

Motor Parameter				Gearbox Parameter		
Sr no.	Spec	Value		Sr. no	Spec	Value
1.	Type	BLDC		1.	Type	Planetary
2.	Kv rating	200Kv		2.	Ratio	85:1
3.	Power @ 36V	1300W		3.	Type of gear	Spur, internal gear
4.	Rated Voltage	24V to 50V		4.	Body Material	Al 6082
5.	No load current	1A at 10V		5.	Gear Material	Cold rolled steel
6.	Peak current	36Amp		6.	Backlash	9-15 Arc-min
7.	Weight	350grams		7.	Weight	700-900 grams
8.	Rated torque	0.6Nm		8.	Breaking Torque	240Nm
9.	Peak Torque	1.1Nm		9.	Efficiency	80-90%
10.	Dimension	Dia50 x Len50mm		10.	Dimensions	56x56x60mm

<https://flipsky.net/collections/e-skateboard/products/flipsky-sensored-outrunner-brushless-dc-motor-battle-hardened-5048-200kv-1300w>

Overall System	
Spec	Value
Peak Amp for system	40amp
Rated Torque	51 Nm
Peak Torque	93 Nm
Output speed	40 to 90 rpm
Dimension	56x56x130 mm
Weight	Less than 1.3kg



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MOTOR PERFORMANCE CURVES AND CHARACTERISTIC

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GUANG DONG FLIPSKY TECHNOLOGY CO.,LTD

MODEL:

90-050048-000-000

CUSTOMER MODEL:

KV:

200

VOLTAGE:

36.0 V

DIRECTION:

CCW

Date:

2023/3/14

Rev:

01

n/rpm I/A P/W η

8000 160.0 1400.0 100.0%

7200 144.0 1260.0 90.0%

6400 128.0 1120.0 80.0%

5600 112.0 980.0 70.0%

4800 96.0 840.0 60.0%

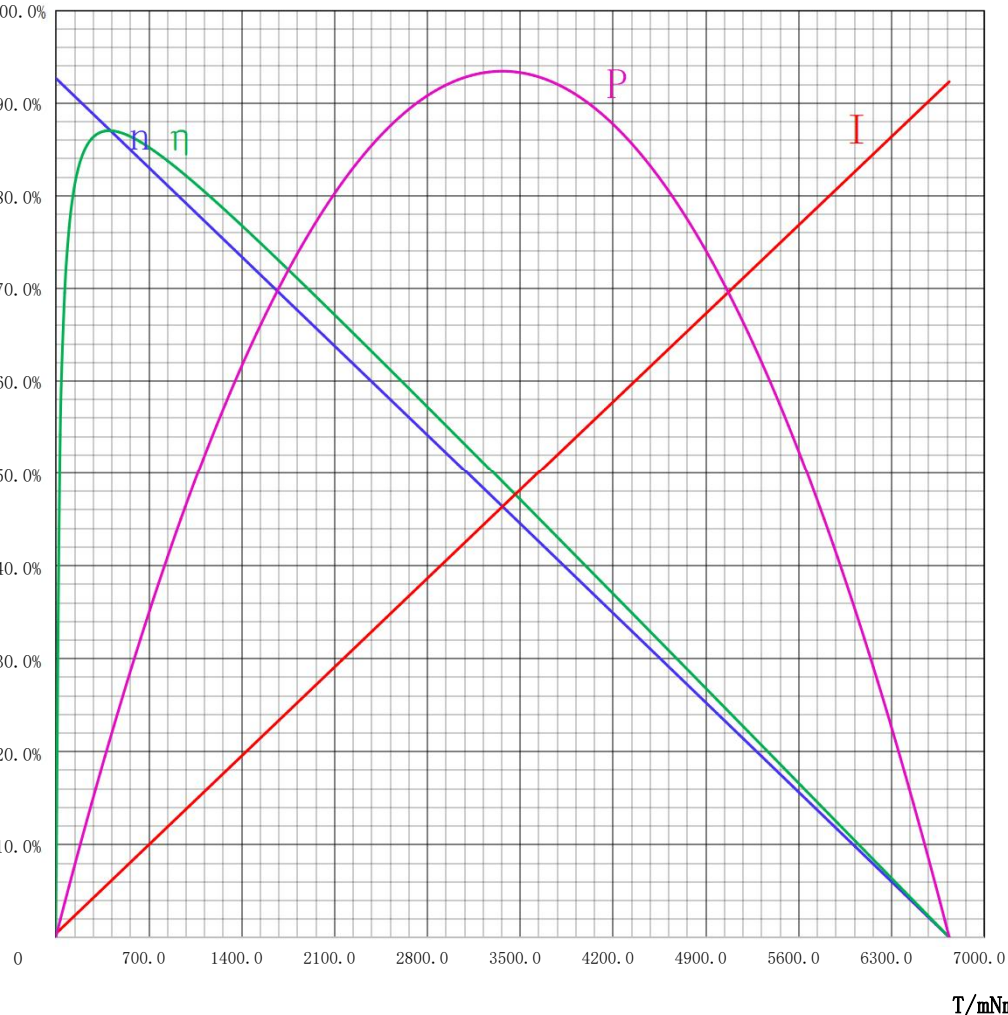
4000 80.0 700.0 50.0%

3200 64.0 560.0 40.0%

2400 48.0 420.0 30.0%

1600 32.0 280.0 20.0%

800 16.0 140.0 10.0%



PERFORMANCE

AT NO LOAD:

SPEED: 7412 RPM

CURRENT: 0.6 A

AT STALL EXTRAPOLATION:

TORQUE 6738.2 mN.m

CURRENT: 147.0 A

AT MAXIMUM EFFICIENCY:

EFFICIENCY 87.0 %

SPEED: 6967 RPM

TORQUE 404.3 mN.m

CURRENT: 9.4 A

OUTPUT 295.0 W

AT MAXIMUM OUTPUT

SPEED: 3706 RPM

TORQUE 3369.1 mN.m

CURRENT: 74.1 A

OUTPUT 1307.5 W

EFFICIENCY 49.0 %

Characteristics

Phase resistance 0.115 Ohms

torque constant 45.8 mNm/A

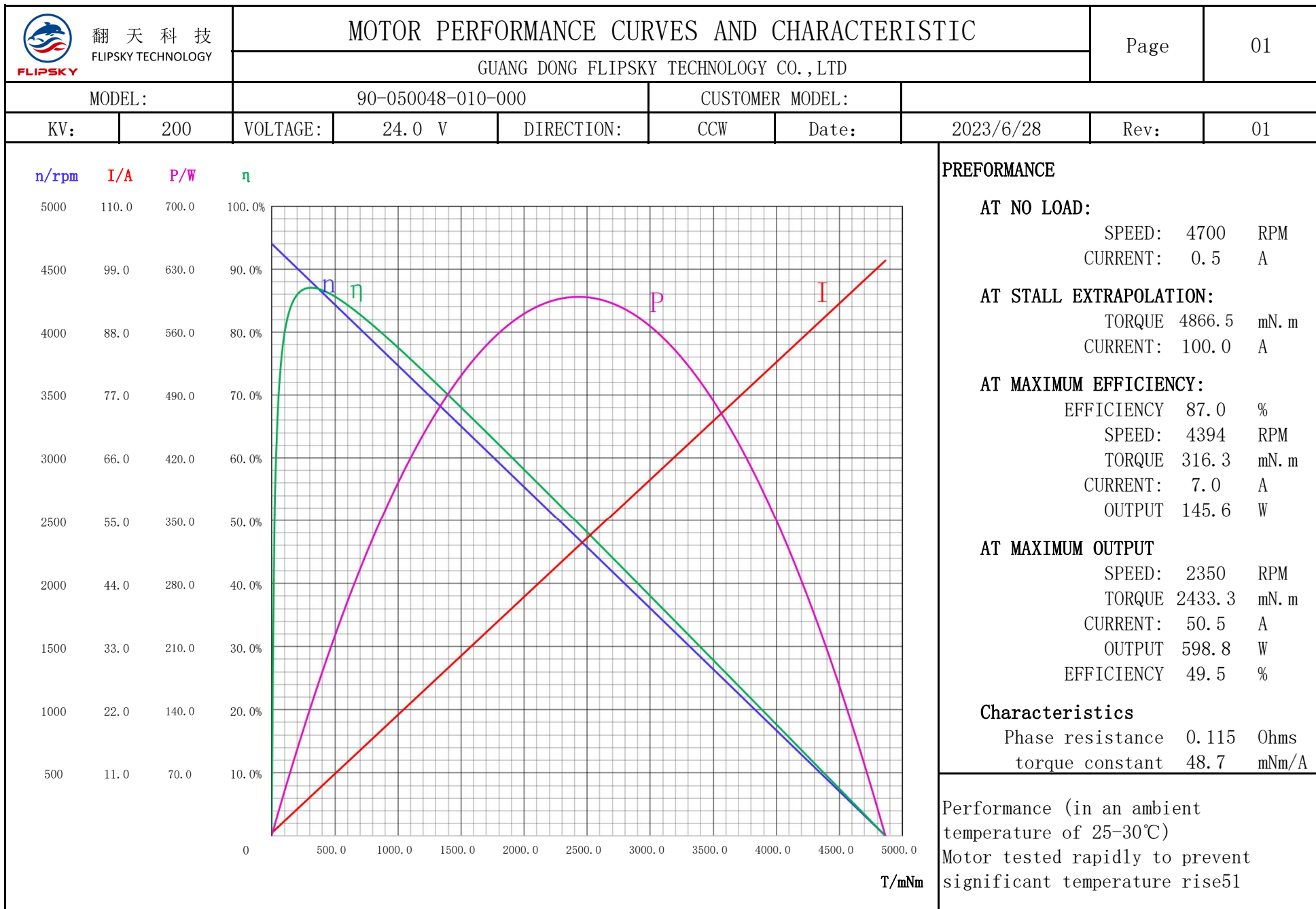
Performance (in an ambient temperature of 25-30°C)

Motor tested rapidly to prevent significant temperature rise51

PREPARED BY: YXH

CHECKED BY: THD

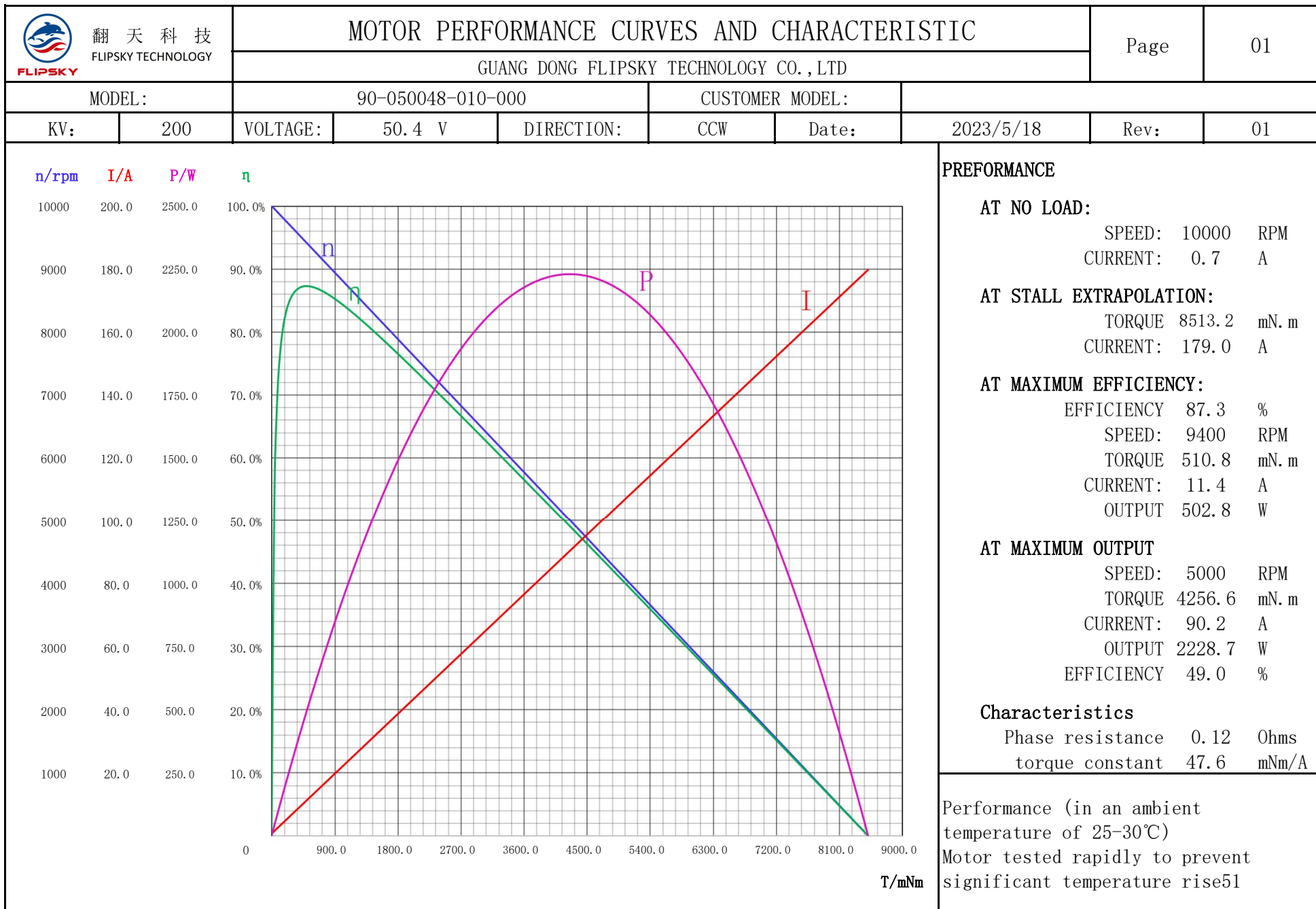
APPROVED BY: CWC



PREPARED BY: YXH

CHECKED BY: THD

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