Miniature High Power Relay	SHP

Features

- 30A switching capability
- 70A withstands inrush current
- TV-15 (at 120VAC) available
- 1 Form A configuration
- UL insulation system: Class A

c US
(File No.:E134581)

1. COIL DATA (at 23°C)

Nominal Voltage (VDC)	Pick-up Voltage (VDC) Max.[1)]	Drop-out Voltage (VDC) Min[1)]	Max. Allowable Voltage (VDC)[2)]	Coil Current (mA)(±10%)	Coil Resistance (Ω)	Coil Power (mW)
5	3.50	0.5	6.00	240	20.8 x (1±10%)	Approx. 1200
6	4.20	0.6	7.20	200	30 x (1±10%)	
9	6.30	0.9	10.8	133	67.5 x (1±10%)	
12	8.40	1.2	14.4	100	120 x (1±10%)	
24	16.8	2.4	28.8	50	480 x (1±10%)	
48	33.6	4.8	57.6	25	1920 x (1±10%)	
60	42.0	6.0	72.0	20	3000 x (1±10%)	

Notes: 1) The data shown above are initial values.

2) The maximum allowable voltage refers to the maximum voltage which relay coil could endure in a short period of time.

2. CONTACT DATA

Contact Arrangement		1 Form A
Contact Resistance[1)]		100mΩ max. (at 1A 6VDC)
Contact Material		$AgSnO_2$
Contact Ratings (Resistive load)		30A 250VAC
Max. Switching Voltage		277VAC
Max. Switching Current		30A
Max. Switching Power		7500VA
Life Expectancy	Electrical	6,000 operations (at 30A 250VAC) 50,000 operations (at 23A cosØ=1 250VAC)
	Mechanical	5,000,000 operations

Notes: 1) The data shown above are initial values.

3. CHARACTERISTICS

Insulation Resistance		1000MΩ (at 500VDC)
Dielectric Strength	Open Contacts	1200VAC 1min
	Coil and Contacts	4000VAC 1min
Operate Time (at nominal voltage)		20ms max.
Release Time (at nominal voltage)		5ms max.
Temperature Range		-40℃ ~ 70℃
Shock Resistance	Functional	196m/s^2
	Destructive	980m/s^2
Vibration Resistance		10 ~ 55Hz 1.5mm DA
Humidity		5 ~ 85% RH
Termination		PCB, QC
Construction		Dust protected
Weight		Approx. 55g
Outline Dimension (L x W x H)		35.2 x 32.2 x 24.0mm

Notes: 1) The data shown above are initial values.

2) Please find coil temperature curve in the characteristic curves below.

4. SAFETY APPROVAL RATINGS

Safety Standard	Contact Form	Contact Rating
UL/cUL	1 Form A	30A 250VAC 2HP 125VAC/250VAC TV-15 120VAC

5. ORDERING INFORMATION

SHP ①	11 ②	-	D12 ③	Q ④

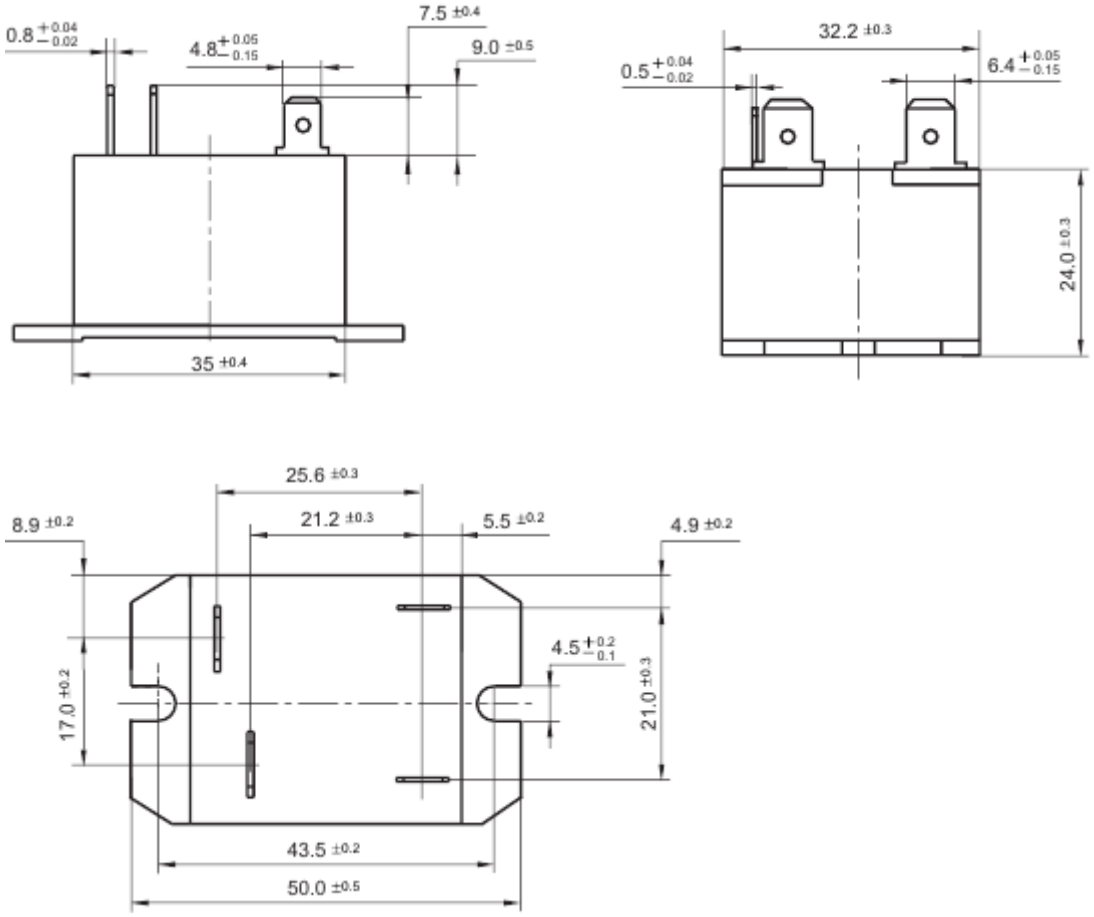
① Relay Model	SHP
② Contact Arrangement	11: 1 Form A (SPST-NO)
③ Coil Voltage	D5=5VDC, D6=6VDC, D9=9VDC, D12=12VDC, D24=24VDC, D48=48VDC, D60=60VDC
④ Termination Form	Nil: PCB S: Quick-connected

Notes: Please don't weld directly on terminal of quick-connected type.

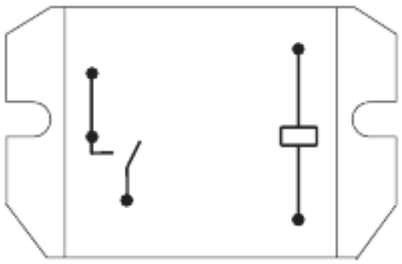
5. DIMENSIONS (Unit: mm)

Outline Dimensions

QC type

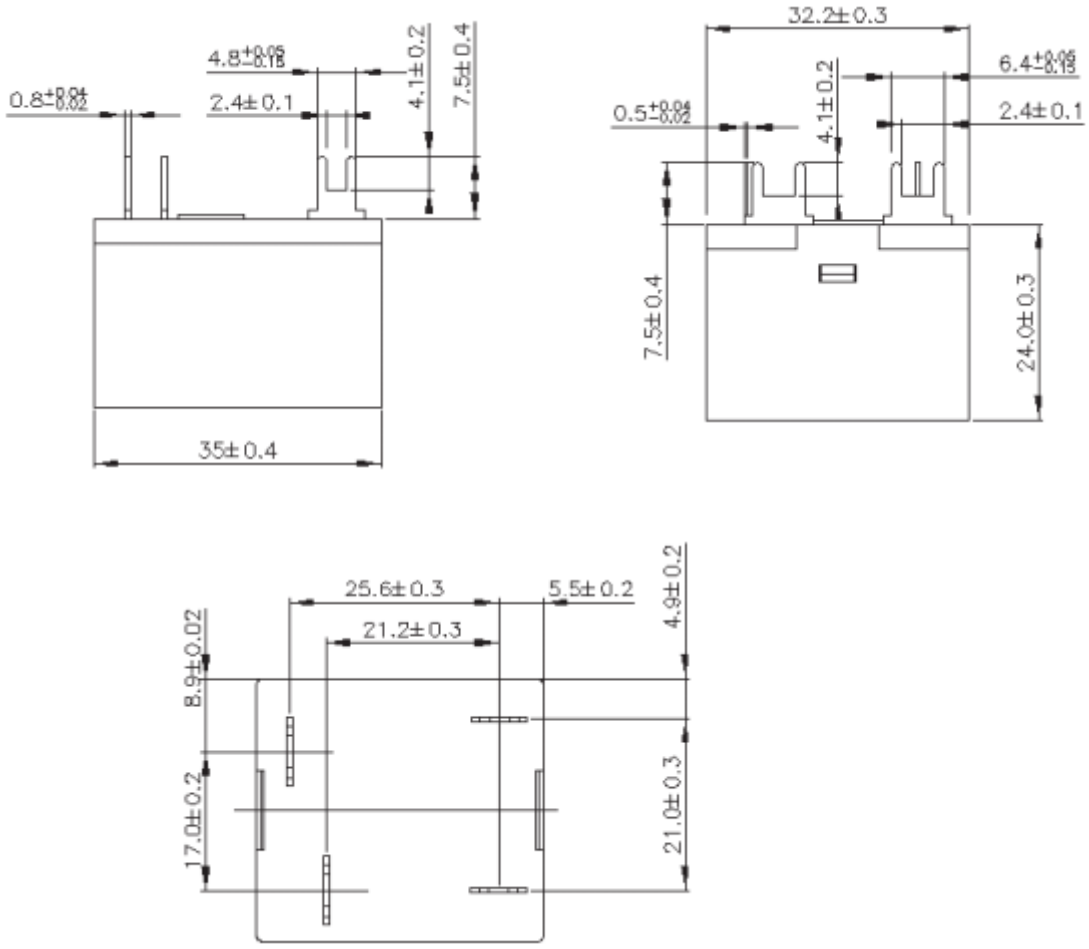


Wiring Diagram (Bottom View)



PCB Layout (Bottom View)

PCB type

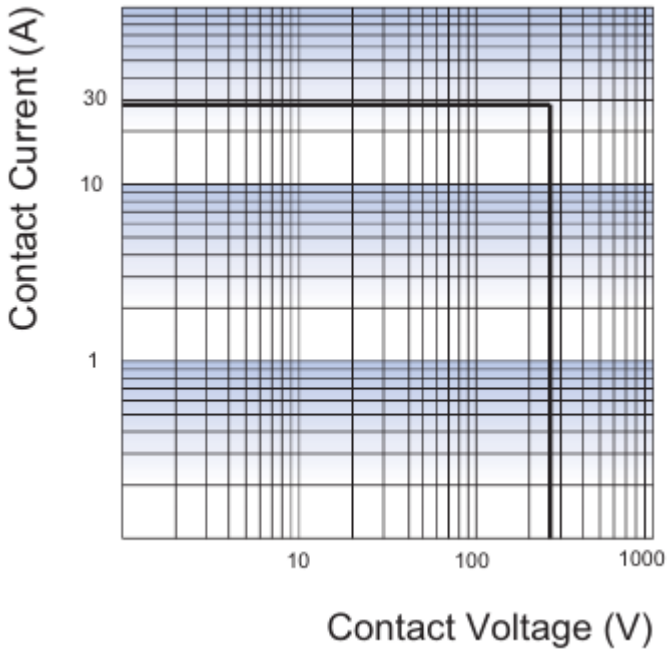


Remark: 1) In case of no tolerance shown in outline dimension: outline dimension ≤1mm, tolerance should be ±0.2mm; outline dimension >1mm and ≤5mm, tolerance should be ±0.3mm; outline dimension >5mm, tolerance should be ±0.4mm.

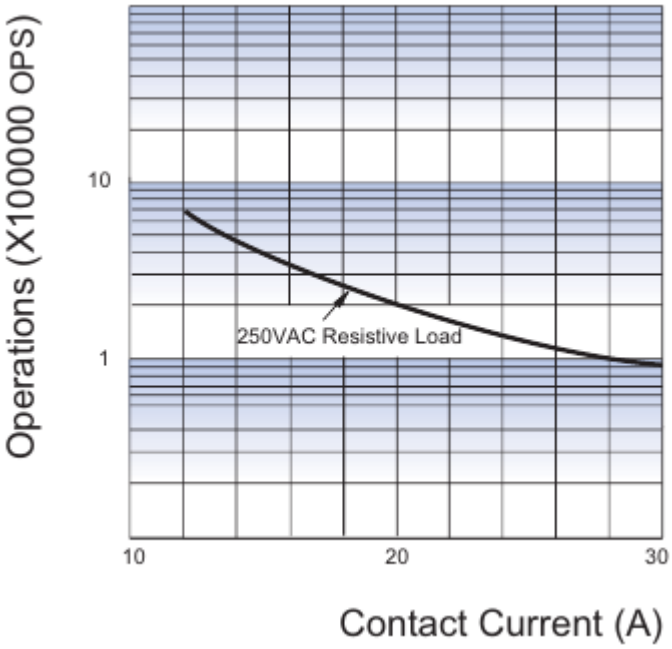
2) The tolerance without indicating for PCB layout is always ±0.1mm

6. CHARACTERISTIC CURVES

Maximum Switching Power



Endurance Curve



Coil Temperature Rise