

## YAS1/D1.2Z22——1.2A 700V SSR

### 概述 Features

- 过零型 Zero-cross
- 负载电流至1.2A Load current up to 1.2A
- 阻断电压700V Repetitive peak off-state voltage 700V
- 介质耐压4000V Dielectric strength 4000V
- 符合RoHS RoHS compliant

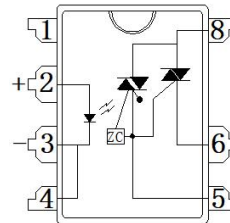


### 获得认证 Agency approvals

- UL - E481250
- cUL - E481250
- TUV - R 50466012

### 应用 Applications

- 家电产品（空调、冰箱、洗衣机、微波炉、卫浴等）  
Home appliances (air conditioners, refrigerators, washing machines, microwave ovens, personal hygiene product etc.)
- LED灯控制 LED control
- 工业控制 Industrial control



### 打印标志 Marking information

Part number	Package	Marking
YAS1/D1.2Z22	DIP7	YAS1 D1.2Z22
YAS1/D1.2Z22S	SMD7	YAS1 D1.2Z22

### 极限值/Absolute maximum ratings

(Ta=25°C)

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	LED 反向电压/LED reverse voltage	$V_R$		6			V
	LED 正向电流/LED forward current	$I_F$				50	mA
输出端/Output	阻断电压/Repetitive peak off-state voltage	$V_{DEM}/V_{RPM}$		700			V
	额定电流/On-state RMS current	$I_{T(RMS)}$	$I_{in}=10mA$			1.2	A
	浪涌电流/Surge current	$I_{TSM}$	50Hz, 1 cycle		12		A
介质耐压/Dielectric strength *		$V_{ISO}$	$I_{ISO} \leq 0.3mA$	4000			$V_{rms}$
工作温度/Operating temperature		$T_{opr}$		-30		85	°C
储存温度/Storage temperature		$T_{stg}$		-40		125	°C

“\*”：RH=40 to 60%, T=20~30°C, AC for 1minute.

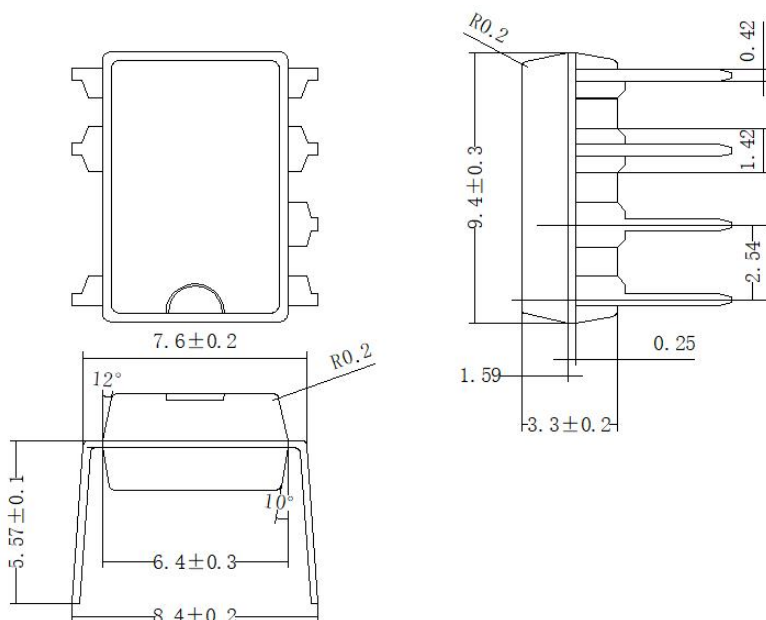
## 电参数 Electrical parameters

(Ta=25°C)

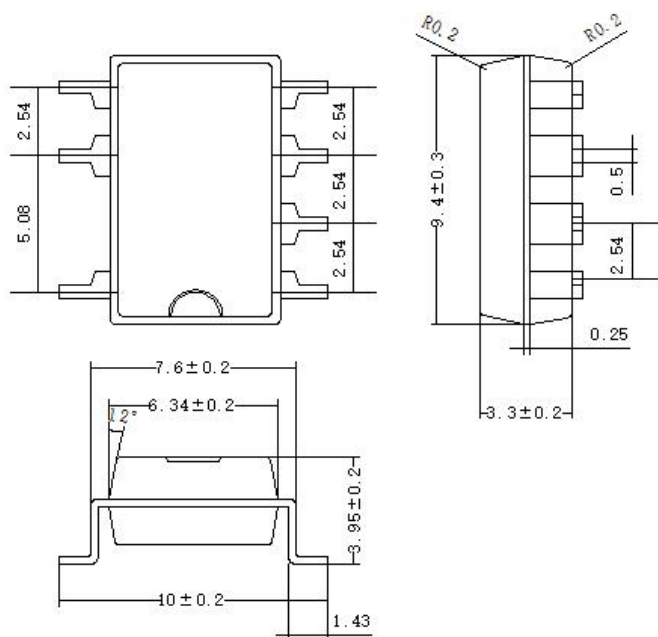
特性参数/Parameter		符号 /Symbol	测试条件 /Test condition	最小 值 /Min.	典型 值 /Typ.	最大值 /Max.	单位 /Unit
输入端/Input	LED 正向电压 /LED forward voltage	$V_F$	$I_F=10mA$		1.2	1.3	V
	LED 反向电流/LED reverse current	$I_R$	$V_R=5V$			10	$\mu A$
输出端/Output	断态泄漏电流/Output off-state leakage current	$I_{DRM}$	$V_{DRM}=700V$			10	$\mu A$
	断态泄漏电流/Output off-state leakage current	$I_{RRM}$	$V_{RRM}=700V$			10	$\mu A$
	维持电流/Holding current	$I_H$				50	mA
	电压指数上升率 /Critical rate of rise of off-state voltage	$dv/dt$	$V_{DRM}=600V*1/\sqrt{2}$	200			V/ $\mu s$
耦合特性 /Transfer characteristics	LED 触发电流/LED trigger current	$I_{FT}$			3	8	mA
	推荐的工作电流 /Recommend operating current	$I_{in}$		10		18	mA
	导通电压降/Output on-state voltage drop	$V_T$	$I_{in}=10mA, I_L=1.2A$ $V_b=6V$		1.1	1.5	V
	过零电压/Zero-cross voltage	$V_{ZC}$	$I_{in}=10mA, I_L=1.2A$		10	20	V
	导通时间/Turn on time	$T_{on}$	$I_{in}=10mA,$ $V_b=6V, R_L=100\Omega$			1+1/2cycle	ms
	关断时间/Turn off time	$T_{off}$				1+1/2cycle	ms

## 外形尺寸 Outline dimension :mm

### 1、DIP7



### 2、SMD7



注：未注公差为 $\pm 0.05$ mm。

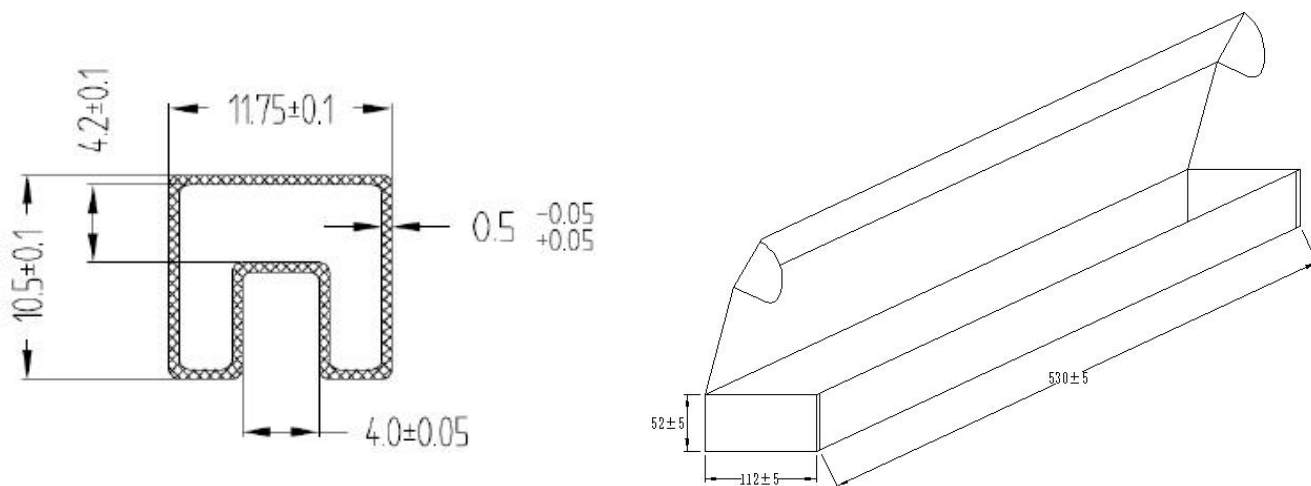
## 订货信息 Ordering information

订货信息/Ordering information								
	Y	AS	1/	D	1.2	Z	22	D/S
公司商标代号 Company symbol								
交流输出型 AC SSR								
封装 Package: 1: DIP7								
输入端电流型 Current driving: D								
负载电流 Load current: 0.6—0.6A;1.2—1.2A								
P:调相型 Non zero-cross Z:过零型 Zero-cross								
负载电压 Load voltage: 22:220Vac;38:380Vac								
D:DIP(Nil) S :SMD								

## 包装信息 Package specification

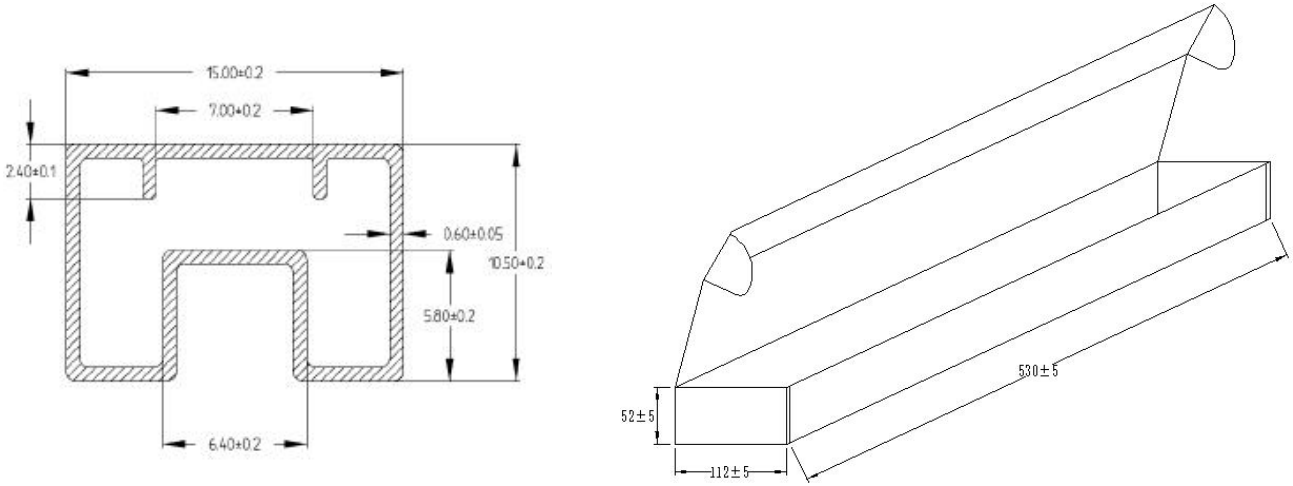
### DIP7:

每管最多装50个/MAX. 50pcs of products shall be packaged in a sleeve;  
每盒最多装40条/MAX. 40 sleeves in one case.



**SMD7:**

每管最多装50个/MAX. 50pcs of products shall be packaged in a sleeve;  
每盒最多装30条/MAX. 30 sleeves in one case.



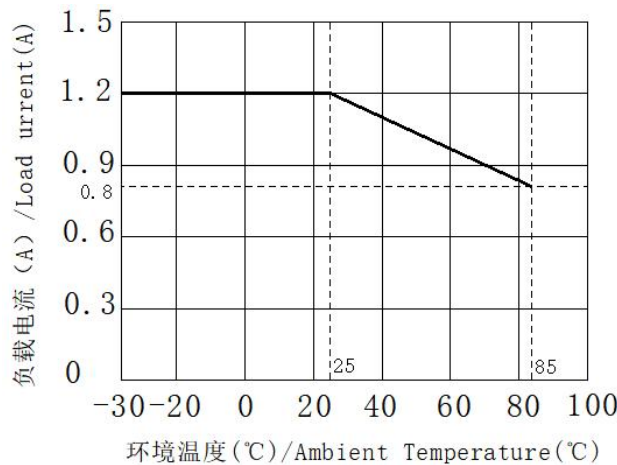
**安规要求 Safety and insulation ratings**

爬电距离	Creepage distance	5.0mm, CTI ≥275;
瞬时过电压	Highest allowable overvoltage	5000V;
再现峰值电压	$V_{IORM}$	769V;
局部放电	Partial discharge test voltage : method b, $V_{Pd} = V_{IORM} \times 1.6$	1230V.

**特性曲线 Characteristic data**

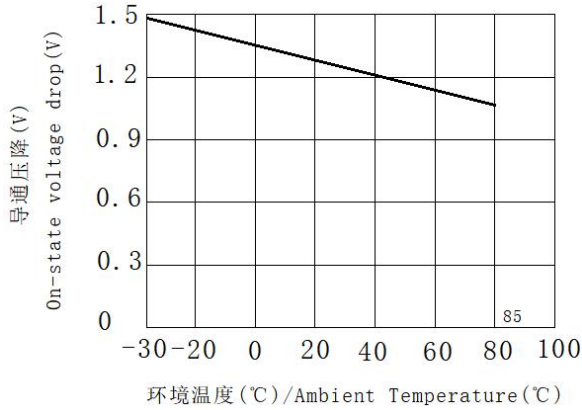
**1. 负载电流与环境温度关系曲线**

Load current VS. ambient temperature



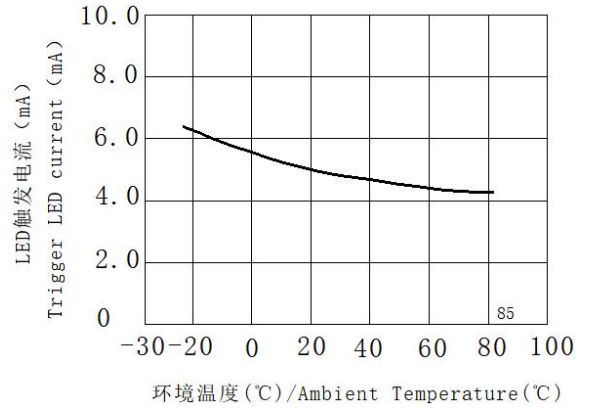
### 2. 导通压降—环境温度特性

On-state voltage drop VS. ambient temperature



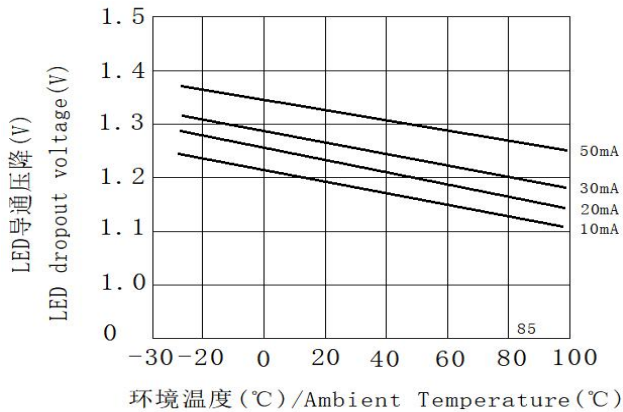
### 3. LED触发电流—环境温度特性

Trigger LED current VS. ambient temperature



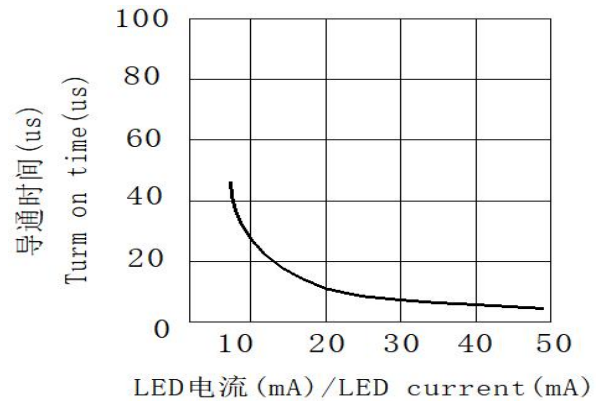
### 4. LED 导通压降—环境温度特性

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

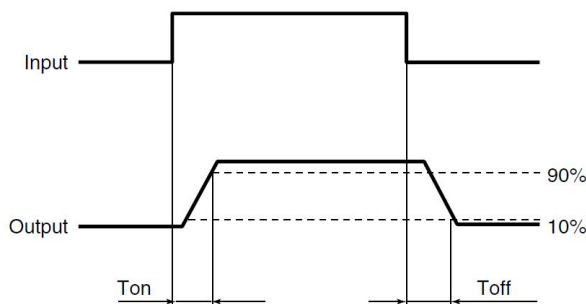


### 5. 导通时间—LED 电流特性

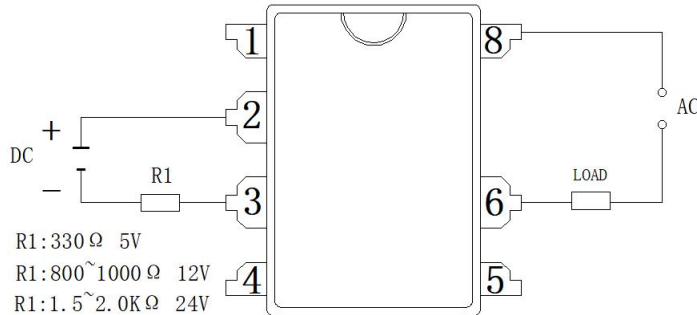
Turn on time vs. LED current



## 接通和关断时间关系 Turn on and turn off time

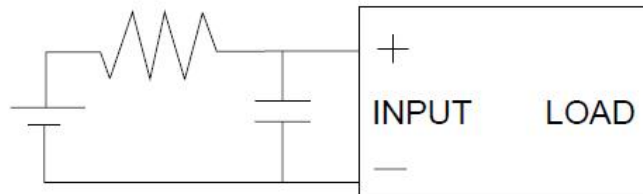


## 接线图 Wiring diagram

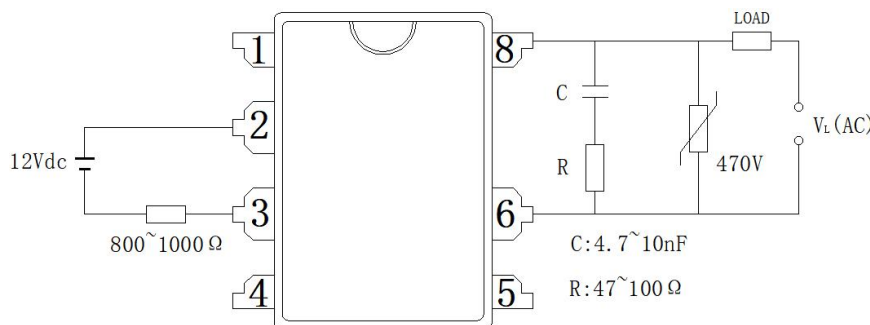


## 注意事项 Notes

- 工作环境温度超过  $25^{\circ}C$  时请降额使用。参见特性曲线 1。  
When ambient temperature is above  $25^{\circ}C$ , the load current must be reduced. (see characteristic data )
- 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.
- 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.



- 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 回路或压敏电阻吸收尖峰电压，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**

- a. 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.)
- b. 组装时使用的设备等也应正确的接地。 Devices and equipment used in assembly should also be grounded.

## 关于焊接 **Soldering**

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