

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

57BYGH246-1004A

## ◎力矩曲线/MOMENT CURVE

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 $\sqrt{2}$ 倍的有效值  
REMARK: PEAK CURRENT IS EQUAL TO  $\sqrt{2}$  TIMES EFFECTIVE VALUE

|                                        |                        |          |
|----------------------------------------|------------------------|----------|
| 相 数 PHASES                             | 2                      |          |
| 步 进 角 STEP ANGEL                       | 1.8° ±5%               |          |
| 步进角误差 STEP ANGEL ERRORS                | ±0.09°                 | 注释)3     |
| 额定电压 RATED VOLTAGE                     | 4.8 V                  |          |
| 额定电流 RATED CURRENT                     | 1 A                    |          |
| 电 阻 RESISTANCE                         | 4.8 ohm±10%            | at 20° C |
| 电 感 INDUCTANCE                         |                        | 注释)1     |
| 保持力矩 HOLDING TORQUE                    | 0.65 N.m               | 注释)2     |
| 绝缘耐压 DIELECTRIC STRENGTH               | 500V A.C 1分钟/MINITE    | 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                     | ≈120g. cm <sup>2</sup> |          |
| 重 量 WEIGHT                             | ≈500g                  |          |
| 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     |

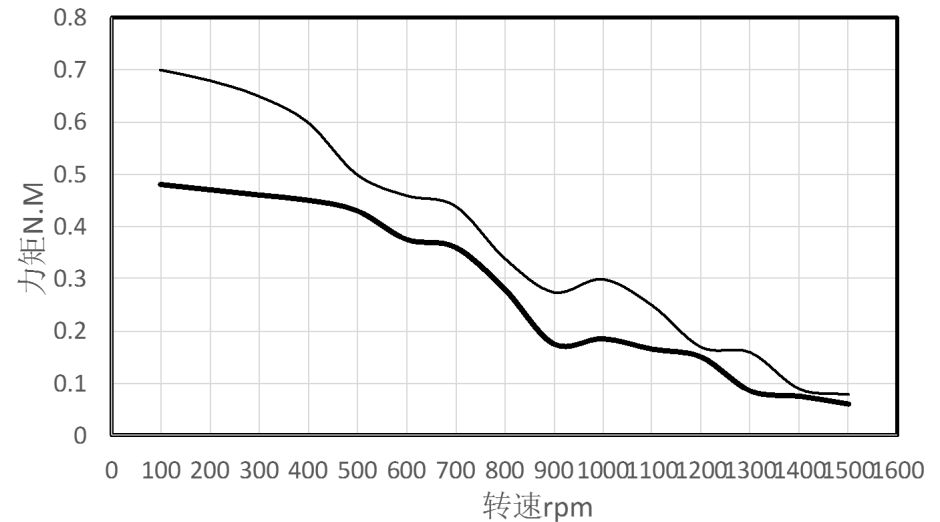
注释):

- 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℃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;

力矩曲线



|                                            |          |             |               |                 |                                         |            |                                  |
|--------------------------------------------|----------|-------------|---------------|-----------------|-----------------------------------------|------------|----------------------------------|
| CONFIRMED&ACCEPTED BY CUTOMER<br>(客户确认&接受) |          |             |               | 型号/MODEL        |                                         |            |                                  |
| COMPANY CHOP&SIGNATURE (盖章&签名)             |          |             |               | 57BYGH246-1004A |                                         |            |                                  |
| 一般公差<br>TOLERANCE                          | ±0.3/±3° | 版本<br>REV.  | 年 月 日<br>DATE | 变更番号<br>ECO NO. | 变 更 内 容<br>REVISIONS                    | 设计<br>BY   | 备 注 NOTE                         |
| 设 计/DESIGNED                               |          | 比例<br>SCALE | 1:1           | 品 名<br>TITLE    | 步进电机规格书<br>STEPPING MOTOR SPECIFICATION |            | 三视图<br>THIRD ANGLE<br>PROJECTION |
| 审 核/CHECKED                                |          | 单位<br>UNIT  | mm            | 上海四横电机制造有限公司    |                                         | 页<br>SHEET | 1/1                              |

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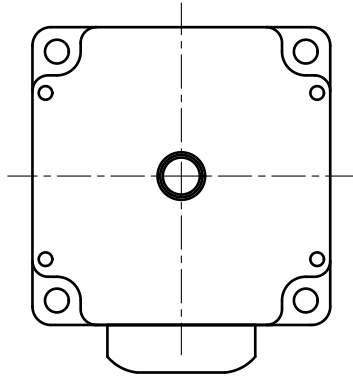
A

B

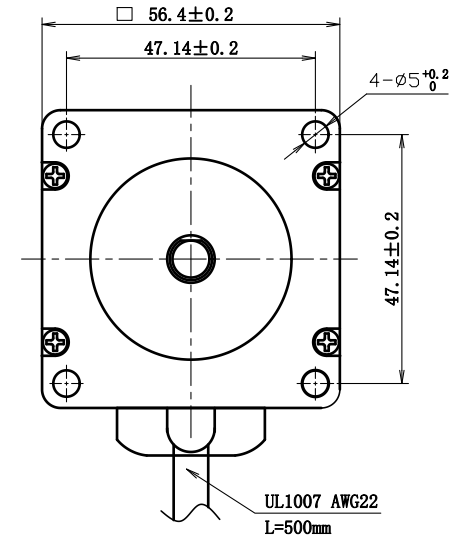
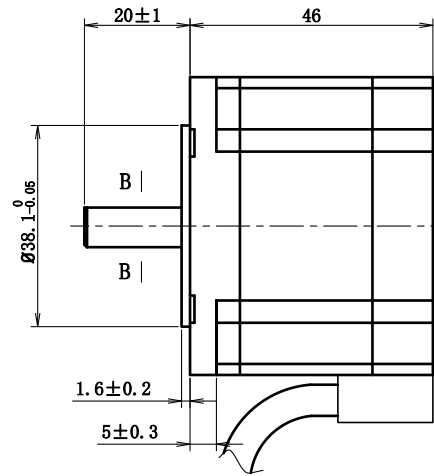
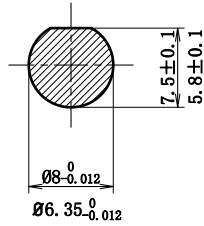
C

D

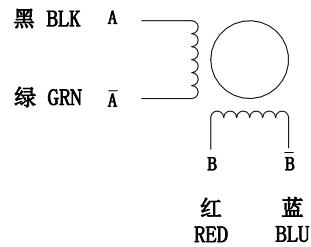
E



B-B(2:1)



Wiring Diagram/接线图



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

| STEP | A | B | $\bar{A}$ | $\bar{B}$ |
|------|---|---|-----------|-----------|
| 1    | + | + | -         | -         |
| 2    | - | + | +         | -         |
| 3    | - | - | +         | +         |
| 4    | + | - | -         | +         |

CW

CCW

|                   |  |          |  |                 |             |                                  |                   |
|-------------------|--|----------|--|-----------------|-------------|----------------------------------|-------------------|
|                   |  |          |  | 型号/MODEL        |             |                                  |                   |
|                   |  |          |  | 57BYGH246-1004A |             |                                  |                   |
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| 设计/DESIGNED       |  |          |  | 设计<br>BY        | 备注 NOTE     |                                  | REV. A            |
| 比例<br>SCALE       |  | 1:1      |  | 品名<br>TITLE     |             | 步进电机规格书                          |                   |
| 单位<br>UNIT        |  | mm       |  |                 |             | 三视图<br>THIRD ANGLE<br>PROJECTION |                   |
| 审核/CHECKED        |  |          |  | 上海四横电机制造有限公司    |             | 页<br>SHEET                       | 1/1               |

