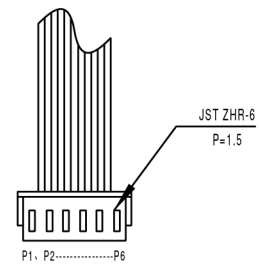
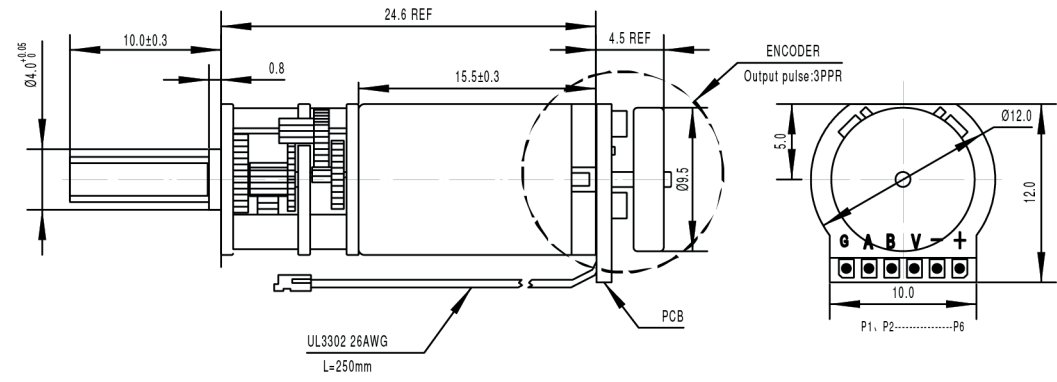
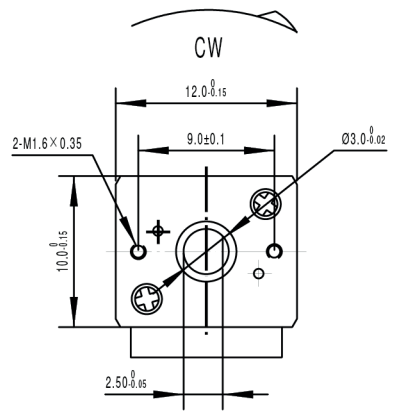


GM12-N20VA-08225-100-EN MOTOR

DIRECTION OF ROTATION



ELECTRICAL CHARACTERISTICS

CHARACTERISTICS	SYMBOL	TEST CONDITIONS	MIN.	REF.	MAX.	UNITS
Input Voltage	V <sub>cc</sub>	— — —	3.5	—	24	V
Output Saturation Voltage	V <sub>ce(sat)</sub>	V <sub>cc</sub> =14V; I <sub>c</sub> =20mA	—	300	700	mV
Output Leakage Current	I <sub>cex</sub>	V <sub>ce</sub> =14V; V <sub>cc</sub> =14V	—	<0.1	10	μV
Input Current	I <sub>ce</sub>	V <sub>cc</sub> =20V; Output open	—	5	10	mA
Output Rise Time	t <sub>r</sub>	V <sub>cc</sub> =14V; R <sub>L</sub> =820Ω; G=20pF	—	0.3	1.5	μS
Output Fall Time	t <sub>f</sub>	V <sub>cc</sub> =14V; R <sub>L</sub> =820Ω; G=20pF	—	0.3	1.5	μS

- P1 GND SENSOR Green
- P2 HALL SENSOR A Purple
- P3 HALL SENSOR B Blue
- P4 V<sub>cc</sub> Brown
- P5 MOTOR - Red
- P6 MOTOR + Black

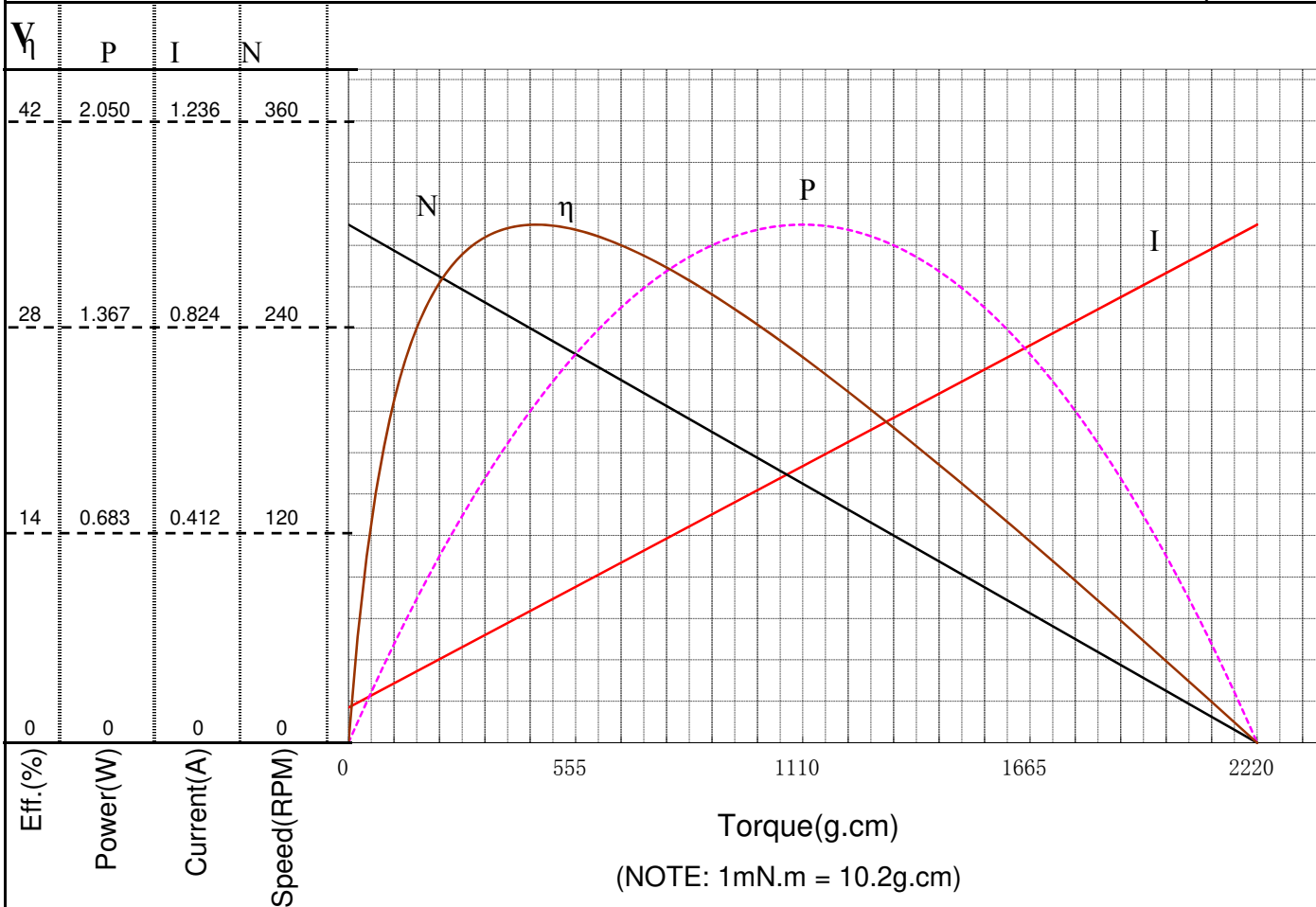
TITLE: GM12-N20VA-08225-100-EN	Customer No:	Drafted By: kevin Wang	
		Checked By:	
Dwg. NO:	Date: 2018.03.19	Approved By:	
		Scale: 2:1	Units: mm
TT MOTOR (HK) INDUSTRIL CO.,LTD		EDITION No: A	Angular: =1° Decimal: X.XX ±0.05 X.X ±0.2 X ±0.3

# TT MOTOR (HK) INDUSTRIAL CO.LTD

## GRAPH DRAWING

Sample No: #REF! Customer \_\_\_\_\_ Date: 2018/3/20  
 Model: GM12-N20VA-08225-100-EN  
 ——— Efficiency  
 ----- Power output

**NOTE:** Performance(in an ambient temperature of 20-30°C)  
 Motor tested rapidly to prevent significant temperature rise.



Constant v	12.0	Volts
Direction:	CW	
At No Load		
Speed:	300	rpm
Current:	0.070	A
At stall(Extrapolated)		
Torque:	2220.0	g.cm
Current:	1.030	A
At maximum efficiency		
Efficiency:	34.8	%
Torque:	466.2	g.cm
Speed:	237	rpm
Current:	0.27	A
Output:	1.13	W
At maximum Power output		
Output:	1.71	W
Torque:	1110.0	g.cm
Speed:	150	rpm
Current:	0.55	A
Issued by QA Reliability Testing Center		
COMPUTER PRINT-OUT		
NOMINAL MOTOR CURVES		
Performance and characteristics are measured based on limited motor samples only		

Prepared by:

Checked by:

Approved by:

Date: