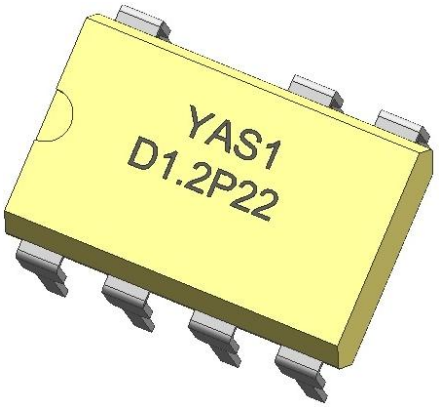
YAS1/D(0.6)1.2P（Z）22——700V SSR



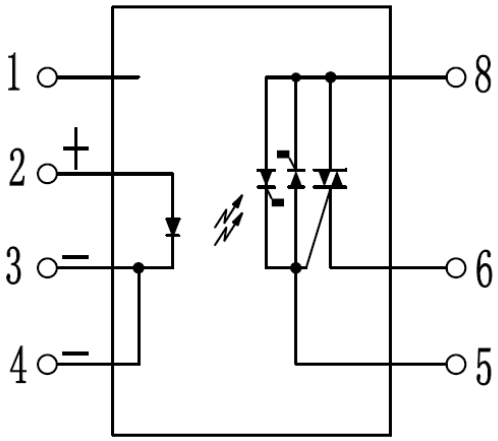
概述/General Features

- 过零和调相型/ Zero-cross，random trigger
- 负载电流最大为1.2A/Max load current 1.2A
- 高负载耐压700V/High load voltage 700V
- 符合RoHS/RoHS compliant
- UL E481250

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 equipment market.



订货信息/Ordering Information

Part Number	Package	Marking
YAS1/D1.2P（Z）22	DIP7	YAS1/D1.2P（Z）22
YAS1/D0.6P（Z）22	DIP7	YAS1/D0.6P（Z）22

极限值/Absolute Maximum

(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			1	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_D=700V			1	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			1200	mA
	额定电流/ ON-state RMS current（D0.6*22）	I	I_F=10mA			600	mA
	浪涌电流/ Surge current（D0.6*22）	I	50Hz, 1 cycle		6000		mA
	浪涌电流/ Surge current	I	50Hz, 1 cycle		12000		mA

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电参数/Electrical parameter

(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	正向电压 /LED forward voltage	V_F	I_F=10mA		1.2	1.3	V
	输入电流 / Input Current	I	Vin=14.4 Vd.c, Ri=750Ω	10.0		19.8	mA
输出端 Output	额定电流 / ON-state RMS current	I	I_F=10mA			1200	mA
	额定电流 / ON-state RMS current （D0.6*22）	I	I_F=10mA			600	mA
	维持电流 /Holding current	I_H				50	mA
	电压指数上升率 /dv/dt	dv/dt	V_{DRM}=600V*1/√2	200			V/μs
耦合特性 Transfer characteristics	触发电流/Trigger current	I_{FT}	V_O=6V, R_L=100Ω		4	8	mA
	导通电压降 /Output on-state voltage drop （D0.6*22）	V	I_F=10mA, I_L=600mA V_D=6V		1.1	2.0	V
	导通电压降 /Output on-state voltage drop	V	I_F=10mA, I_L=1200mA V_D=6V		1.1	2.0	V
	导通时间/ Turn on time	t_{on}	I_F=10mA, V_D=6V, R_L=100Ω		0.01	1	ms
	导通时间 /Turn on time （过零 zero-cross）	t_{on}	I_F=10mA, V_D=6V, R_L=100Ω			1+1/2cycle	ms
	关断时间 Turn off time	t_{off}				1+1/2cycle	ms
	介质电压 / Dielectric Strength*	V_{ISO}	I_{off}≤0.5mA	4000			V_{rms}
	工作温度 Operating temperature	T		-30		85	℃
	储存温度 Store temperature			-40		125	

备注：1、介质电压超过 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。

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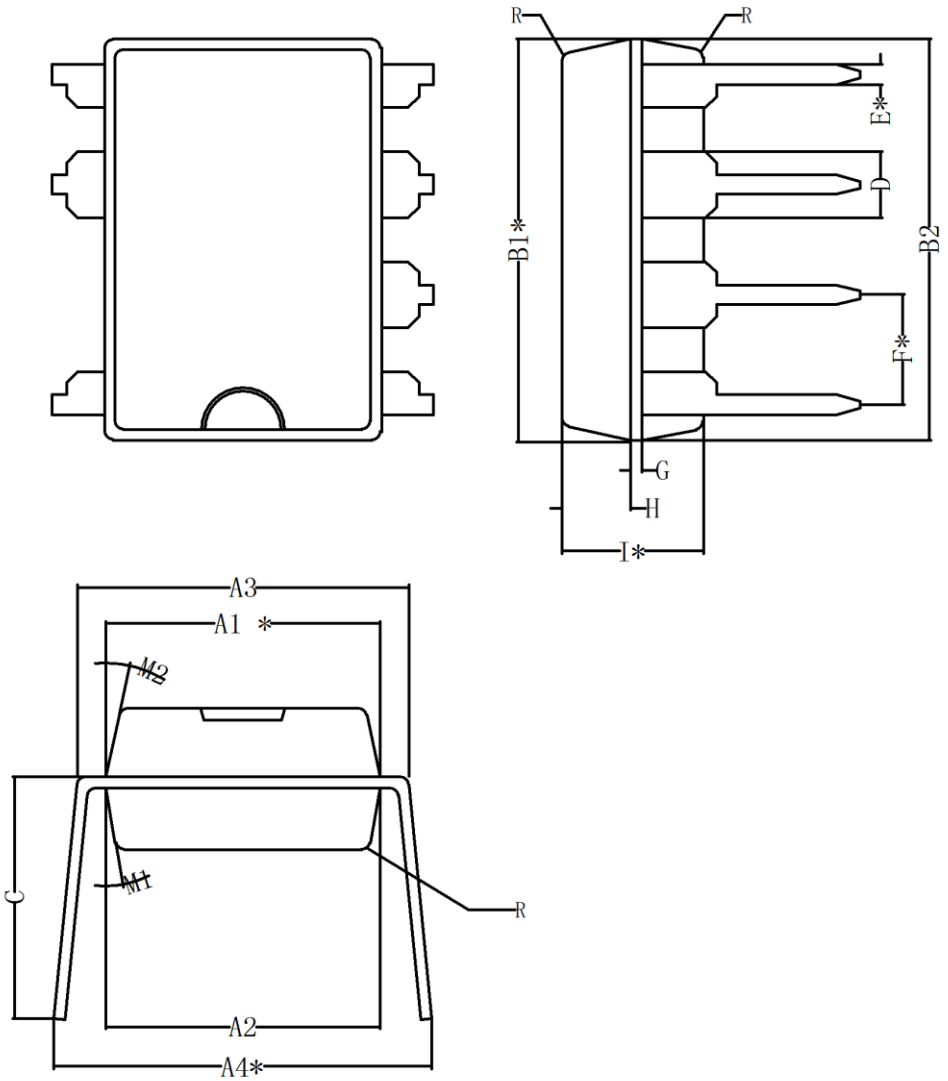
外形尺寸/Outline dimension：

1、DIP



符号	最小	典型	最大	符号	最小	典型	最大
A1*	6.13	6.33	6.53	E*	0.34	0.42	0.50
A2	6.22	6.42	6.62	F*		2.54	
A3	7.32	7.62	7.92	G		0.25	
A4*	8.10	8.40	8.70	H	1.39	1.59	1.79
B1*	9.00	9.20	9.40	I*	3.07	3.27	3.47
B2	9.05	9.25	9.45	R		0.20	
C		5.57		M1		10°	
D		1.52		M2		12°	

注1：未注公差请按±0.2；
注2：带“*”尺寸为关键尺寸。

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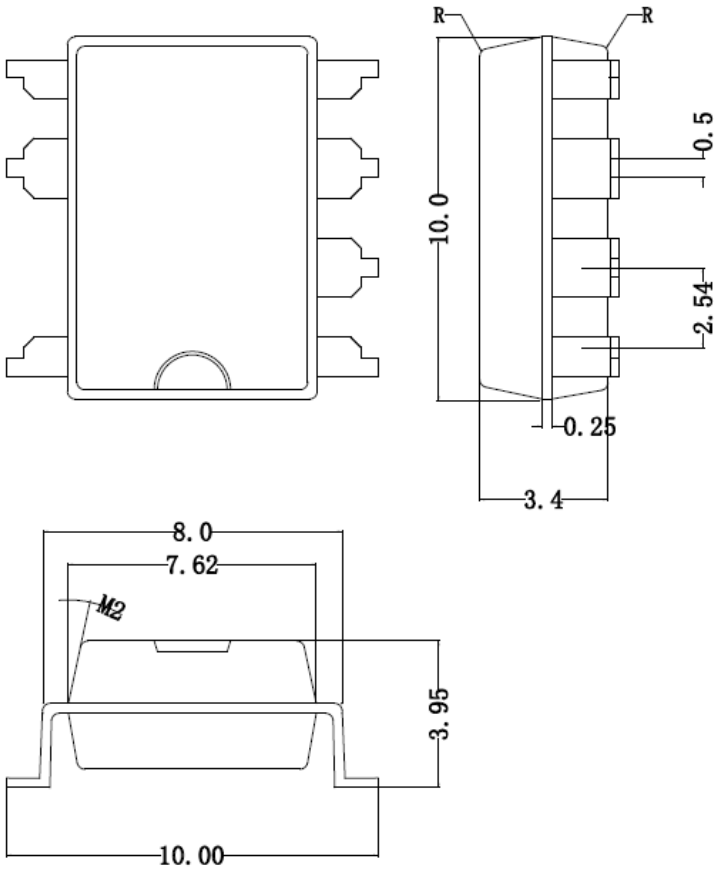
2、SMD:

未注公差请按±0.2:



订货信息/Ordering Information :

订货信息/Ordering Information								
	Y	AS	1/	D	1.2	P	22	()
公司商标代号 Company symbol								
交流输出型 AC SSR								
封装 Package：1：DIP8；2：SIP4(单列直插)								
输入端电流型 Current driving：D 输入电压型 Voltage driving： 05D—5V;12D—12V;24D—24V；								
负载电流 Load current：0.6—0.6A;1.2—1.2A;								
Z:过零 Zero-cross; P:调相 Non zero-cross								
负载电压 Load voltage：22:220Vac;38:380Vac								
用户特殊编号 Special code								

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安规要求/Safety and insulationratings：

爬电距离 Creepage distance：5.0mm，CTI ≥275;

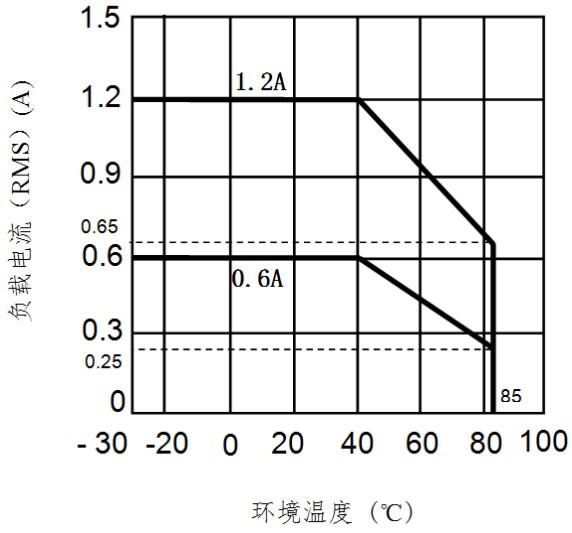
瞬时过电压 Highest allowable overvoltage 5000V;

再现峰值电压 V_{IORM} 769V;

局部放电Partial discharge test voltage：方法b Method b, $V_{pd} = V_{IORM} \times 1.6$ 1230V.

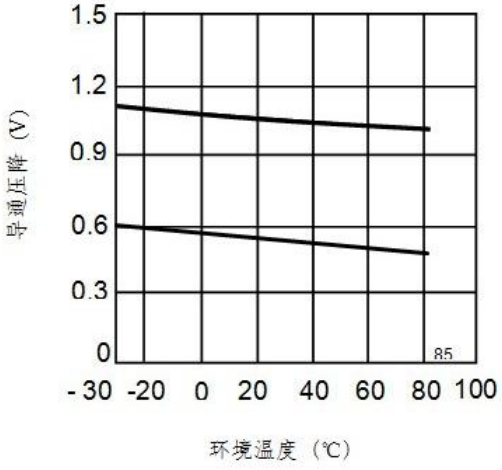
特性曲线/Characteristic Data:

负载电流与环境温度关系曲线 Load current vs. ambient temperature characteristics



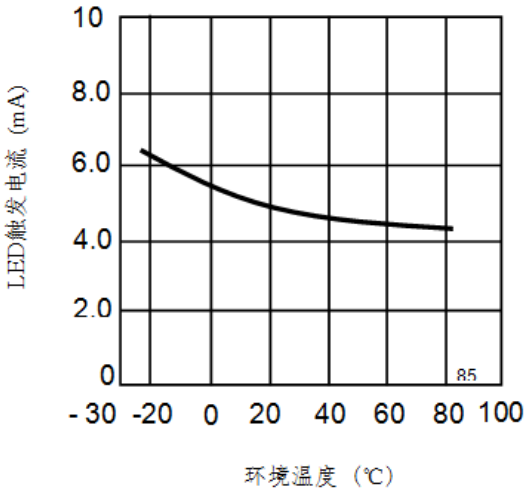
2.导通压降—环境温度特性

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



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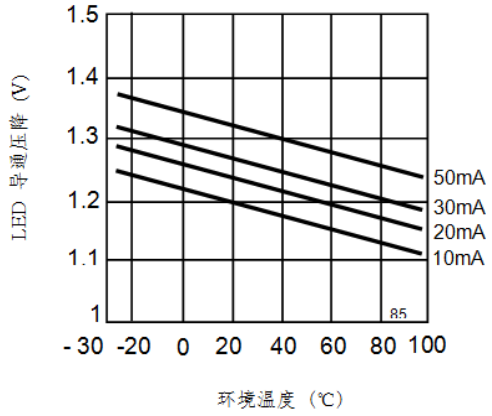
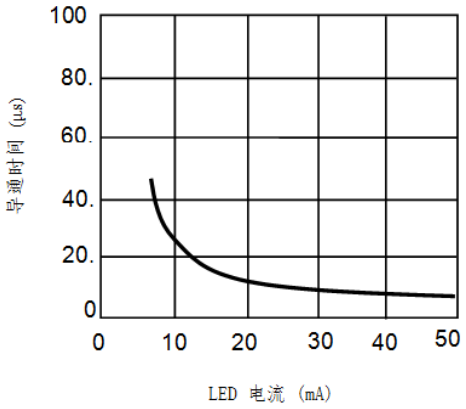
4.LED 导通压降—环境温度特性

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

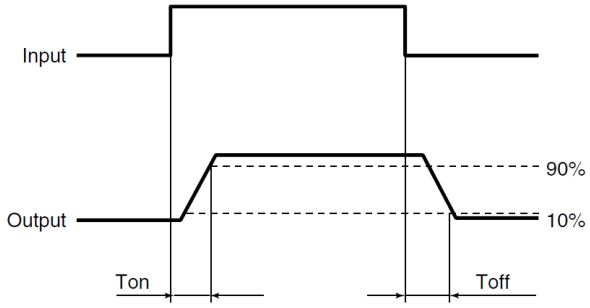


5.导通时间—LED 电流特性

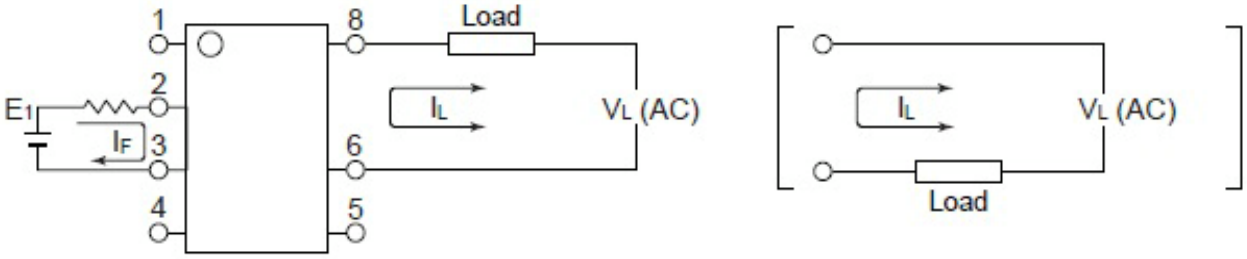
Turn on time vs. LED current



接通和关断时间关系，Turn on/Turn off time:



接线图/Wiring diagram:



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 Annexes，fig.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.

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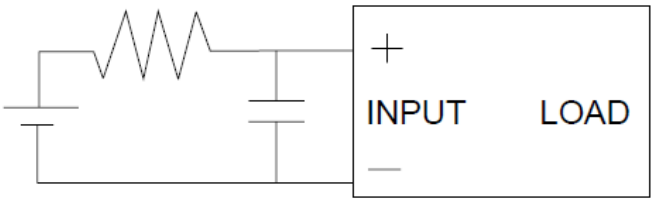
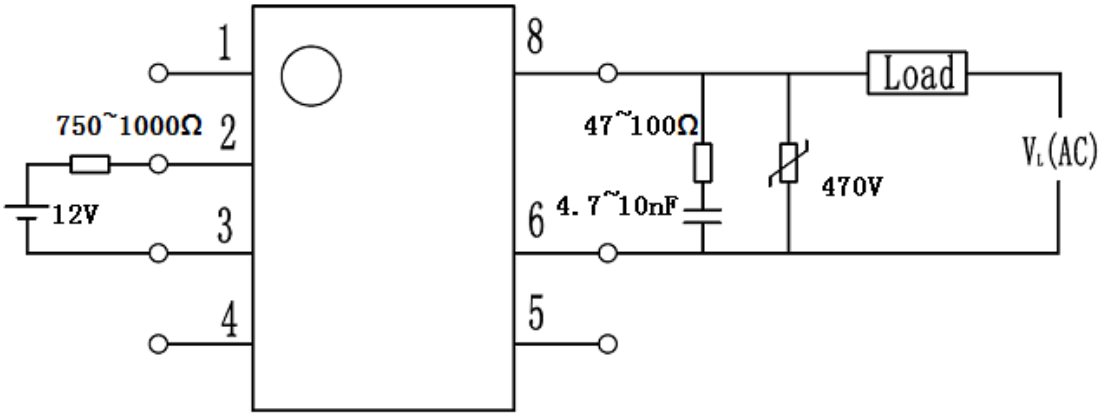
c)由于 SSR 动作时间很短，输入端的噪声可能会引起 SSR 误动作，所以在输入端环境噪声较大时，应在输入端接 R/C 回路吸收噪声。

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

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℃ or within 5 seconds at 350℃.

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