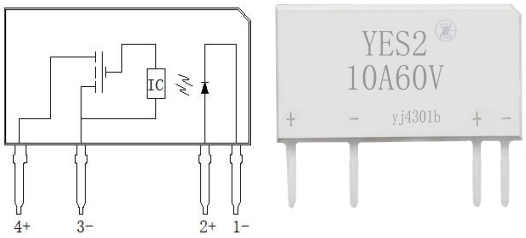
YES2/10A60V——10A60V Opto-MOS

概述 Features

- 厚度3.0mm SSR　　Thickness 3.0mm SSR
- 负载最大电流至10A　　Load current up to 10A
- 击穿电压60V　　Breakdown voltage 60V
- 介质耐压3000V　　Dielectric strength 3000V
- 符合RoHS　　RoHS compliant

应用 Applications

- 开关电源　　Switching mode power supply
- 交通信号控制　　Traffic signals control
- 测试设备　　Measuring instruments
- 工业控制　　Industrial control



打印标志 Marking information

Part number	Package	Marking
YES2/10A60V	SIP4	YES2 10A60V

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	LED反向电压/LED reverse voltage	V_R		6					V
	LED正向电流/LED forward current	I_F					50		mA
	功耗/Power dissipation	P_{in}			75				mW
输出端/Output	击穿电压/ Breakdown voltage	BV_{DSS}		60					V
	功耗/Power dissipation	P_{out}			2/3 (带散器)		2.4/4 (带散器)		W
	额定电流/On-state current	I_L					不带散热器	10	A
							带散热器	15	
	峰值电流/Peak current	I_{peak}	100 ms (1 shot),V_L= DC		不带散热器	40			A
					带散热器	50			
介质耐压/Dielectric strength *		V_{ISO}	I_{ISO}≤0.3mA	3000					V_{rms}
工作温度/Operating temperature		T_{opr}		-30			85		℃
储存温度/Storage temperature		T_{stg}		-40			125		℃

"*"： RH =40 to 60%, T=20~30℃,AC for 1minute.

版权归厦门市硅兆光电科技有限公司所有　www.siliconbillion.com

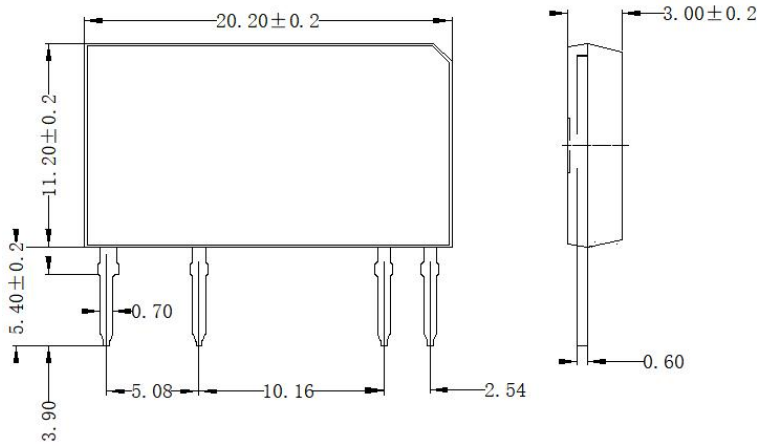
电参数 Electrical parameters

(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	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	μA
输出端/Output	断态泄漏电流/Output off-state leakage current	I_{Leak}	V_O=60V			10	μA
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
	导通电阻/Output on-state resistance	R_{on}	I_{in}=10mA，I_D=5A		10	20	mΩ
	导通时间/Turn on time	T_{on}	I_{in}=10mA，I_D=2A			5	ms
	关断时间/Turn off time	T_{off}	I_{in}=10mA，I_D=2A			2	ms
	电容/I/O capacitance	C				10	pF

外形尺寸 Outline dimension :mm

SIP4



注：未标公差为±0.05mm

版权归厦门市硅兆光电科技有限公司所有 www.siliconbillion.com

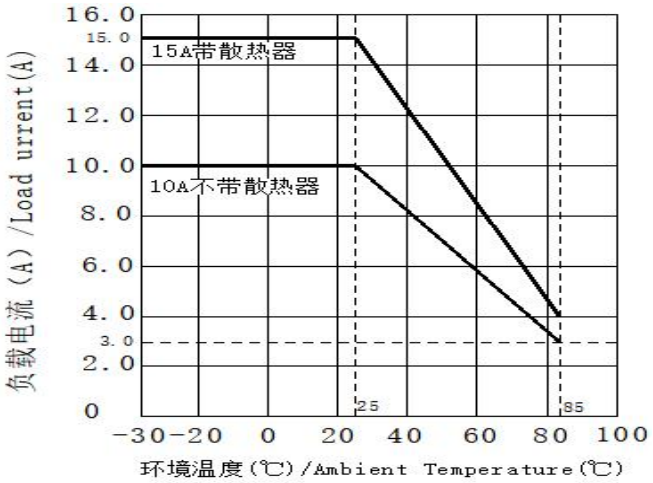
订货信息 Ordering information

订货信息/Ordering information					
	Y	ES	2/	10A	60V
公司商标代号 Company symbol					
光功率 MOS SSR:Opto- Power MOS SSR					
封装 Package：2：SIP4					
负载电流 Load current： 10A					
击穿电压 BV_{DSS}：60V					

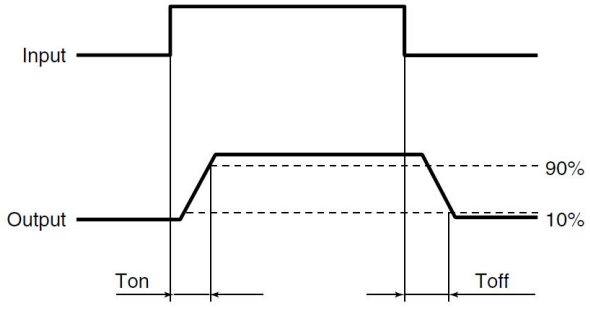
特性曲线 Characteristic data

1. 负载电流与环境温度关系曲线

Load current VS. ambient temperature



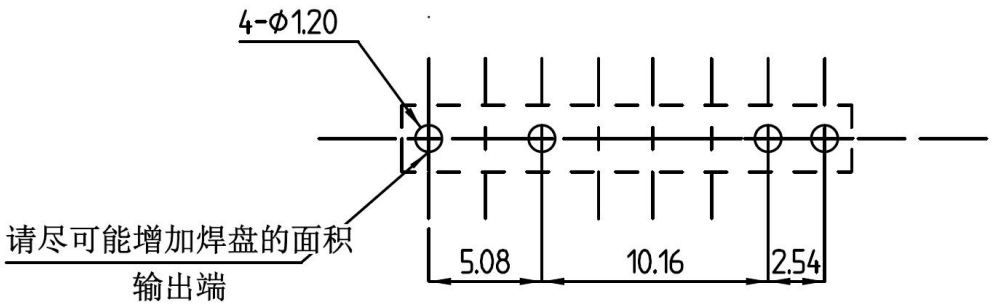
接通和关断时间关系 Turn on and turn off time



版权归厦门市硅兆光电科技有限公司所有 www.siliconbillion.com

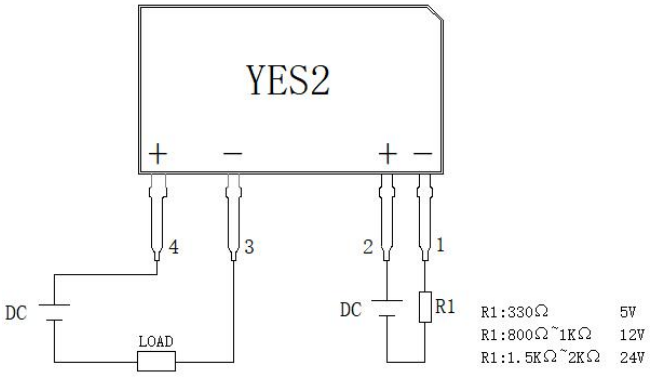
安装孔尺寸图 Fixing layout

Unit:mm



Please enlarge the solder pads of output.

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。参见特性曲线 1。
When ambient temperature is above 25℃, the load current must be reduced. (see characteristic data)

- 在 60%额定值使用时，推荐使用散热器。
  The use of heat-sink is recommended,when current is more than 60% rating value.
- 请务必在输出端布线时尽量增加铜箔的面积和焊锡的厚度，以确保散热符合要求。
  In order to get the enough heat sink,please make maximum copper width,and enough thinkness of solder at output layout.

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.

版权归厦门市硅兆光电科技有限公司所有 www.siliconbillion.com

关于防静电对策 Cautions for static electricity

a.操作 MOS 输出继电器的作业人员，请穿戴防静电工作服，通过 500kΩ~1MΩ左右的保护电阻，实施人体接地。

a. Employees handling relays should wear anti-static clothes and should be grounded through protective resistance of 500kΩ to 1MΩ.

b.请在作业台上装有带导电性的金属板或具有防静电的专用板，并对测量仪器和治具等实施接地。

b. A conductive metal sheet should be placed over the work table. Measuring instruments and jigs should be grounded.

c.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。)

c. 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.)

d.组装时使用的设备等也应正确的接地。

d. Devices and equipment used in assembly should also be grounded.

e.对印刷电路板和机器进行包装时，请避免使用发泡苯乙烯、聚乙烯等带电性的高分子材料。

e. When packing printed circuit boards and equipment, avoid using high-polymer materials such as foam styrene, plastic, and other materials which carry an electrostatic charge.

f.对 MOS 输出继电器进行储存和搬运时，请在不易产生静电的环境(例如湿度 45~60%)中通过导电性包装材料进行保护。

f. When storing or transporting relays, the environment should not be conducive to generating static electricity (for instance, the humidity should be between 45 and 60%), and relays should be protected using conductive packing materials.

版权归厦门市硅兆光电科技有限公司所有 www.siliconbillion.com