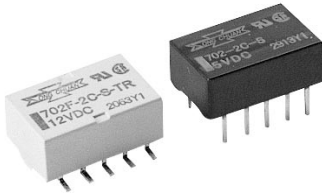


## »» Features

- Compact size and low 5mm profile.
- Low power consumption (140mW for single-side stable, 100 to 300mW for latching type).
- Low thermo electromotive force.
- Low magnetic interference enables high-density mounting.
- Single-and double-winding latching types also available.
- UL and CSA approval.



## »» Type List

Terminal style	Contact form	Relay function	Terminal shape	Enclosure style
				Plastics sealed
PCB terminal	2C (DPDT)	Single-side stable	PCB terminal	702-2C-S
		Single-winding latching		702U-2C-S
		Double-winding latching		702K-2C-S
		Single-side stable	Surface mount terminal	702F-2C-S-TR

## »» Ordering Information

702 U F - 2C - S - TR  
 1 2 3 4 5 6

- |   |  |
|---|--|
| 1. 702 -- Basic series designation<br><br>2. Blank -- Single-side stable<br>U -- Single-winding latching<br>K -- Double-winding latching<br><br>3. Blank -- PCB terminal<br>F -- Surface mount terminal | 4. 2C -- Double pole double throw<br><br>5. S -- Plastics sealed<br>U -- Ultrasonically cleanable<br><br>6. Blank -- Standard type<br>TR -- Tape packing |
|---|--|

## »» Contact Rating

Rated load (resistive load)	0.5A at 125VAC, 1A at 30VDC
Contact material	Ag + Au-clad
Max. continuous current	1A
Maximum switching voltage	125VAC, 110VDC
Maximum switching capacity	62.5VA, 33W
Min. permissible load	0.01μA at 10mVDC

Note : P level:  $\lambda_{60} = 0.1 \times 10^{-6}$ / operation

## »» Coil Rating (DC)

## ◆ Single-side stable

Rated voltage (V)	Rated current $\pm 10\%$ at 23 °C (mA)	Coil resistance $\pm 10\%$ at 23 °C ( $\Omega$ )	Max. continuous voltage at 23 °C	Pick up voltage(Max) at 23 °C	Drop out voltage(Min) at 23 °C	Power consumption at rated voltage
3	46.7	64.3	200 % of rated voltage	75 % of rated voltage	10 % of rated voltage	approx. 0.14W
5	28.1	178				
6	23.3	257				
9	15.5	579				
12	11.7	1028	170 % of rated voltage			approx. 0.2W
24	8.3	2880				

## ◆ Single-winding latching

Rated voltage (V)	Rated current $\pm 10\%$ at 23 °C (mA)	Coil resistance $\pm 10\%$ at 23 °C ( $\Omega$ )	Max. continuous voltage at 23 °C	Pick up voltage(Max) at 23 °C	Drop out voltage(Min) at 23 °C	Power consumption at rated voltage
3	33.3	90	180 % of rated voltage	75 % of rated voltage	75 % of rated voltage	approx. 0.1W
5	20	250				
6	16.7	360				
9	11.1	810				
12	8.3	1440				
24	6.25	3840				approx. 0.15W

## ◆ Double-winding latching

Rated voltage (V)	Rated current $\pm 10\%$ at 23 °C (mA)	Coil resistance $\pm 10\%$ at 23 °C ( $\Omega$ )	Max. continuous voltage at 23 °C	Pick up voltage(Max) at 23 °C	Drop out voltage(Min) at 23 °C	Power consumption at rated voltage
3	66.7	45	160 % of rated voltage	75 % of rated voltage	75 % of rated voltage	approx. 0.2W
5	40	125				
6	33.3	180				
9	22.2	405				
12	16.7	720	130 % of rated voltage			approx. 0.3W
24	12.5	1920				

## &gt;&gt;&gt; Specification

Contact resistance <sup>(1)</sup>	100 mΩ Max.	
Operate time <sup>(1)</sup>	single-side stable type	: 3 ms Max.
	latching type	: 3 ms Max.
Release time <sup>(1)</sup>	single-side stable type	: 2 ms Max.
	latching type	: 3 ms Max.
Bounce time	operate	: approx 0.5ms
	release	: approx 0.5ms
	set/reset	: approx 0.5ms
Min. set/reset signal width	latching type : 5 ms min.	
Insulation resistance <sup>(1)</sup>	1000 MΩ Min. (DC 500V)	
	Between set and reset coil : 100 MΩ (DC 125V)	
Dielectric strength <sup>(1)</sup>	Between coil and contacts	: AC 1000V, 50/60Hz 1 min.
	Between contact of different polarity	: AC 1000V, 50/60Hz 1 min.
	Between contact of same polarity	: AC 750V, 50/60Hz 1 min.
	Between set and reset coil :	AC 125V, 50/60Hz 1 min. (double-winding latching)
Surge withstand voltage	Between contact of same polarity : AC 1500V (10X160 μs) (conforms to FCC part 68)	
Vibration resistance	Operating extremes	10~55Hz , double amplitude 5 mm
	Damage limits	10~55Hz , double amplitude 3 mm
Shock resistance	Operating extremes	500 m/s <sup>2</sup>
	Damage limits	1000 m/s <sup>2</sup>
Life expectancy	Mechanical	100,000,000 operations (frequency 36,000 operations/hr)
	Electrical	200,000 operations (frequency 1,800 operations/hr)
Operating ambient temperature	-40 ~ +70 °C (no freezing)	
Weight	Approx. 1.5 g	

Note : (1) initial value

## &gt;&gt;&gt; Safety Approval

Certified	UL	CSA
File No.	E74321	218083

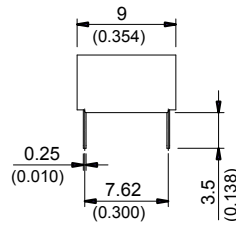
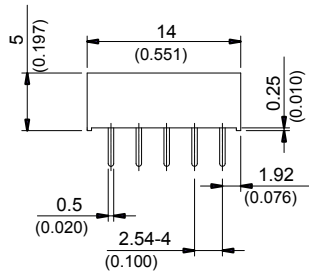
## &gt;&gt;&gt; Safety Approval Rating

UL	CSA
2A 30VDC	2A 30VDC
0.3A 110VDC	0.3A 110VDC
0.5A 125VAC	0.5A 125VAC

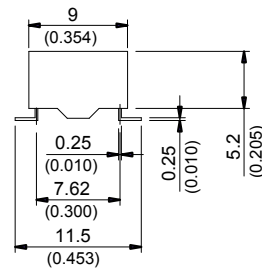
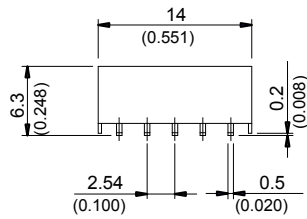
# 702

## Outline Dimensions

◆702



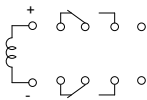
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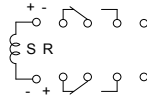
## Wiring Diagram

BOTTOM VIEW

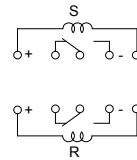
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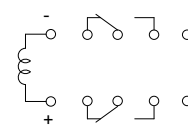
◆702U



◆702K



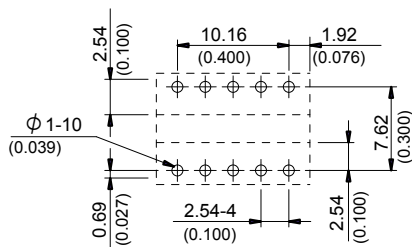
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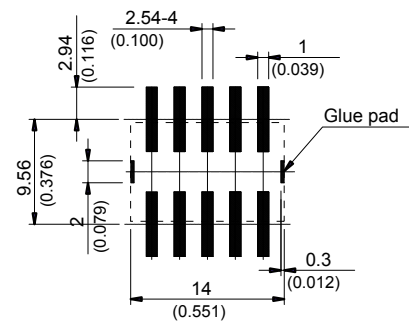
## PC Board Layout

BOTTOM VIEW

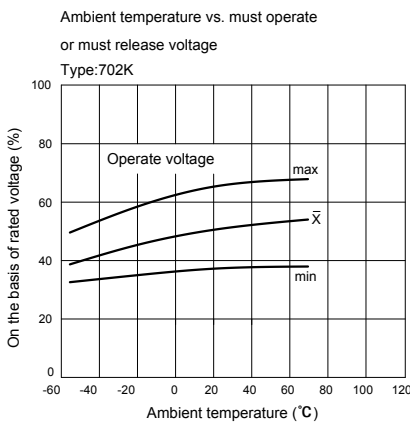
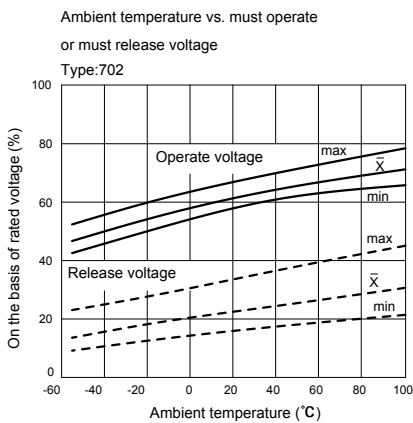
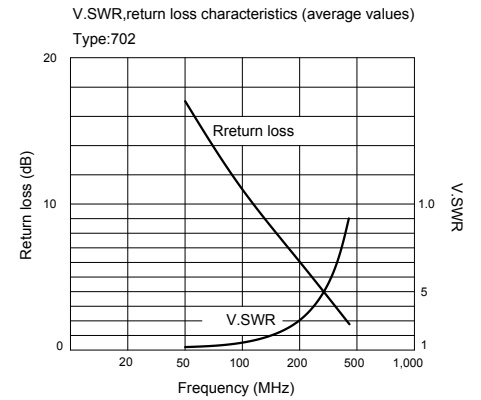
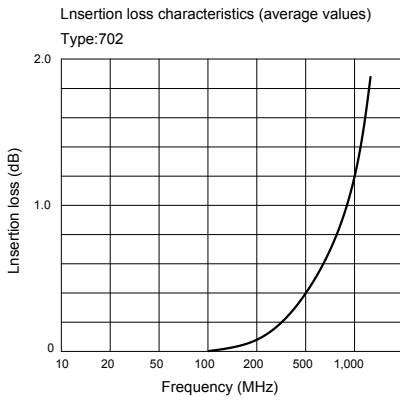
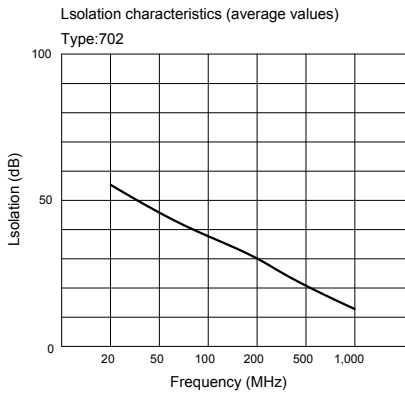
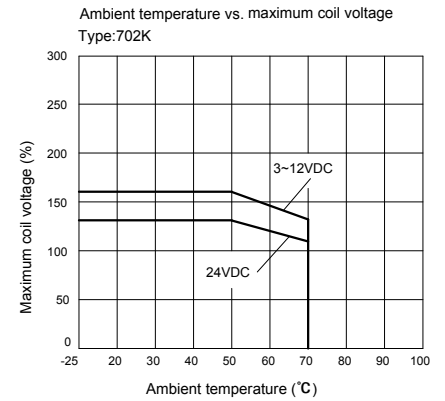
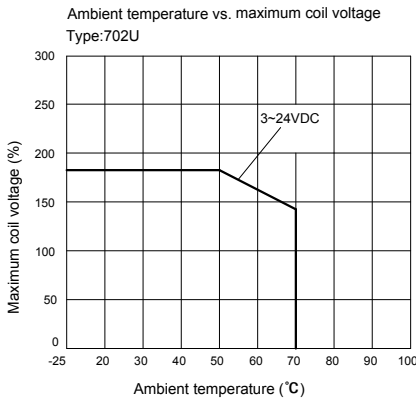
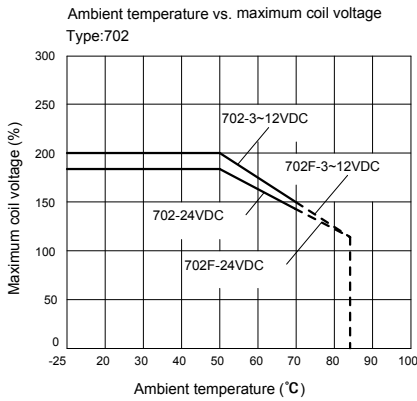
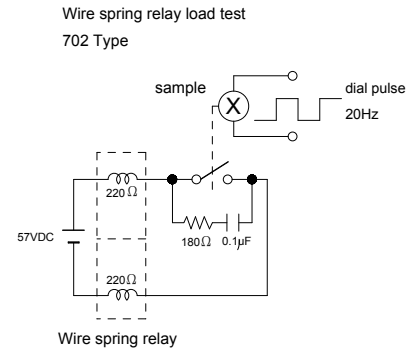
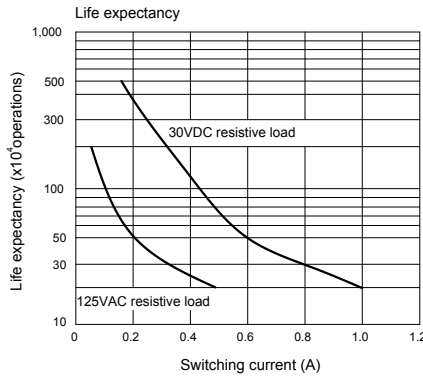
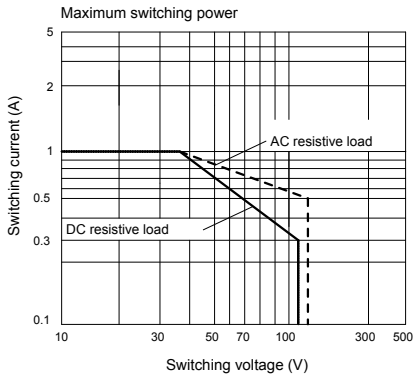
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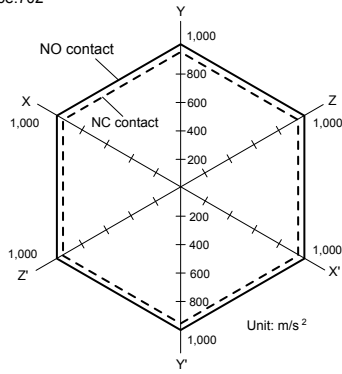
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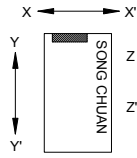
## Engineering Data



Shock malfunction  
Type:702



Shock direction

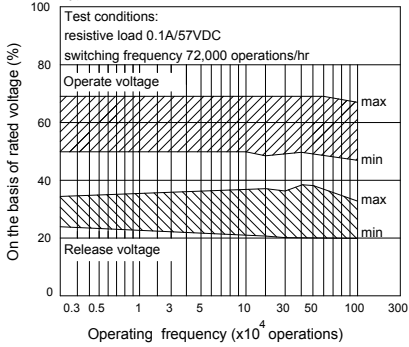


Conditions:

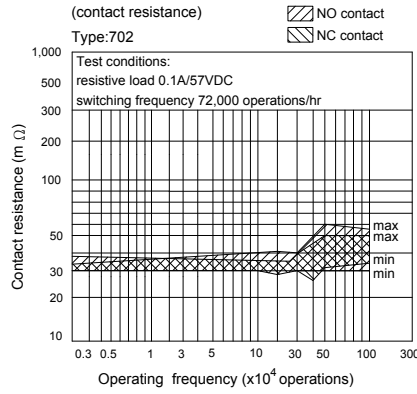
Shock is applied in +X, +Y, and +Z directions three times each with and without energizing the Relays to check the number of contact malfunctions.

Rating:500m/s<sup>2</sup>

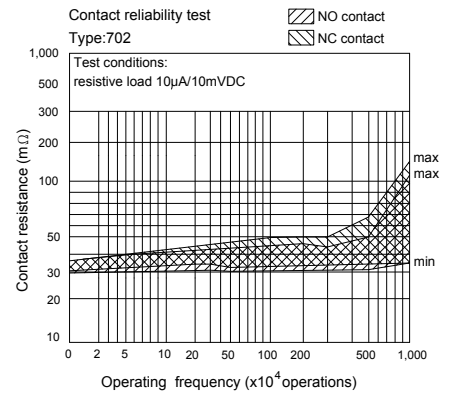
Electrical life expectancy  
(with must operate and must release voltage)  
Type:702



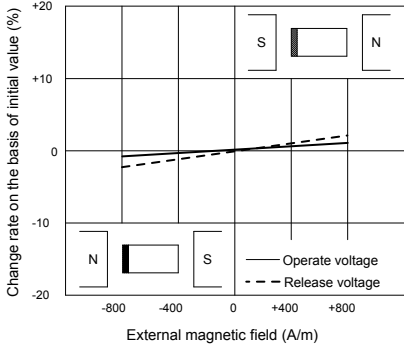
Electrical life expectancy  
(contact resistance)  
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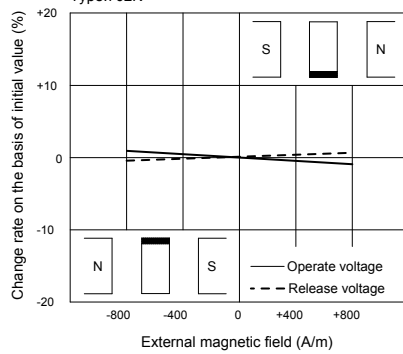
Contact reliability test  
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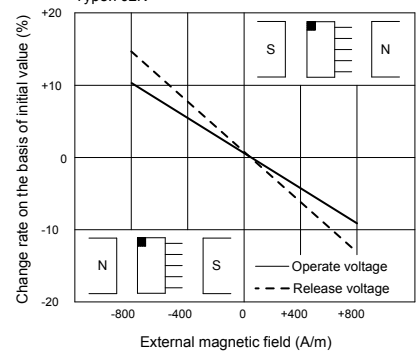
External magnetic Interference (average value)  
Type:702K



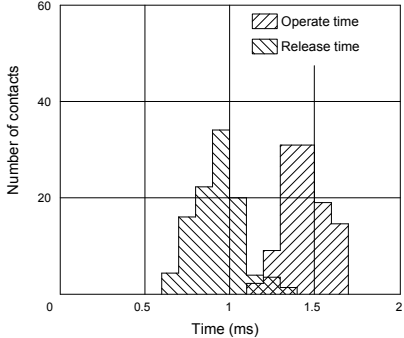
External magnetic Interference (average value)  
Type:702K



External magnetic Interference (average value)  
Type:702K



Must operate and must release time distribution  
Type:702



Must operate and must release bounce time distribution  
Type:702

