

## Miniature Power Relay

## SRB



### Features

- Small size (20.5x7x15.1 mm) for high density PCB mounting.
- 5A contact switching capability.
- High breakdown voltage : 4000V (between coil and contact).
- IEC60335-1 compliant product is available.
- IEC60079-15 compliant product is available.

### Safety Approval

UL , cUL File No. : E190598

TUV File No. : R50138320

VDE File No. : 40033402

CQC File No. : CQC07001019820、CQC11002064517、CQC21002306490

## Contact Data

Type	SRB
Rated load (Resistive load)	5A 277VAC 3A 277VAC
Max. switching current	5A
Max. switching voltage	277VAC
Max. switching power	1385VA
Min. switching load	6V 1A

## Characteristic

Contact material	Silver alloy	
Contact resistance	100mΩ Max.(at 1A 6VDC)	
Operate time (at rated coil voltage)	10ms Max. (no diode)	
Release time	5ms Max. (no diode)	
Insulation resistance	1,000MΩ Min. (DC500V)	
Dielectric strength	Between open contacts : 750VAC, 50/60Hz for 1min.	
	Between coil and contact : 4,000VAC, 50/60Hz for 1min.	
Vibration resistance	Functional	10~55Hz at double amplitude of 1.5 mm
	Destructive	10~55Hz at double amplitude of 1.5 mm
Shock resistance	Functional	10G Min.
	Destructive	100G Min.
Endurance	Mechanical endurance (at 10,800ops./h)	10,000,000(at room temperature)
	Electrical endurance (at 360ops./h)	100,000(at room temperature)

Ambient temperature	-40°C ~ +85°C ( No condensation ) For ambient temperature is 105°C, please contact Sanyou
Weight	Approx. 3.9g

### Coil Data (at 20°C)

Nominal voltage (VDC)	Nominal operating current ± 10%(mA)	Coil resistance ±10%(Ω)	Max. allowable voltage	Operate voltage (Max.)	Release voltage (Min.)	Nominal operating power
5	40.00	125	130% of nominal voltage	75% of nominal voltage	5% of nominal voltage	0.2W
6	33.33	180				
9	22.22	405				
12	16.67	720				
18	11.11	1,620				
24	8.33	2,880				
5	72.00	69				0.36W
6	60.00	100				
9	40.00	225				
12	30.00	400				
18	20.00	900				
24	15.00	1600				

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

### Safety Certificate Ratings (Note: More details of approved ratings, please refer to the safety certificates)

Certificates	CQC	TUV	VDE	UL/cUL
File No.	CQC07001019820 CQC11002064517 CQC21002306490	R50138320	40033402	E190598
Approved Ratings	5A 277VAC 3A 277VAC	5A 277VAC 3A 277VAC	5A 277VAC 3A 277VAC	5A 277VAC , Resistive 3A 277VAC , Resistive 3A 30VDC , Resistive 5A 250VAC , Resistive 3A 250VAC , Resistive 5A 250VAC , General Use 3A 250VAC , General Use 1/8HP 240VAC TV-3, 120VAC

(1) All values unspecified are at room temperature.

(2) Only typical ratings are listed above and the endurance differ in each load. Other specific load information are available upon request.

(3) For sealed type testing, please open the ventilation hole in the case before test.

## Ordering Information

### Nomenclature

SRB -S -1 12 D M 2 -F -XX

Special Parameter : Nil-Standard type,10-3A product,  
Letter or number-Special requirement

Insulation System : Nil – Standard , B - Class B , F - Class F

Contact Material : 2 – AgNi , 3 – AgSnO<sub>2</sub>

Contact Arrangement : M-Form A

Coil Power : D-0.20W , H-0.36W

Rated Coil Voltage (VDC) : 05 , 06 , 09 , 12 , 18 , 24

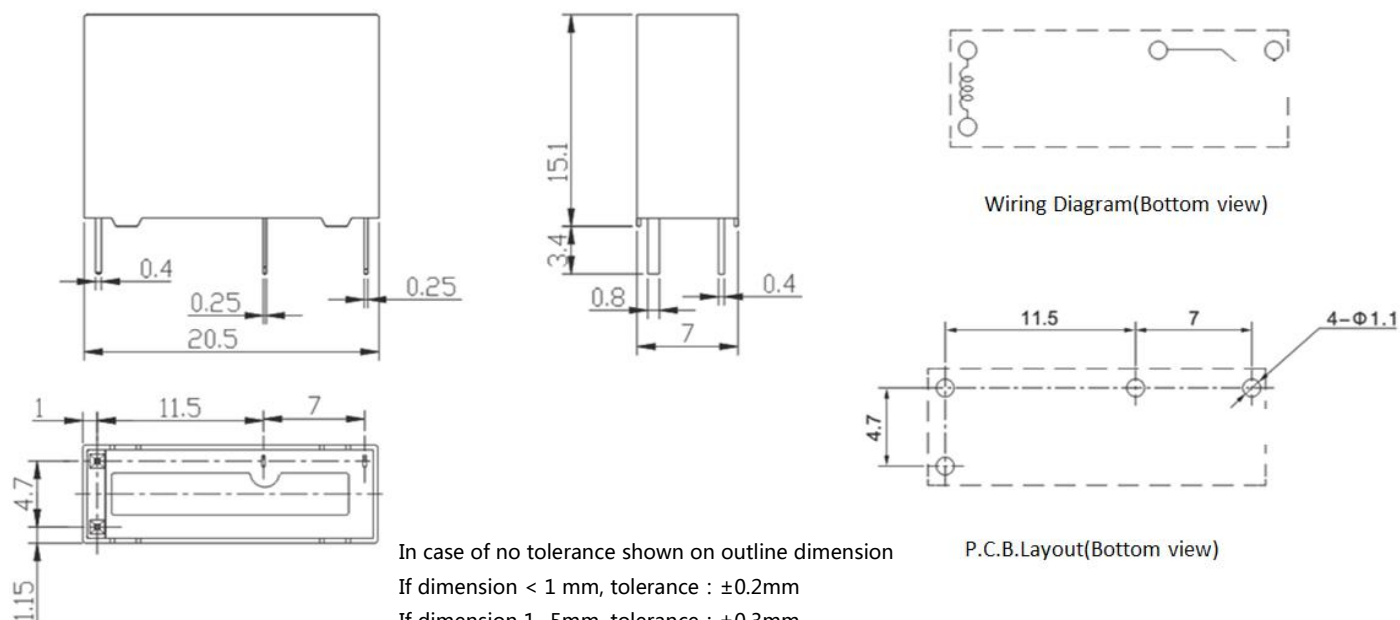
Number of Poles : 1-1 Pole

Protective Construction : S- Flux proofed ,  
SH- Sealed type washable

Type : SRB

- (1) Flux-proof relays can not be used in the environment with pollutants like H<sub>2</sub>S, SO<sub>2</sub>, NO<sub>2</sub>, dust, etc.
- (2) Water cleaning or surface process is not suggested after the flux-proof relays are assembled on PCB.
- (3) Customized special suffix is available after being evaluated by Sanyou.

## Outline dimension, wiring diagram, PCB layout (Unit: mm)



In case of no tolerance shown on outline dimension

If dimension < 1 mm, tolerance : ±0.2mm

If dimension 1~5mm, tolerance : ±0.3mm

If dimension > 5mm, tolerance : ±0.4mm

Note :

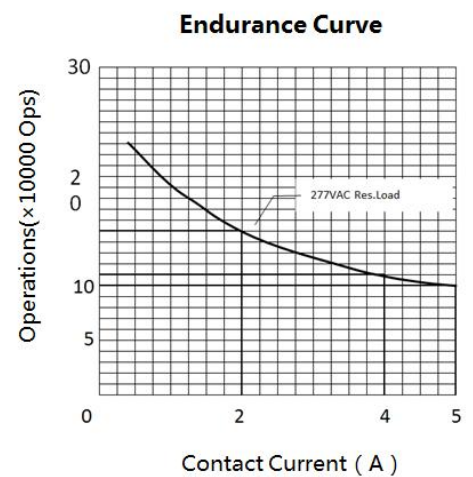
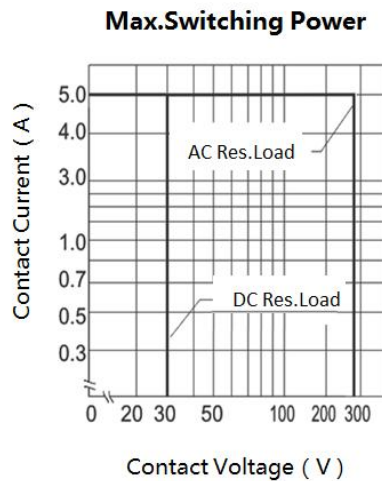
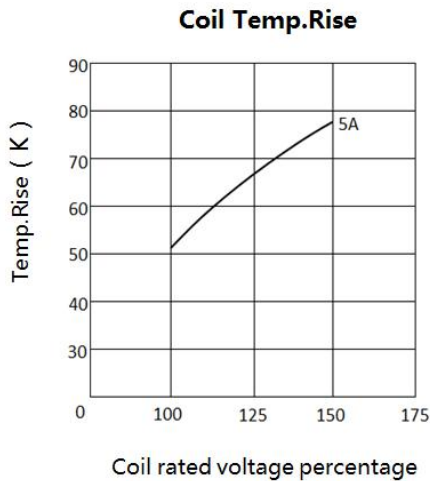
1.The dimension of pin is the size before tinning

2. Tolerance of PCB layout : ±0.1 mm.

## Typical Applications

- Telecommunication equipment
- Safety equipment
- office equipment
- Home appliances such as air conditioner, microwave oven

## Characteristic Curves



Note :

- (1) Test conditions: room temperature, flux-proof product, resistive load, 1s on, 9s off.
- (2) The above curves are for reference only, and the final result is subject to the experiment.

Disclaimer : The specification is for reference only. Specifications are subject to change without prior 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 the technical service. However it is the user's responsibility to determine which product should be used.