



产品规格确认书 Specification for approval

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Specification for approval

顾客 Customer: _____

顾客产品名称 Custom Product Name: _____

顾客零件号 : Custom Part No: _____

产品名称 Product Name: Common Mode Choke

产品型号 Product model: SY13TF-003-220-001

发布日期 Publish Date: _____

版本 Version: V1.0

特别说明: 此确认书请顾客在 2 周内确认, 如未在规定时间内答复, 则视为同意。

| | | | |
|----------------------------|-------------|----------------|--|
| 三友审批签字 Signature by Sanyou | | | 顾客签字或盖章 stamp of signature by customer |
| 编制 Make | 审核 Check | 批准 Approved | |
| | | | |

Especially claim: This specification should be checked in 2 weeks, if had not answered in the scheduled time ,then regards as the agreement.



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变更版记录 Revisions

| 版本 Version No. | 变更内容 Change description | 变更原因 Reason | 日期 Date | 修改 Drafted by | 审核 Checked by |
|-------------------|----------------------------|----------------|------------|---------------------|------------------|
| 1.0 | 初版 | / | 2022.1.5 | 黄玉华 | 何明荣 |
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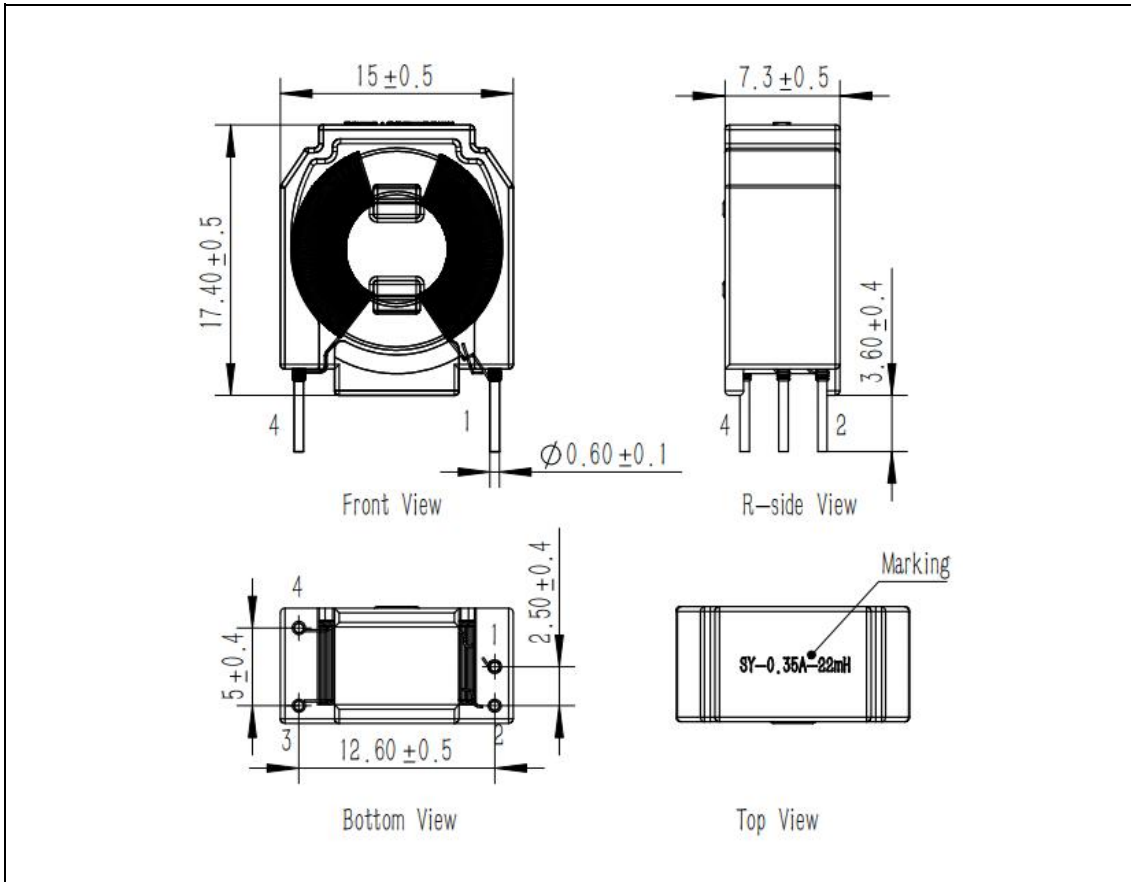
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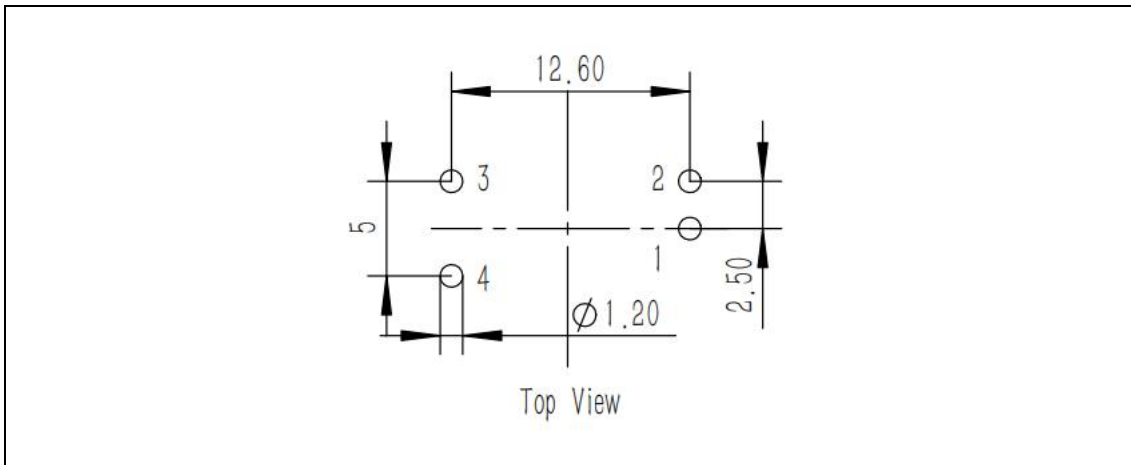


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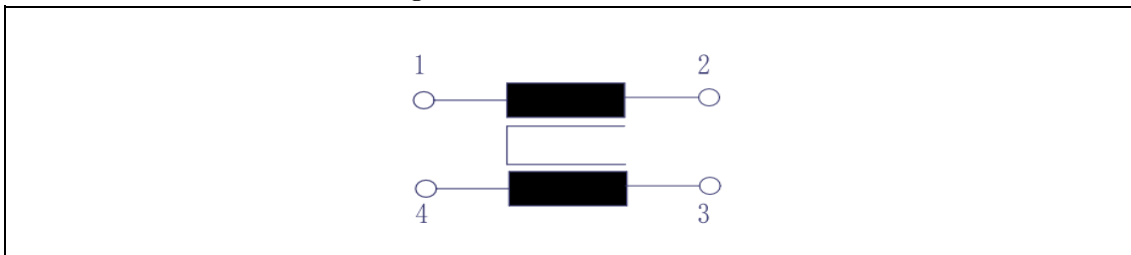
1. 外形尺寸(Outline Dimensions) (单位: mm) (UNIT:mm)



2. 推荐 PCB 安装尺寸 (Suggested PCB Layout) (单位: mm) (UNIT:mm)



3. 原理图 (Schematic diagram)





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4. 绕线参数 (Winding Parameter)

| 起线-尾线 Start-Finished pin | 线径规格 Wire Diameter | 圈数 Turns | 绕线方式 Winding Condition | 胶带圈数 Turns of tape |
|-----------------------------|-----------------------|-------------|---------------------------|-----------------------|
| 1-2 | 1UEWF 0.12 | 112 (REF.) | close | \ |
| 4-3 | 1UEWF 0.12 | 112 (REF.) | close | \ |

备注：绕线圈数参考，以电感量为准。

The turns of coil listed in winding parameter is only for reference, the actual number is decided by the inductance

5. 电气特性 (Electrical characteristics)

| 项目 Item | 测试引脚 Pin NO. | 规格 SPEC. | 测试条件 Conditions |
|------------------------------------|-----------------|-----------------------|--|
| 电感 Inductance | 1-2 | 22mH -30%/+50% | 15KHz 0.3V 25°C (LCR 测试仪器内阻 100 Ω) |
| | 4-3 | 22mH min -30%/+50% | |
| 电感偏差 Inductance Deviation | 1-2 - 4-3 | 300uH max. | 15KHz 0.3V 25°C (LCR 测试仪器内阻 100 Ω) |
| 漏感 Leakage Inductance | 1-2 | 300uH max. | 15KHz 0.3V 25°C (LCR 测试仪器内阻 100 Ω) PIN4-3 short |
| 直流电阻 DC Resistance | 1-2 | 1.9 Ω max. | 25°C |
| | 4-3 | 1.9 Ω max. | |
| 高压测试 Hi-Pot Test | (1-2)-(4-3) | 1.5KV | 5S 1mA |
| | PIN-CORE | 0.75KV | 5S 1mA |
| 绝缘电阻 Insulation Resistance | (1-2)-(4-3) | 100M Ω min | 500VDC |
| 工作温度范围 Operation Temperature | | -25°C~125°C | 包含线圈发热导致的温度升高 (including coil's temperature rising) |



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6. 材料表 (Material list)

| 编号 NO. | 类别 Description | 材料 Material | 供应商 MANUFACTURER | UL NO. | 温度等级 TEMP. |
|-----------|-------------------|--------------------|--|---------|---------------|
| 1 | Core | T13*7*4.5C GP95 | Guanda or equivalent | / | 130°C |
| 2 | Case | PA66 | NANTONG ORIENT PLASTICS CO LTDt | E332375 | 130°C |
| 4 | Wire | 1UEW-F | Guangdong Jinyan Electrotechnics or equivalent | E238500 | 155°C |
| 5 | Epoxy | EP600-3M HF | Santong or equivalent | / | 130°C |
| 6 | Solder | Sncu | Qiandao or equivalent | / | / |

7. 产品工艺要求 (Technological requirements):

- 1) 绕线平整，两个绕组圈数相同。The turns of two coils must be same, and the winding shall be flat without overlap.
- 2) 磁芯，隔板和底座点胶固定。Fasten core and bobbin with glue.
- 3) 如客户无要求，产品标签为SY-0.35A-22mH 否则按照客户要求 If no rerequirements, marked the inductor with:SY-0.35A-22mH, else meets custormer' s specfication.

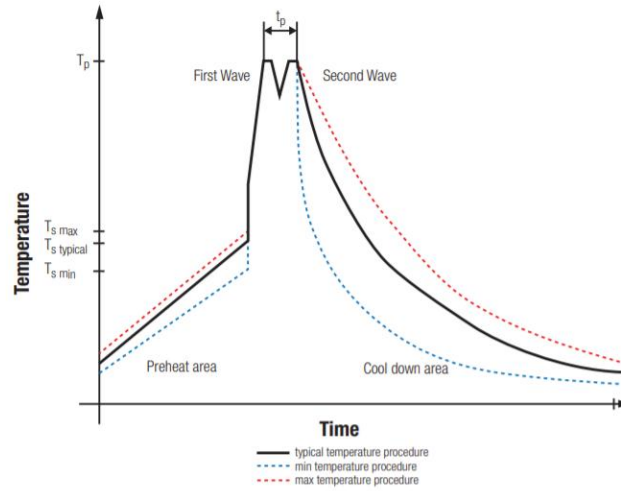
8. 推荐焊接条件 (Recommend Soldering Conditions)

- 1) 焊接方式：波峰焊 (Wave Soldering)
- 2) 典型焊接曲线 (Classification Wave Soldering Profile)



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Classification Wave Soldering Profile:



Classification Wave Soldering Profile:

| Profile Feature | | Pb-Free Assembly |
|--|-------------------------|---|
| Preheat Temperature Min | $T_{s \min}$ | 100 °C |
| Preheat Temperature Typical | $T_{s \text{ typical}}$ | 120 °C |
| Preheat Temperature Max | $T_{s \max}$ | 130 °C |
| Preheat Time t_s from $T_{s \min}$ to $T_{s \max}$ | t_s | 70 seconds |
| Ramp-up Rate | ΔT | 150 °C max. |
| Peak Temperature | T_p | 250 °C - 260 °C |
| Time of actual peak temperature | t_p | max. 10 seconds max. 5 seconds each wave |
| Ramp-down Rate, Min | | ~ 2 K/ second |
| Ramp-down Rate, Typical | | ~ 3.5 K/ second |
| Ramp-down Rate, Max | | ~ 5 K/ second |
| Time 25 °C to 25 °C | | 4 minutes |

refer to EN61760-1:2006