

# REED SWITCH

## ORT551

### Ultraminiature Transfer

#### ■ GENERAL DESCRIPTION

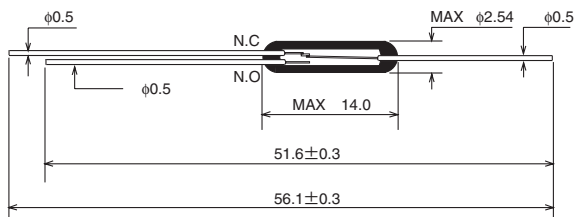
The OR551 is a ultraminiature two-contacts reed switch designed for transfer type operation. The contacts are sealed within the glass tube with inert gas to maintain contact reliability.

#### ■ FEATURES

- (1) Reed contacts are hermetically sealed within a glass tube with inert gas and do not receive any influence from the external atmospheric environment.
- (2) Quick response
- (3) The structure comprises the operating parts and electrical circuits arranged coaxially. Reed switches are suited to applications in radio frequency operation.
- (4) Reed switches are compact and light weight.
- (5) Superior corrosion resistance and wear resistance of the contacts assures stable switching operation and long life.
- (6) With a permanent magnet installed, reed switches economically and easily become proximity switches.

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#### ■ EXTERNAL DIMENSIONS (Unit: mm)



#### ■ APPLICATIONS

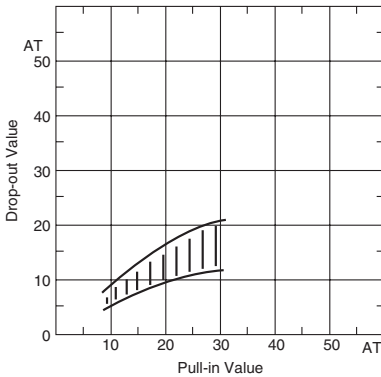
- Automotive electronic devices
- Control equipment
- Communication equipment
- Measurement equipment
- Household appliances

■ ELECTRICAL CHARACTERISTICS

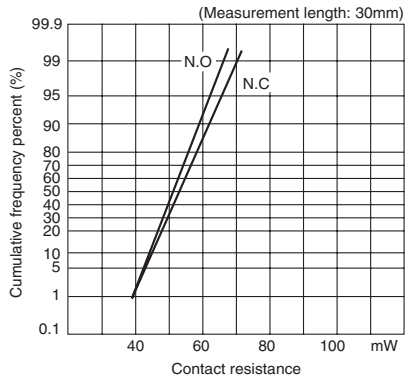
Parameter	Rated value	Unit
Pull-in Value (PI)	10~30	AT
Drop-out Value (DO)	4min	AT
Contact resistance (CR)	100max	mW
Breakdown voltage	200min ( $PI \geq 20$ )	VDC
	150min ( $PI < 20$ )	VDC
Insulation resistance	$10^9$ min	W
Electrostatic capacitance	1.5max	pF
Contact rating	3	VA
Maximum switching voltage	30 ( $\frac{DC}{AC}$ )	V
Maximum switching current	0.2	A
Maximum carry current	0.5	A

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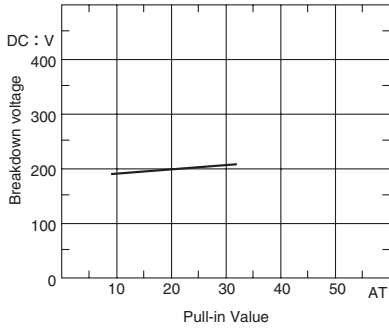
(1) Drop-out Value vs. Pull-in Value



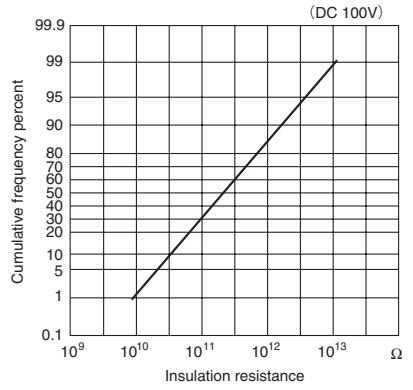
(2) Contact resistance



(3) Breakdown voltage

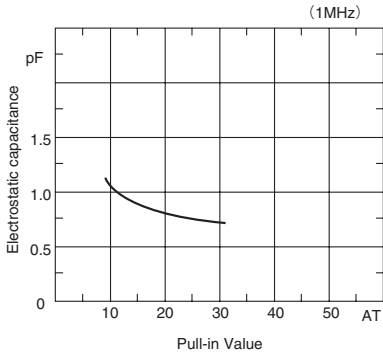


(4) Insulation resistance



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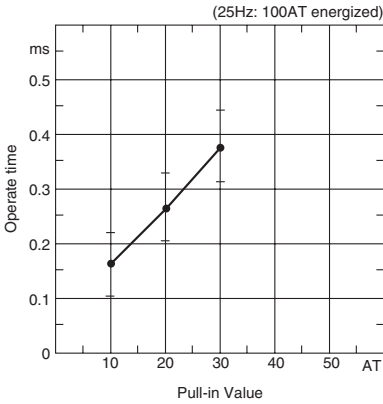
(5) Electrostatic capacitance



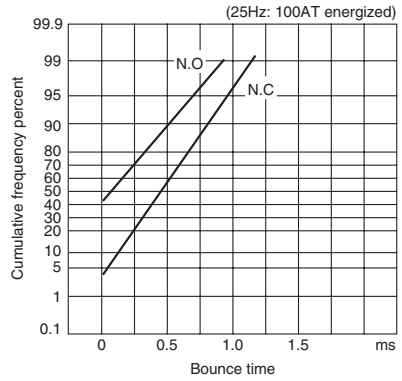
■ OPERATING CHARACTERISTICS

Parameter	Rated value	Unit
Operate time	1.0max	ms
Bounce time	NO 1.0max	ms
	NC 1.5max	ms
Release time	0.5max	ms
Resonant frequency	6000±4000	Hz
Maximum operating frequency	200	Hz

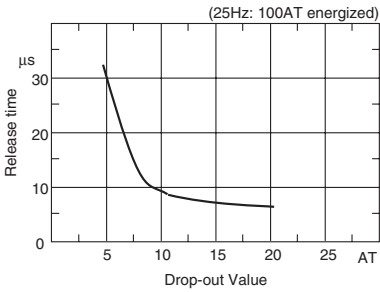
(1) Operate time



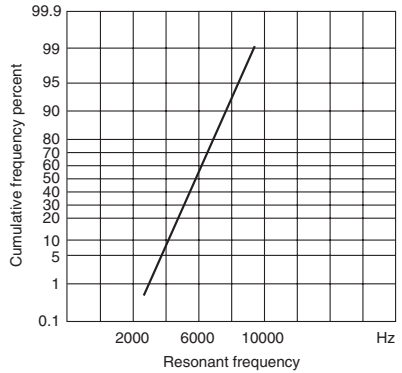
(2) Bounce time



(3) Release time



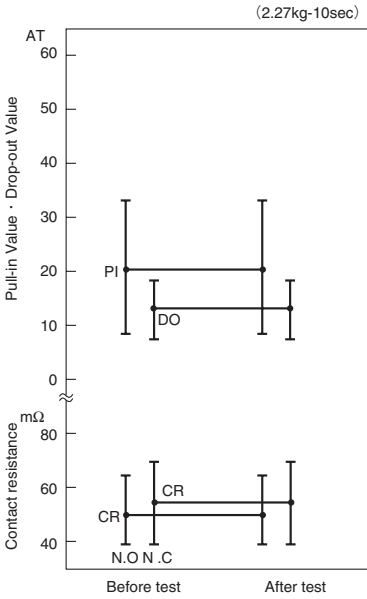
(4) Resonant frequency



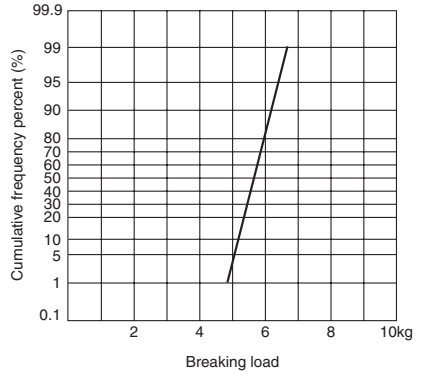
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■ MECHANICAL CHARACTERISTICS

(1) Lead tensile test (static load)



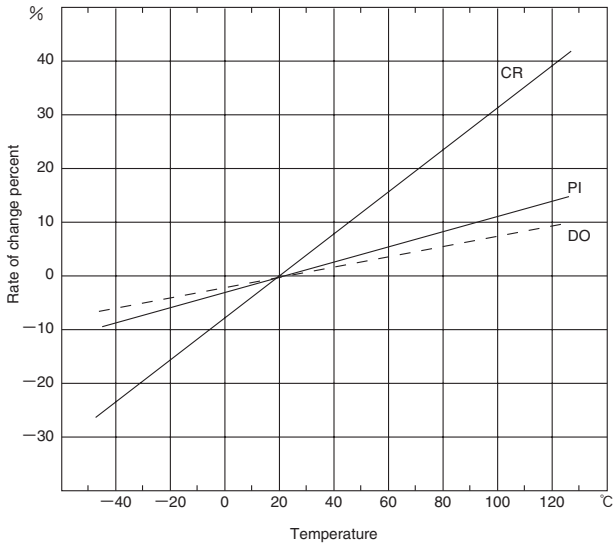
(2) Lead tensile strength



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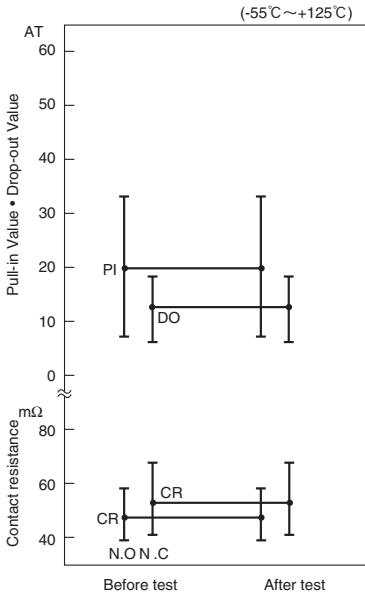
■ ENVIRONMENTAL CHARACTERISTICS

(1) Temperature characteristics

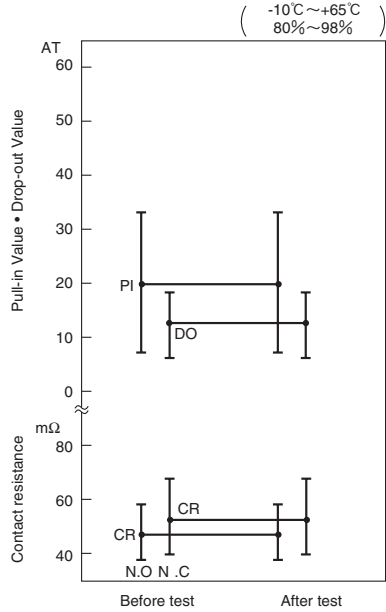


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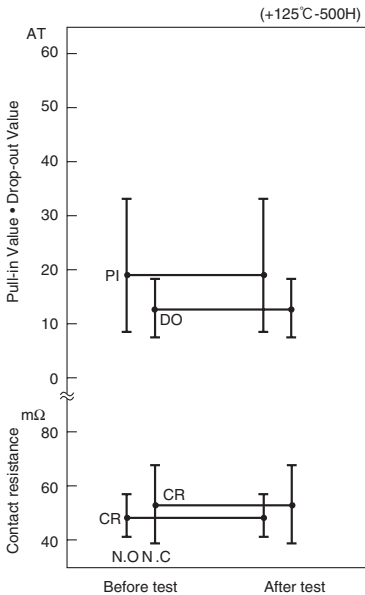
(2) Temperature cycle



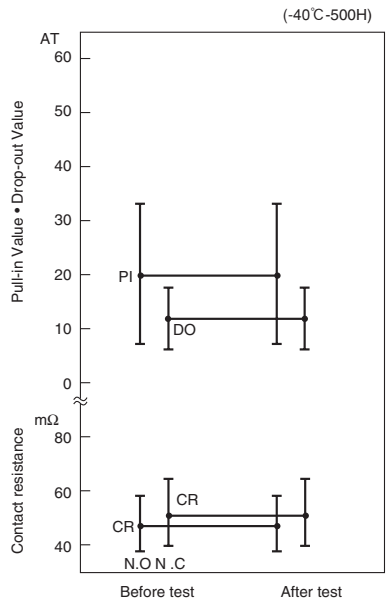
(3) Temperature and humidity cycle



(4) High temperature storage test

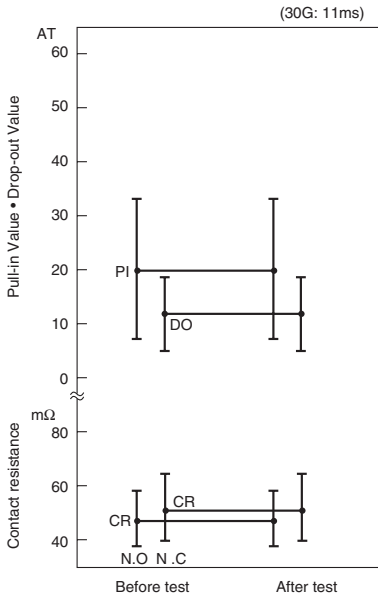


(5) Low temperature storage test

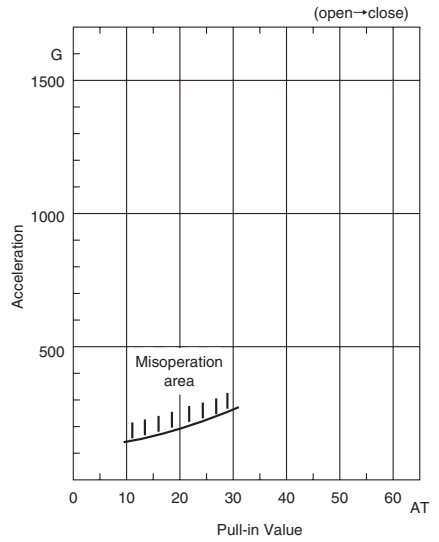


(6) Shock test

1) Electrical characteristics

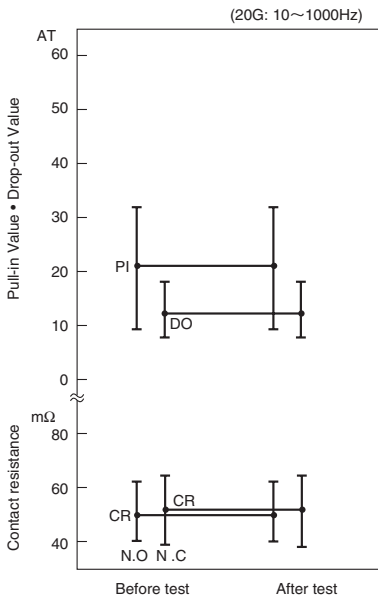


2) Misoperation area



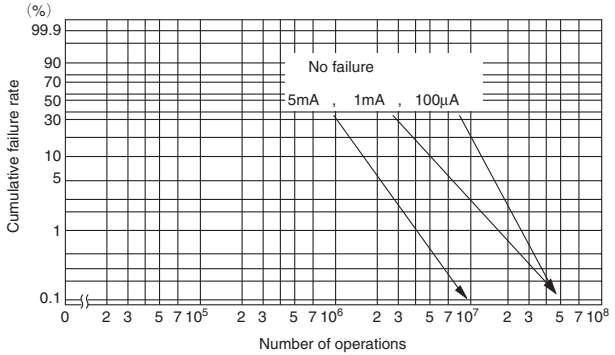
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(7) Vibration test



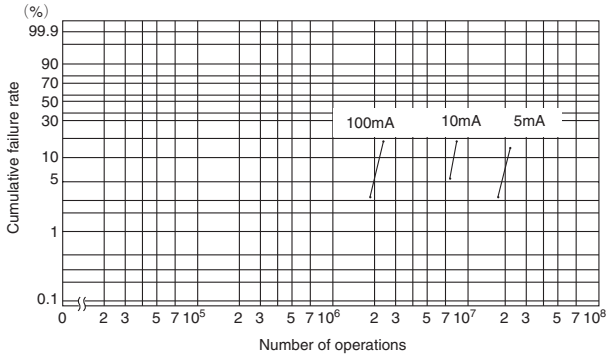
■ LIFE EXPECTANCY DATA: ORT551

Load conditions  
 Voltage: 5VDC  
 Current: 100µA, 1mA, 5mA  
 Load: Resistive load

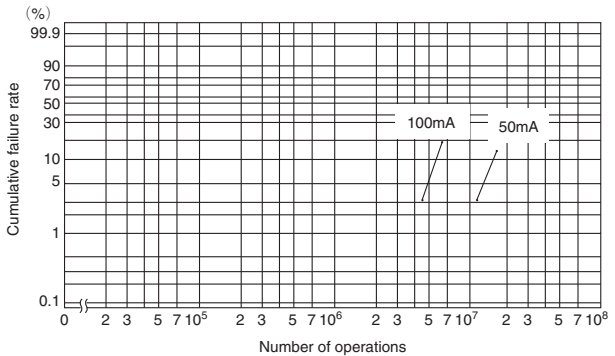


\* Arrow indicates number of operations where test was completed.

Load conditions  
 Voltage: 12VDC  
 Current: 5mA, 10mA, 100mA  
 Load: Resistive load



Load conditions  
 Voltage: 24VDC  
 Current: 50mA, 100mA  
 Load: Resistive load



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