

符合RoHS指令要求  
CONFORM TO RoHS INSTRUCTIONS

# ◎步进电机规格书

SPECIFICATION FOR STEPPER MOTOR

上海四横电机制造有限公司

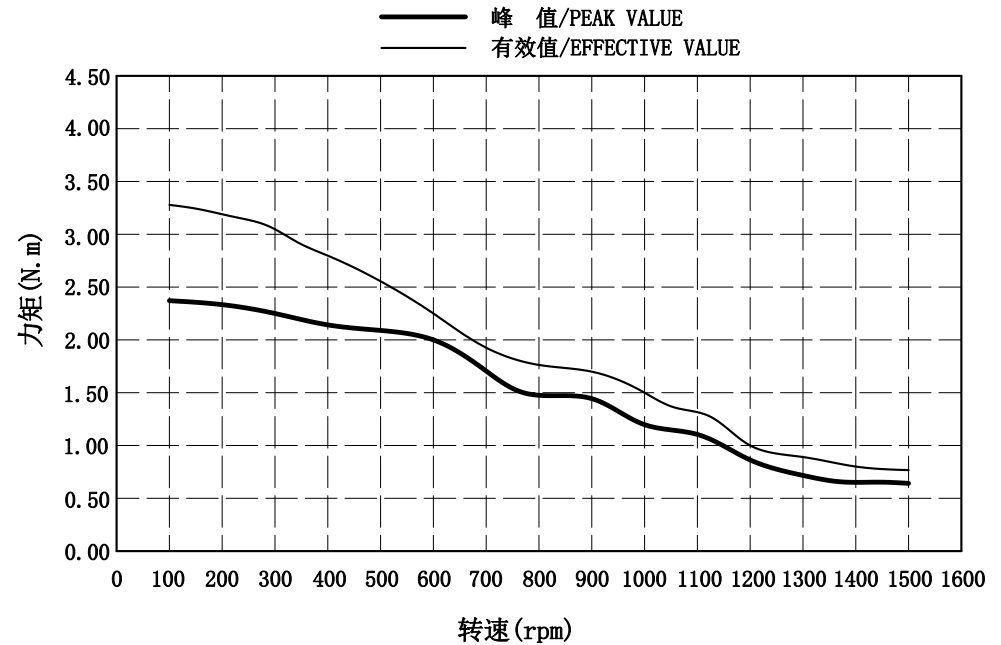
## ◎电气特性参数/ELECTRICAL PARAMETER

60BYGH2100-4004A

## ◎力矩曲线/MOMENT CURVE

相数 PHASES	2	
步进角 STEP ANGLE	1.8° ±5%	
步进角误差 STEP ANGLE ERRORS	±0.09°	注释)3
额定电压 RATED VOLTAGE	3.2 V	
额定电流 RATED CURRENT	4 A	
电阻 RESISTANCE	0.8 ohm±10%	at 20° C
电感 INDUCTANCE		注释)1
保持力矩 HOLDING TORQUE	3.5 N.m	注释)2
绝缘耐压 DIELECTRIC STRENGTH	500V A.C 1分钟/MINUTE	注释)4
绝缘电阻 INSULATION RESISTANCE	100 MΩ 以上/MIN.	注释)5
绝缘等级 INSULATION CLASS	Class B	
温度上升 TEMPERATURE RISE	80K MAX.	注释)6
转子惯量 ROTOR INERTIA	≈3200g.cm <sup>2</sup>	
重量 WEIGHT	≈4000g	
最大轴向跳动 MAXIMUM AXIAL RUNOUT TOLERANCE	0.075mm(负载920g)	
最大径向跳动 MAXIMUM RADIAL RUNOUT TOLERANCE	0.025mm(负载450g)	
使用环境温度 CONSERVE AMBIENT TEMP.	0° C——+50° C	
使用环境湿度 CONSERVE AMBIENT HUM.	20%RH——90%RH	注释)8
保存环境温度 CONSERVE AMBIENT TEMP.	-20° C——+70° C	
保存环境湿度 CONSERVE AMBIENT HUM.	15%RH——95%RH	注释)8
使用寿命 SERVICE LIFE	5000 小时/HOURS	注释)7

驱动方式/DRIVING MODE: 恒流驱动/CONSTANT CURRENT DRIVE  
 驱动电压/DRIVING VOLTAGE: 24VDC  
 励磁方式/EXCITATION MODE: 2相/PHASES  
 备注: 电流峰值等于√2倍的有效值  
 REMARK: PEAK CURRENT IS EQUAL TO √2 TIMES EFFECTIVE VALUE

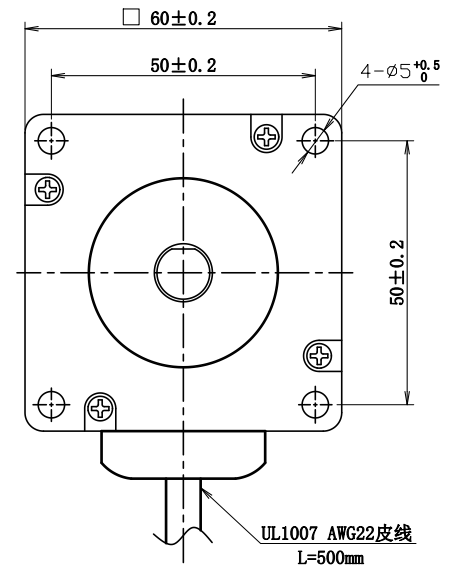
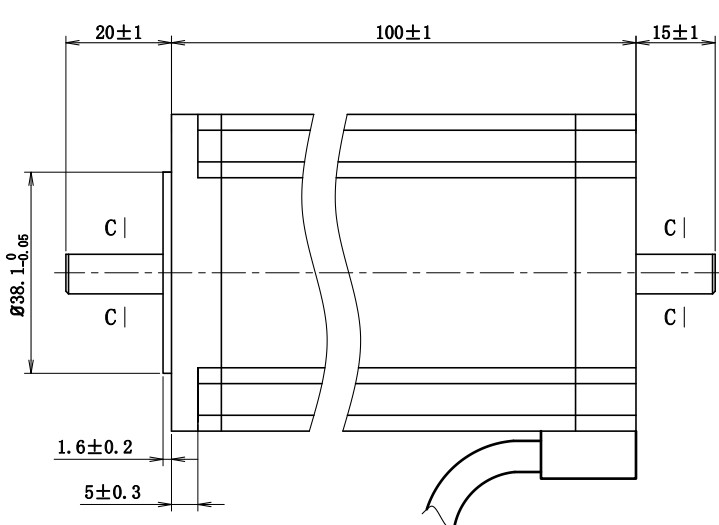
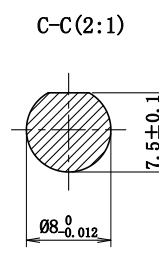
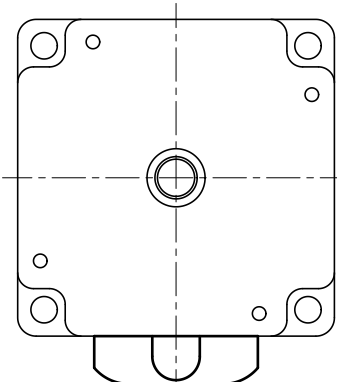


- 注释):
- 在1k Hz 1Vrms条件下测试;
  - 在额定电流, 2相励磁下进行测试;
  - 不包括励磁误差2相励磁;
  - 在电机引线和铁芯之间加50HZ交流电压1分钟无异常, 漏电流小于3mA;
  - 在电机引线和铁芯之间加500V. D. C电压;
  - 额定电流无负载安装在铝板上使用电阻法测试;
  - 额定电流轴承温度低于80°C条件下进行寿命试验;
  - 表面无结霜;

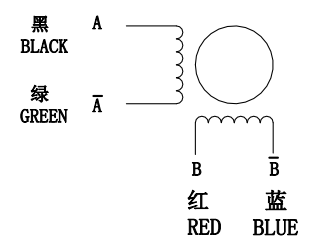
- Notes):
- Testing at 1K hz 1 VRMS;
  - Test at rated current, 2-phase excitation;
  - Excluding excitation error 2 phase excitation;
  - Add 50 HZ AC voltage between motor lead and iron core for 1 minute without abnormal, leakage current less than 3 ma;
  - Add 500 v. between the motor lead and the iron core. D. C Voltage;
  - Rated current no load mounting on aluminum plate using resistance method;
  - Rated current bearing temperature below 80 ° C for Life Test;
  - No Frost on the surface;

CONFIRMED&ACCEPTED BY CUTOMER (客户确认&接受)				型号/MODEL	
COMPANY CHOP&SIGNATURE (盖章&签名)				60BYGH2100-4004A	
一般公差 TOLERANCE	±0.3/±3°	版本 REV.	年月日 DATE	变更番号 ECO NO.	变更内容 REVISIONS
设计/DESIGNED		比例 SCALE	1:1	品名 TITLE	步进电机规格书 STEPPING MOTOR SPECIFICATION
审核/CHECKED		单位 UNIT	mm	上海四横电机制造有限公司	
				设计 BY	备注 NOTE
				REV.	A
				三视图 THIRD ANGLE PROJECTION	
				页 SHEET	1/1

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接线图/Wiring Diagram

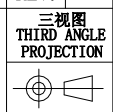


励磁顺序 (2相励磁)  
EXCITING SEQUENCE (TWO PHASE)

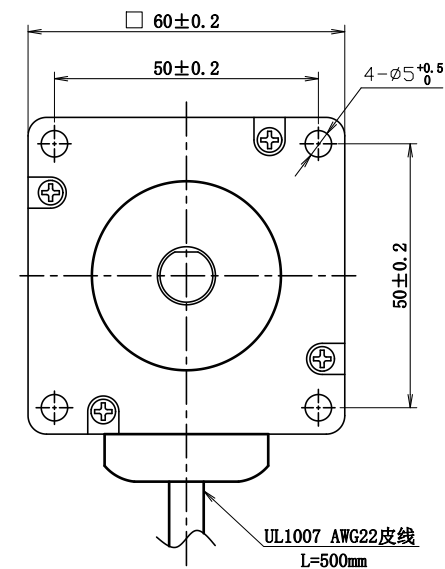
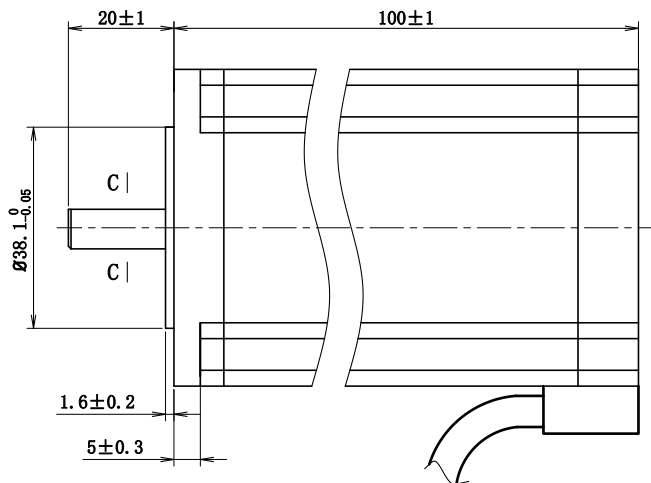
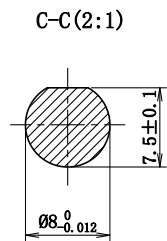
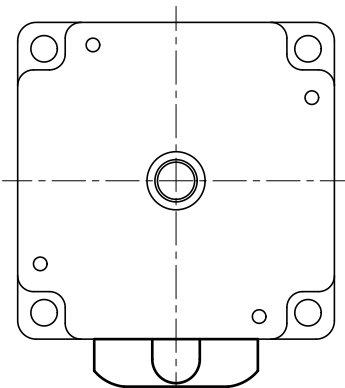
STEP	A	B	Ā	B̄
1	+	+	-	-
2	-	+	+	-
3	-	-	+	+
4	+	-	-	+

CW ↑ CCW ↓

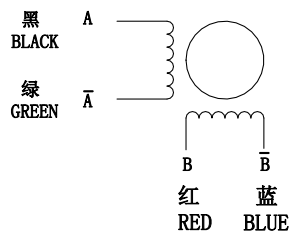
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接线图/Wiring Diagram



励磁顺序 (2相励磁)  
EXCITING SEQUENCE (TWO PHASE)

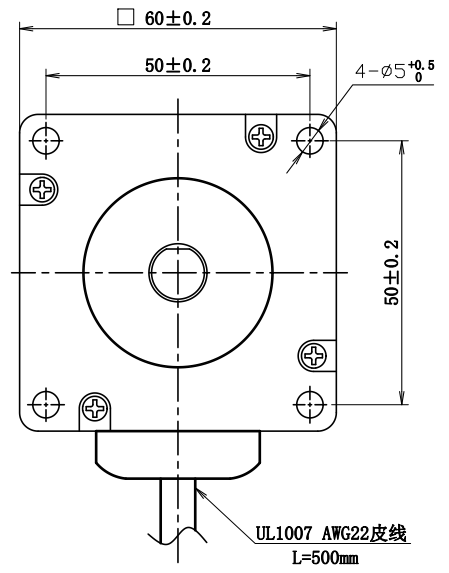
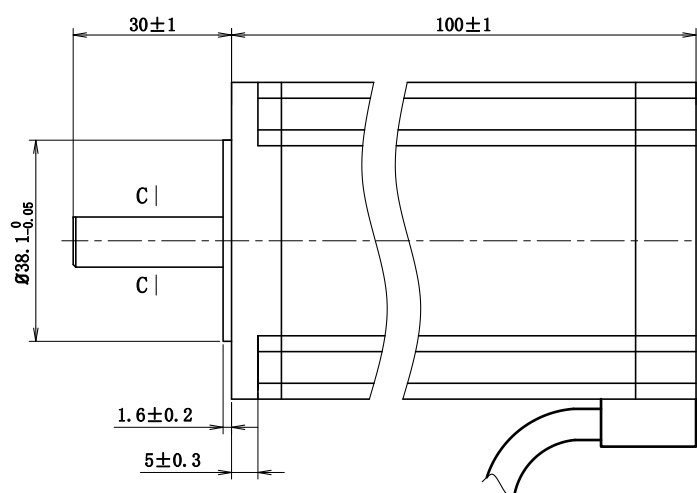
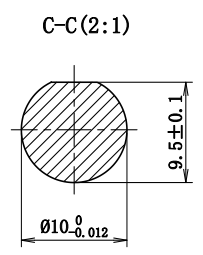
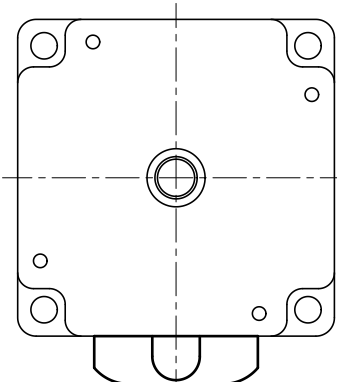
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1	+	+	-	-
2	-	+	+	-
3	-	-	+	+
4	+	-	-	+

CW ↑ CCW ↓

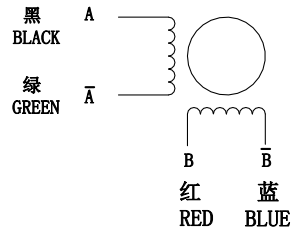
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接线图/Wiring Diagram



励磁顺序 (2相励磁)  
EXCITING SEQUENCE (TWO PHASE)

STEP	A	B	Ā	B̄	
1	+	+	-	-	↓ CW ↑ CCW
2	-	+	+	-	
3	-	-	+	+	
4	+	-	-	+	

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