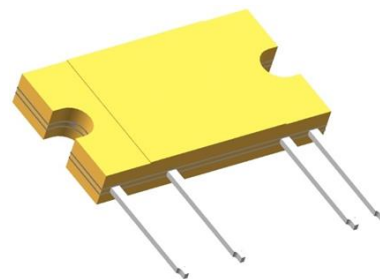


YAS2/D2Z22——700V 2A SSR

概述 Features

- 厚度3.0mm SSR Thickness 3.0mm SSR
- 过零型 Zero-cross
- 负载电流至2A Load current up to 2A
- 阻断电压700V Peak off-state voltage 700V
- 符合RoHS RoHS compliant

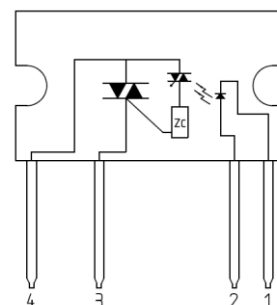


获得认证 Agency Approvals

- UL
- cUL
- TUV

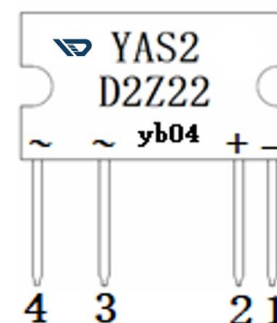
应用 Applications

- 家电产品（空调、冰箱、洗衣机、微波炉等的风扇、加热、进出水开关等控制）
Home appliances (air conditioners, microwave ovens, washing machines, personal hygiene systems, refrigerators, fan heaters, inductive heating cooker, and water heaters, etc.)
- 工业控制 Industrial equipments.



打印标志 Marking Information

| Part Number | Package | Marking |
|-------------|---------|------------|
| YAS2/D2Z22 | SIP4 | YAS2/D2Z22 |



极限值 Absolute Maximum Ratings

(Ta=25℃)

| 特性参数/Parameter | | 符号/Symbol | 测试条件/Test Condition | 最小值/Min. | 典型值/Typ. | 最大值/Max. | 单位/Unit |
|----------------|---|-----------|---------------------|----------|----------|----------|---------|
| 输入端/Input | 反向电流/LED reverse current | I_R | $V_R=5V$ | | | 10 | μA |
| | 正向电流/ LED forward current | I_F | | | | 50 | mA |
| 输出端/Output | 断态泄漏电流/Output off-state leakage current | I_R | $V_b=700V$ | | | 3 | μA |
| | 阻断电压/ Repetitive peak OFF-state voltage | V_{DRM} | | | | 700 | V |
| | 额定电流/ On-state RMS current | I | $I_F=10mA$ | | | 2 | A |
| | 浪涌电流/ Surge current | I | 50Hz, 1 cycle | | 30 | | A |



电参数 Electrical Parameters

| 特性参数/Parameter | | 符号 /Symbol | 测试条件 /Test condition | 最小 值 /Min. | 典型值 /Typ. | 最大值 /Max. | 单位 /Unit |
|-------------------------------------|---|---------------|---|------------------|----------------|--------------|-------------|
| 输入端 Input | 正向电压 /LED forward voltage | V_F | $I_F=10mA$ | | 1.2 | 1.3 | V |
| 输出端 Output | 额定电流 / On-state RMS current | I | $I_F=10mA$ | | | 2000 | mA |
| | 负载电压/Load voltage | V_{ac} | | 48 | | 264 | V |
| | 电压指数上升率 /Critical rate of rise of off-state voltage | dv/dt | $V_{DM}=600V*1/\sqrt{2}$ | 200 | | | V/ μs |
| | 断态漏电流/Output off-state leakage current | I_{DRM} | $V_D=700V$ | | | 3 | μA |
| | 最小负载电流 /Min. load current | I | | 100 | | | mA |
| 耦合特性 Transfer characteristics | 触发电流/Trigger current * | I_{FT} | $V_D=6V, R_L=100\Omega$ | | 4 | 8 | mA |
| | 推荐的工作电流 /Recommend operating current | I_{IN} | | 10 | | 18 | mA |
| | 关断电压/ Must release voltage | V_{off} | | | | 1.2 | V |
| | 导通电压降/Output on-state voltage drop | V_T | $I_F=10mA, I_L=2A$ $V_D=6V$ | | 1.2 | 1.5 | V |
| | 导通时间/Turn on time | t_{on} | $I_F=10mA,$ $V_D=6V, R_L=100\Omega$ | | 1+1/2 cycle | 1 | ms |
| | 过零电压/ Zero-cross voltage * | V_{zc} | $I_F=10mA,$ $I_L=1200mA$ $V_D=6V$ | | 15 | 30 | V |
| | 关断时间/Turn off time | t_{off} | | | | 1+1/2cycle | ms |
| | 绝缘电阻/Insulation resistance | R_{iso} | 500Vd. c | 1000 | | | M Ω |
| | 介质耐压/ I/O Dielectric strength | V_{ISO} | $I_{off}\leq 0.5mA$ | 3000 | | | V_{rms} |
| | 工作温度/Operating temperature | T | | -30 | | 85 | $^{\circ}C$ |
| 储存温度/Store temperature | | | -40 | | 125 | | |

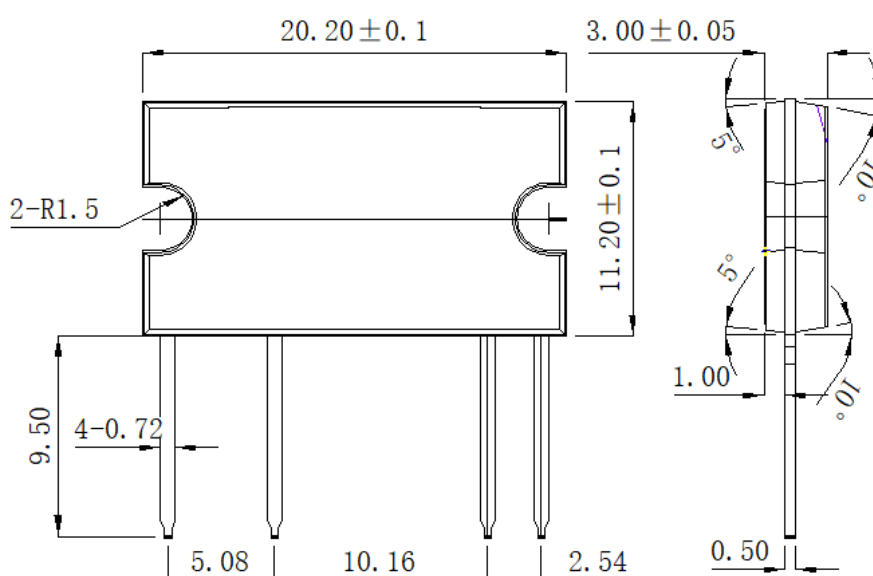
备注：1、介质耐压超过 3000V 建议在油里测试，在测试前请务必确认输入端和输出端已经分别短路。
2、带“*”参数为关键参数。

安规要求 Safety and insulation ratings:

爬电距离 Creepage distance: 4.3mm, CTI ≥ 275 ;
 瞬时过电压 Highest allowable overvoltage 4000V;
 再现峰值电压 V_{IORM} 769V;
 局部放电 Partial discharge test voltage: 方法b Method b, $V_{pd} = V_{IORM} \times 1.6$ 1230V.

外形尺寸 Outline dimension :mm

SIP4



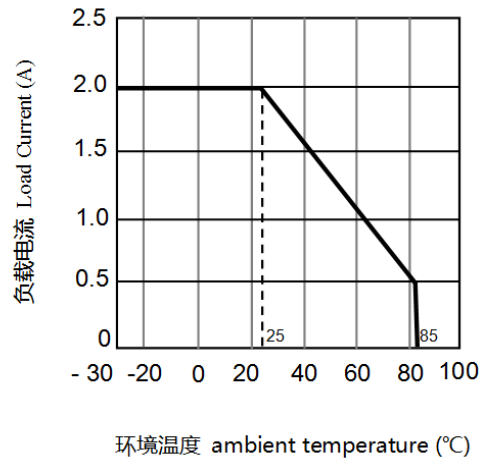
订货信息 Ordering Information :

| 订货信息/Ordering Information | | | | | | | |
|--|---|----|----|---|---|---|----|
| | Y | AS | 2/ | D | 2 | Z | 22 |
| 公司商标代号 Company symbol | | | | | | | |
| 交流输出型 AC SSR | | | | | | | |
| 封装 Package: 1: DIP7; 2: SIP4(单列直插) | | | | | | | |
| 输入端电流型 Current driving: D | | | | | | | |
| 负载电流 Load current: 1-1A;1.2-1.2A;2-2A | | | | | | | |
| P:调相 Non zero-cross Z:过零 Zero-cross; | | | | | | | |
| 负载电压 Load voltage: 22:220Vac;38:380Vac | | | | | | | |



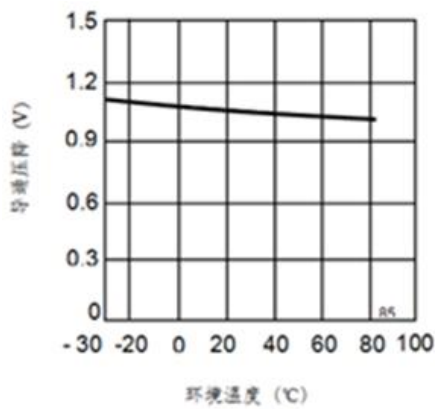
特性曲线 Characteristic Data

1. 负载电流与环境温度关系曲线
 Load current VS. Ambient temperature



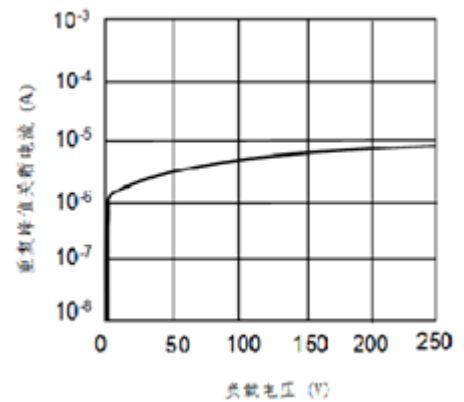
2. 导通压降—环境温度特性

On-state voltage drop VS. Ambient temperature



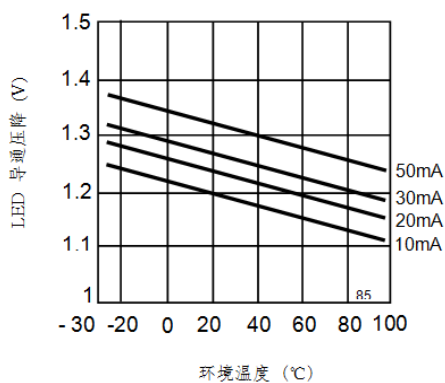
3. 重复峰值关断电流—负载电压

Repetitive peak turn off current—Load voltage



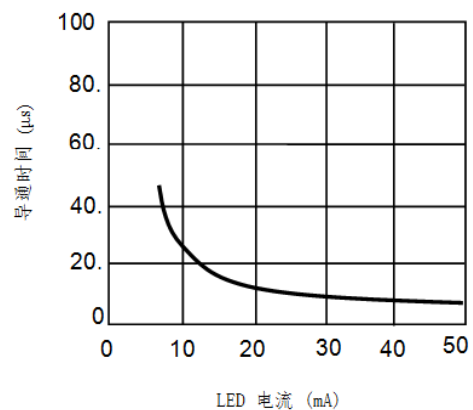
4. LED 导通压降—环境温度特性

LED dropout voltage vs. Ambient temperature
 LED current: 10 to 50 mA



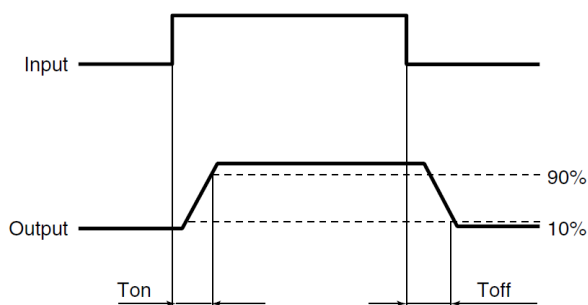
5. 导通时间—LED 电流特性

Turn on time vs. LED current



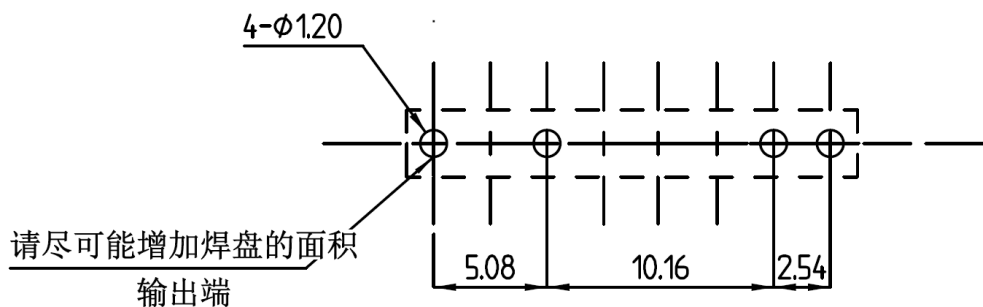


接通和关断时间关系 Turn on and Turn off time:



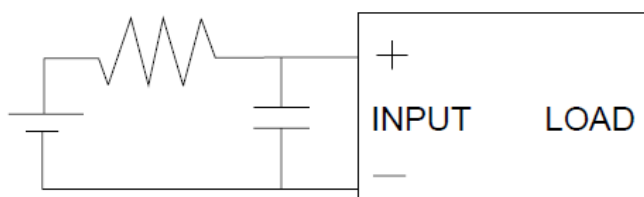
安装孔尺寸图 Fixing layout

Unit:mm



注意事项 Notes

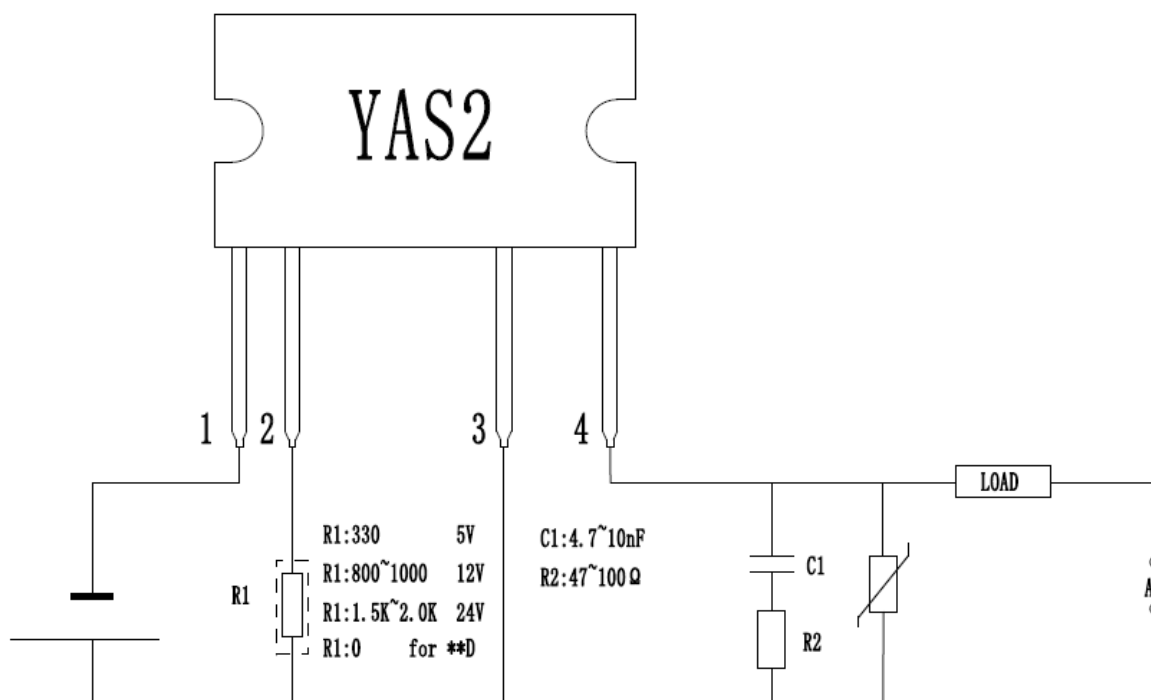
- a) 工作环境温度超过 25℃时请降额使用，降额曲线参考附件。
 When ambient temperature is above 25℃, the load current must be reduced. (see Characteristic Data 1)
- b) 继电器接线时，务必保证输入端极性的正确，以免损坏继电器。
 Ensuring the polarity is correct when connecting the input lines, otherwise the wrong connection will damage the relay.
- c) 由于 SSR 动作时间很短，输入端的噪声可能会引起 SSR 误动作，所以在输入端环境噪声较大时，应在输入端接 R/C 回路吸收噪声。
 Since the operate time of the relay is extremely short, any noise to input terminal will cause malfunction of the SSR, So a RC circuit should be connected to input terminal to absorb the noise in the noisy condition.



- d) 推荐的使用电路，输出端的尖峰电压可能会引起 SSR 误动作，所以请在输出端应加 R/C 回路或压敏电子吸收尖峰电压，具体见下图：



Below shows a recommend circuit: Please add a RC circuit or varistor on the load side, as noise/surge could damage the unit or cause malfunctions.



关于防静电对策 Cautions for Static Electricity

- 使用电烙铁时,对电烙铁前端进行接地。(建议使用低电压用的电烙铁。) When using soldering irons, either use irons with low leakage current, or ground the tip of the soldering iron. (Use of low-voltage soldering irons is also recommended.)
- 组装时使用的设备等也应正确地接地。 Devices and equipment used in assembly should also be grounded.

关于焊接 Soldering

继电器焊接,260 度情况下焊接时间不能超过 10 秒钟,350 度情况下焊接时间不能超过 5 秒钟。
Soldering must be completed within 10 seconds at 260°C or within 5 seconds at 350°C.