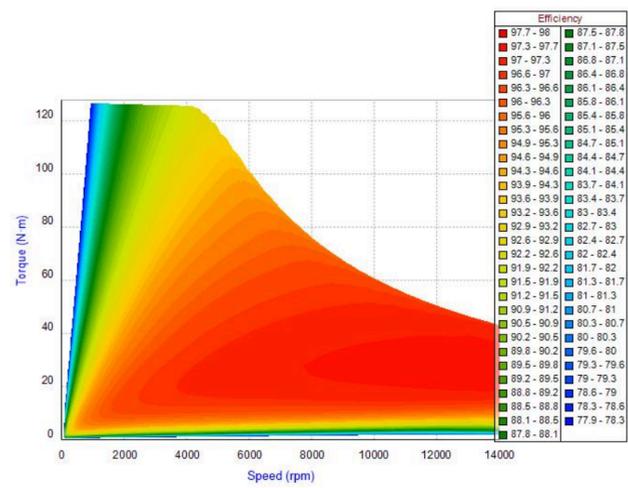
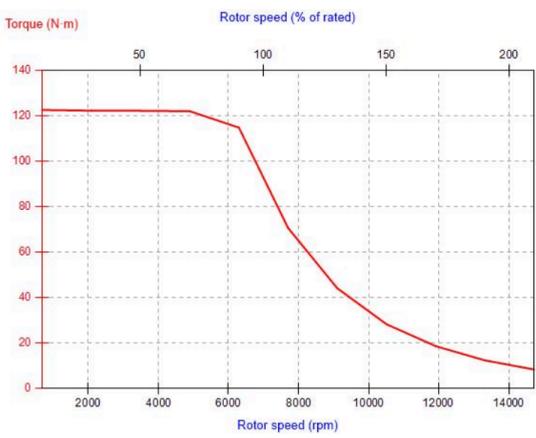
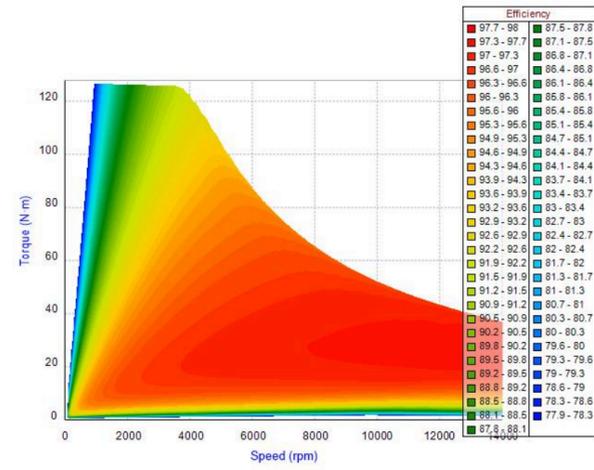
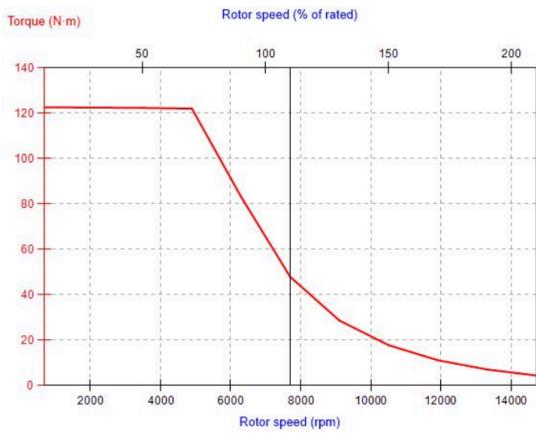
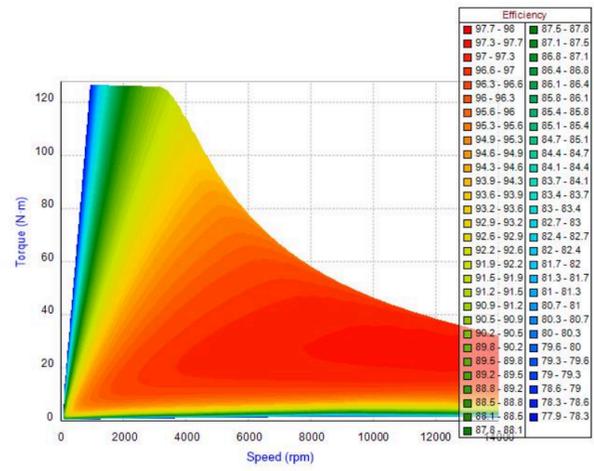
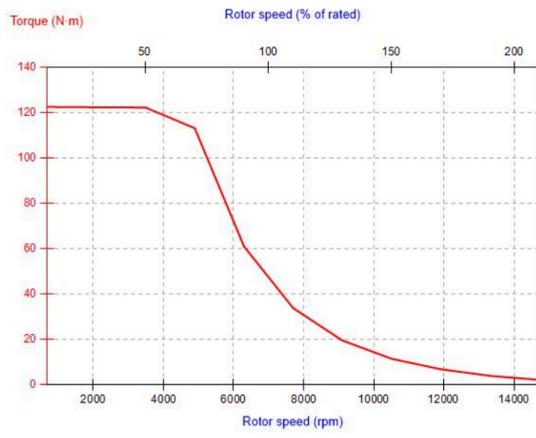
Peak Power @ 72V	52 kW
@ 82V	61 kW
@ 96V	72 kW
@ 108V	81 kW
Max Phase Current (RMS)	1500A
Phase Resistance	~1.4 mΩ
Phase Wire Terminal	35 mm <sup>2</sup> (M6 Hole)

## MECHANICAL SPECIFICATIONS

Shaft Diameter	20 mm
Shaft Material	20MnCr5 Steel Alloy
Bearing Type	SKF Sealed Deep Groove
Pole Pairs	5
Waterproof Rating	IP67

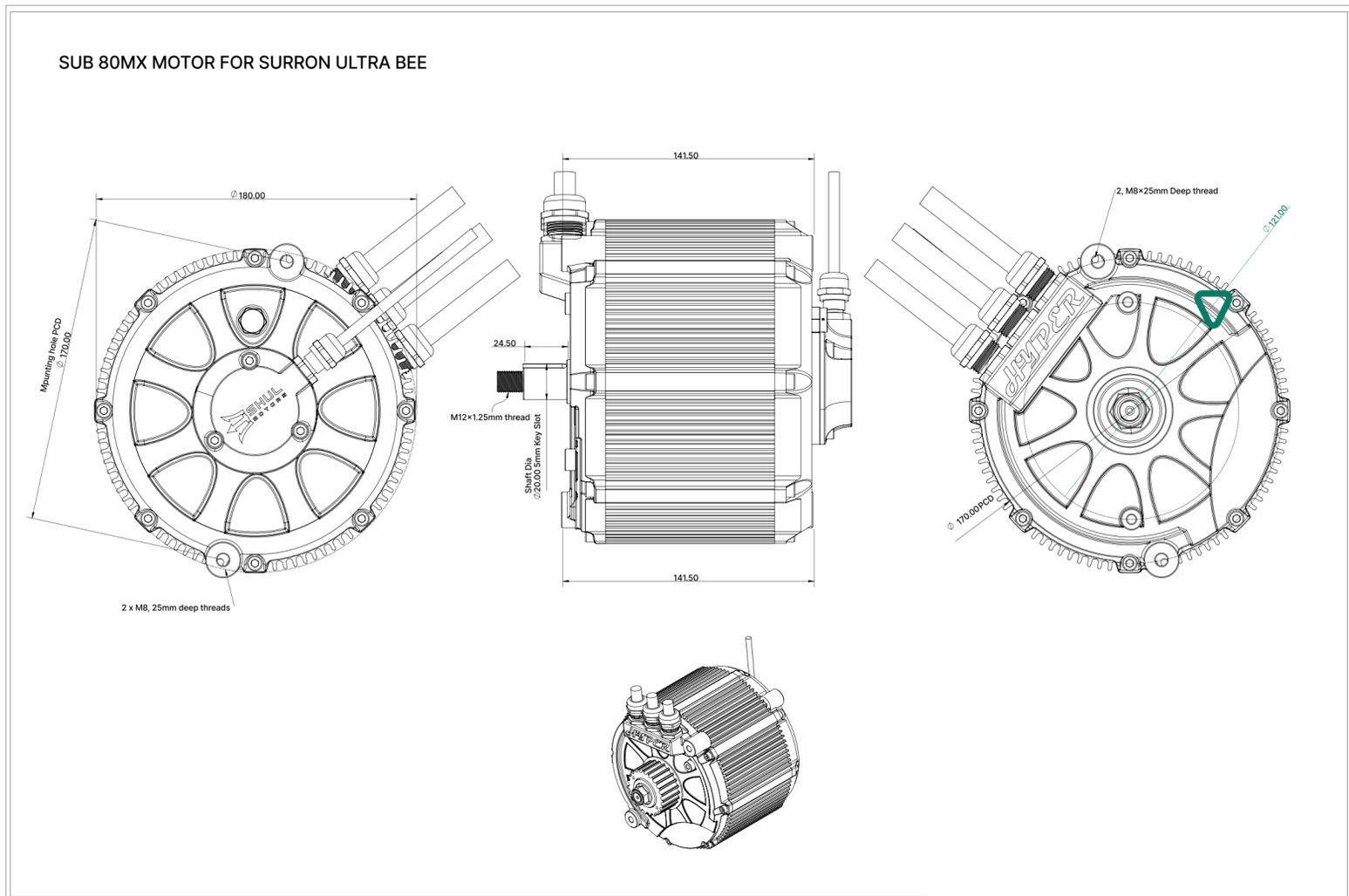
TORQUE VS RPM

# Torque Characteristics



## INTEGRATION

# Mechanical Dimensions



ALL DIMENSIONS IN MILLIMETERS (MM)

## RELIABILITY & DURABILITY

### BEARING SYSTEM

SKF rubber-sealed bearings for smooth high-speed operation.

### STRUCTURAL

Shock-resistant housing design capable of maintaining stator alignment under high torque loads.

### WINDING INTEGRITY

Infinity winding technology eliminates internal solder joints at end-turns, reducing failure points and resistance.

### OPERATION

Stable operation verified under sustained high torque and RPM cycling conditions.

## DISCLAIMER

The information provided in this datasheet is for reference purposes only and describes the typical performance of the product. 3Shul Motors reserves the right to modify specifications, materials, or designs at any time without prior notice to improve performance, reliability, or manufacturability. It is the responsibility of the system integrator to ensure the motor is suitable for the intended application and is operated within the specified limits. Damage resulting from exceeding these limits is not covered under warranty.