

小型功率继电器
Miniature Power Relay

SJE (5A) 系列
SJE(5A) Series



■ **特点 Features**

- 体积小(20.6x10.2x15.7mm) , 适用于密集安装, 5A 切换容量。
 Small size (20.6x10.2x15.7mm) with 5A switching capability for high density PCB mounting.
- 耐压可达 4KV (线圈触点间) , 耐 8KV 浪涌电压。
 IP/OP 4KV,Withstand surge voltage of 8KV.
- 适用于空调、冰箱、微波炉、烤箱。
 Apply to air conditioner, refrigerator, microwave oven, stove etc.
- 可提供满足 IEC60335-1 的产品。
 Satisfy IEC60335-1 product is available.
- 可提供满足 IEC60079-15 的产品。
 Satisfy IEC60079-15 product is available.

安规认证 **Safety Approval**

UL , C-UL 认证号 File No. : E190598
 TUV 认证号 File No. : R50143457
 CQC 认证号 File No. : CQC04001009429
 VDE File No. : 40035912

■ **触点负载 Contact Capacity**

型号 Model	SJE-D(E,L)	SJE-D(E,L)M
额定负载 (阻性) Nominal switching capacity (Res. load)	NO/NC:5A/3A 277VAC	5A 277VAC
最大切换电流 Max. switching current	5A	5A
最大切换电压 Max. switching voltage	277VAC	277VAC
最大切换功率 Max. switching power	1,385VA	1,385VA

■ **性能参数 Characteristic Data**

触点材料 Contact material	银合金 Silver alloy
接触电阻 Initial contact resistance	100mΩ Max.(at 1A 6VDC)
吸合时间 Operate time (at nominal volt.)	10 msec. Max. (不加二极管 No diode)

释放时间 Release time (at nominal volt.)	4 msec. Max. (不加二极管 No diode)	
绝缘电阻 Initial insulation resistance	1,000MΩ Min.(DC500V)	
介质耐压 Initial dielectric strength	触点与触点间 Between open contacts : AC1000V , 50/60Hz 1min.	
	触点与线圈间 Between coil and contact : AC4,000V , 50/60Hz 1min.	
抗振动 Vibration resistance	误动作 Function	10~55Hz, 双振幅 1.5 mm 10~55Hz at double amplitude of 1.5 mm
	耐久 Destructive	10~55Hz, 双振幅 1.5 mm 10~55Hz at double amplitude of 1.5 mm
抗冲击 Shock resistance	误动作 Function	10G Min.
	耐久 Destructive	100G Min.
寿命 Endurance(operations)	机械寿命(每小时 10,800 次, 室温) Mechanical (at 10,800ops./h)	10,000,000 次 10,000,000(at room temperature)
	电气寿命(每小时 360 次, 室温) Electrical (at 360ops./h)	100,000 次 100,000(at room temperature)
环境温度 Ambient temperature	-40℃ ~ +105℃ (不冷凝 No condensation)	
重量 Unit weight	约 6.5g Approx. 6.5g	

■ 线圈参数 (at 20℃) Coil Data (at 20℃)

额定电压 (VDC) Nominal voltage (VDC)	额定电流 ±10%(mA) Nominal operating current ±10%(mA)	线圈电阻 ±10% (Ω) coil resistance ±10%(Ω)	最大连续外加电 压 Max. allowable voltage	吸合电压 (Max.) Pick-up voltage (Max.)	释放电压 (Min.) Drop-out voltage (Min.)	额定功率 Nominal operating power
3	150.00	20	额定电压的 130% 130% of nominal Voltage	额定电压的 75% 75% of nominal voltage	额定电压的 5% 5% of nominal voltage	约 0.45W Approx. 0.45W
5	90.00	55				
6	75.00	80				
9	50.00	180				
12	37.50	320				
18	25.00	720				
24	18.75	1,280				
48	9.38	5,120				

额定电压 (VDC) Nominal voltage (VDC)	额定电流 ±10%(mA) Nominal operating current ±10%(mA)	线圈电阻 ±10% (Ω) coil resistance ±10%(Ω)	最大连续外加电 压 Max. allowable voltage	吸合电压 (Max.) Pick-up voltage (Max.)	释放电压 (Min.) Drop-out voltage (Min.)	额定功率 Nominal operating power
3	133.33	22.5	额定电压的 130% 130% of nominal Voltage	额定电压的 75% 75% of nominal voltage	额定电压的 5% 5% of nominal voltage	约 0.4W Approx. 0.4W
5	80.00	62.5				
6	66.67	90				
9	44.44	202.5				
12	33.33	360				
18	22.22	810				
24	16.67	1,440				
48	8.33	5,760				
3	66.67	45	额定电压的 130% 130% of nominal Voltage	额定电压的 75% (Form C 80%) 75% of nominal voltage (80% of nominal voltage with Form C)	额定电压的 5% 5% of nominal voltage	约 0.2W Approx. 0.2W
5	40.00	125				
6	33.33	180				
9	22.22	405				
12	16.67	720				
18	11.11	1,620				
24	8.33	2,880				
48	4.17	11,520				

(1) 上述值为初始值；请勿在产品上连续施加最大电压 > 10min，以免线圈过度发热。

The data shown above are initial values. Do not energize the maximum allowable voltage of the coil for more than 10 minutes to avoid overheating of the coil.

■ 安规认证负载（注：更多详细的认证负载，参考安规证书）

认证类型 Approval	CQC	TUV	VDE	UL/CUL
认证号码 File No.	CQC04001009429	R5014357	40035912	E190598
认证负载 Approved Ratings	From A: 5A 277VAC From C: 5A 277VAC, NO 3A 277VAC, NC	NO: 5A 250VAC NC: 3A 250VAC	From A: 5A 277VAC From C: 5A 277VAC, NO 3A 277VAC, NC	SJE - D/L/E : Form A : 5A 277VAC , Resistive&General use Form C : 5A 277VAC , Resistive/General Use , NO 3A 277VAC , Resistive/General Use , NC

- (1) 上述未注明温度的负载，均指环境温度为室温。

The above-mentioned unspecified temperature ratings, means that the ambient temperature is room temperature.

- (2) 以上仅列出了该产品认证的部分负载，每个负载的详细测试条件不同，因此电寿命次数不一样。如需了解详细情况，请联系三友。

Only some typical ratings are listed above. Each rating's test condition is different, so the electrical endurance will be different. If more details are required, please contact us.

- (3) 对于塑封式、防水式产品试验时，应打开外壳的透气孔。

For sealed type testing, please open the ventilation hole of case before test.

■ 订货标记 Ordering Information

型号命名规则 Nomenclature									
SJE	-S	-1	12	D	M	H	3	-F	-XX
									特殊参数 Special Parameter : 无 Nil - 普通型 Standard 字母或数字-特殊要求 Nil-Standard type Letter or number-Special requirement
									绝缘等级 Insulation System : 无 Nil - 普通型 Standard F - Class F
									触点材质 Contact Material : 无 Nil - AgSnO ₂ , 2-AgNi , 3 - AgSnO ₂ 三复合动点 For contact 3 Compounds(Form C) 4 - AgNi 三复合动点 For contact 3 Compounds(Form C)
									负载能力 Load Capacity : 无 Nil - 普通型 Standard, H-10A
									触点形式 Contact Form : Nil - Form C , B - Form B , M - Form A
									线圈功耗 Coil Power : D-0.45W , E-0.4W , L-0.2W
									线圈规格 Coil Voltage (VDC) : 03 , 05 , 06 , 09 , 12 , 18 , 24 ,48
									触点组数 Number of Poles : 1-1 Pole
									封装形式 Protective Construction : S-塑封式 Flux proofed , SH-防水式 Sealed type washable
基本型号 Type Designation : SJE									

- (1) 塑封式不能在污染环境（含有 H₂S、SO₂、NO₂、粉尘等污染物）中使用。

Plastic sealing type can not be used in polluted environment (containing H₂S, SO₂, NO₂, dust and other pollutants)

- (2) 塑封式装入 PCB 焊接后，不能进行整体清洗或表面处理。

After the plastic seal product is loaded into PCB welding, the whole cleaning or surface treatment can not be carried out.

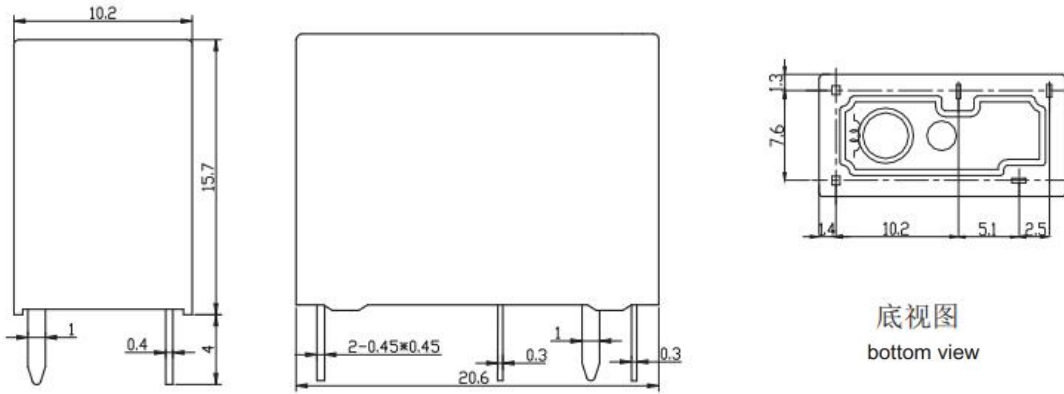
- (3) 客户特殊要求（XX），由我司评估后，按特性符号标识。

Special requirements of customers (XX) shall be evaluated by our company and marked by characteristic symbols.

SJE(5A)

■ 外形尺寸图、接线图、安装孔位图（单位：mm）

Outline dimension drawing, wiring diagram, installation drawing (unit: mm)



底视图
bottom view

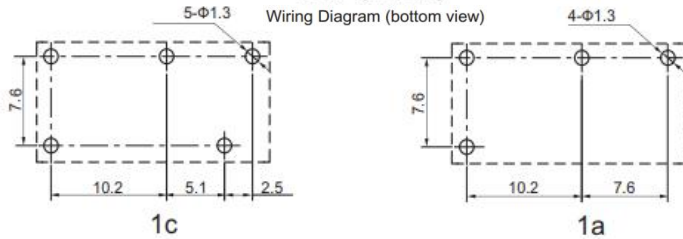
未标注尺寸公差：
 < 1mm: $\pm 0.2\text{mm}$
 1~5mm: $\pm 0.3\text{mm}$
 > 5mm: $\pm 0.4\text{mm}$
 注：1、引出脚尺寸为预焊前尺寸
 2、安装孔尺寸公差： $\pm 0.1\text{mm}$

Unless otherwise specified :
 If dimension < 1mm, tolerance : $\pm 0.2\text{mm}$;
 If dimension 1~5mm, tolerance : $\pm 0.3\text{mm}$;
 If dimension > 5mm, tolerance : $\pm 0.4\text{mm}$.
 Note : 1. Extended terminal dimension is dimension before soldering.
 2. Tolerance of P.C.B. layout : $\pm 0.1\text{mm}$.



接线图(底视图)

Wiring Diagram (bottom view)



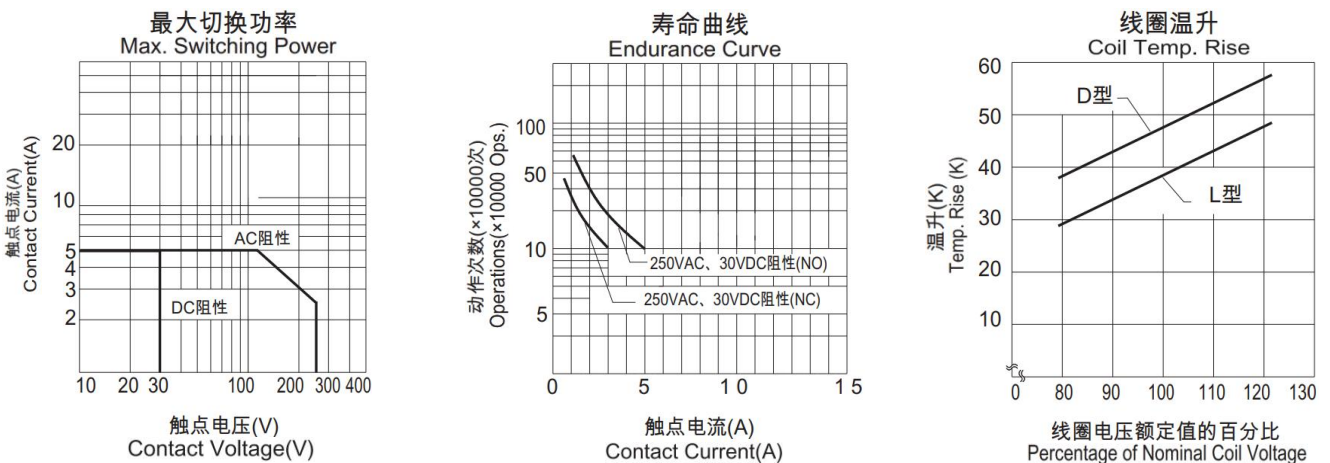
安装孔位图(底视图)

P.C.B. Layout (bottom view)

■ 典型用途 Typical Applications

- 通讯
- 安全设备
- 办公设备等
- 家用电器等，如空调，微波炉
- Telecommunication equipment
- Safety equipment
- Office equipment
- Home appliances such as air conditioner, microwave oven

■ 性能曲线图 Characteristic Curves



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对三友而言，不可能评定继电器在每个具体应用领域的所有性能参数要求，因而客户应该根据具体的使用条件选择与之相匹配的产品。对于密封继电器在安装清洗后，使用前请打开外壳上的透气孔。若有疑问，请与三友联系获取更多的技术支持。但产品选型责任仅由客户负责。

Disclaimer: This datasheet is for customers' reference. All the specification are subject to change without notice.

We could not evaluate all the performance and all the parameters for every possible application. Thus the user should in a right position to choose the suitable product for their own application. For sealed relays after installation and cleaning, please open the vent hole on the case before use. If there is any query, please contact Sanyou for technical service. However it is the user's responsibility to determine which product should be used only.