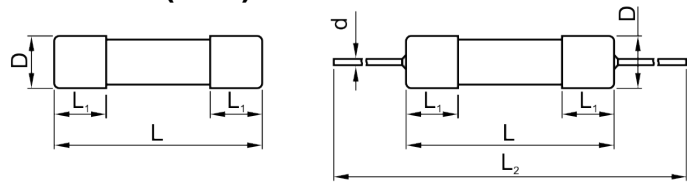


Miniature Fuses (Cartridge Fuse-links)

SCF520&SCF520P Series, Fast Acting, Ceramic Tube



Dimensions (mm)



L	L ₁	L ₂	D	d
20.0 ± 0.5	5.1 ± 0.3	96 ± 2	Φ5.2 ^{+0.1} _{-0.2}	≤6.3 A: Φ(0.65 ± 0.05) >6.3 A to 10 A: Φ(0.80 ± 0.05) >10 A to 20 A: Φ(1.00 ± 0.05) 25 A: Φ(1.20 ± 0.05)

Description

Φ5 × 20 mm, Fast-acting, high breaking capacity cartridge fuse, designed to IEC & UL standards.

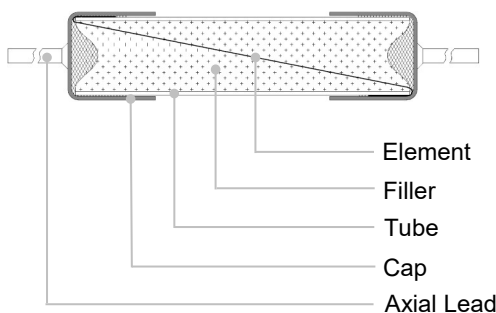
Features

- Φ5 mm × 20 mm
- Fast Acting
- High Breaking Capacity
- Ceramic Tube, Nickel-plated Brass End cap Construction
- Designed to UL 248-14 / IEC 60127-1 & 7
- Lead-free (Pb-free)
- RoHS & REACH Compliant

Applications

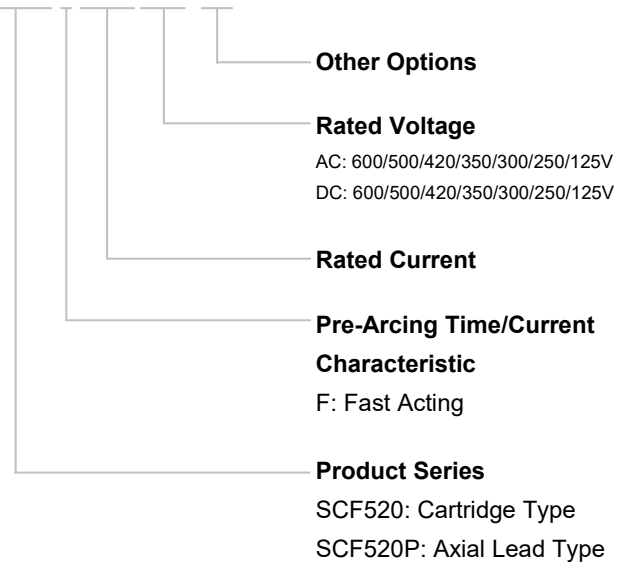
- Power Supply
- Household Appliance
- General Lighting
- Smart Home
- Office Equipment
- Electric Tool
- Medical Equipment
- Instruments and Apparatuses

Structure Diagram



Part Numbering System

SCF520F1.25A250V-001



Agency Approvals

Agency Approvals	Agency File Number	Ampere Range (A)
	E345932	0.5 to 25
	CQC21012313736 CQC21012313738 CQC21012317022 CQC21012317866 CQC21012319112 CQC21012320077 CQC21012322189 CQC21012322191	0.4 to 20
	R50541719	1 to 20

Glossary

Item	Description
Fuse	An overcurrent protective device with a fusible link that operates and permanently opens the circuit on an overcurrent condition.
Rated Current	The rated current of a fuse identifies its current-carrying capacity based on a controllable set of test conditions. Each fuse is marked with its rated current.
Rated Voltage	A maximum open circuit voltage in which a fuse can be used, yet safely interrupt an over-current. Exceeding the voltage rating of a fuse impairs its ability to clear an overload or short circuit safely.
Ampere Squared Seconds I^2t	The melting, arcing, or clearing integral of a fuse, termed I^2t , is the thermal energy required to melt, arc, or clear a specific current. It can be expressed as melting I^2t , arcing I^2t or the sum of them, clearing I^2t .
Time-current Characteristics	Under stated conditions of operation, the value of time as a function of the prospective current.
Rated Breaking Capacity	Value (r.m.s. for a.c.) of prospective current that a fuse-link is capable of breaking at a stated voltage under prescribed conditions of use and behaviour.




Miniature Fuses

Miniature Fuses

Miniature Fuses (Cartridge Fuse-links)

SCF520&SCF520P Series, Fast Acting, Ceramic Tube

Specifications

Series	Rated Current	Rated Breaking Capacity	Average Typical Melting I^2t^a	Agency Approvals			Environmental	
	(A)						RoHS	REACH
			(A ² sec)	CQC	TUV	cURus		
SCF520 SCF520P	0.4	UL (0.5 A-10 A): 1500 A@300 VAC 300 A@500 VAC / DC UL (12 A-20 A): 1500 A@300 VAC 300 A@500 VAC 300 A@420 VDC UL (25 A): 1500 A@300VAC 300 A@420VAC / DC UL (SCF520P25A): 300 @500VAC	0.06	●	○	○	●	●
SCF520 SCF520P	0.5		0.14	●	○	●	●	●
SCF520 SCF520P	0.63		0.23	●	○	●	●	●
SCF520 SCF520P	0.8		0.4	●	○	●	●	●
SCF520 SCF520P	1		0.6	●	●	●	●	●
SCF520 SCF520P	1.25		1.0	●	●	●	●	●
SCF520 SCF520P	1.6		1.35	●	●	●	●	●
SCF520 SCF520P	2		3.8	●	●	●	●	●
SCF520 SCF520P	2.5		4.8	●	●	●	●	●
SCF520 SCF520P	3.15		8.5	●	●	●	●	●
SCF520 SCF520P	4		16.5	●	●	●	●	●
SCF520 SCF520P	5		34	●	●	●	●	●
SCF520 SCF520P	6.3		65	●	●	●	●	●
SCF520 SCF520P	8		114	●	●	●	●	●
SCF520 SCF520P	10		235	●	●	●	●	●
SCF520 SCF520P	12.5		307	●	●	●	●	●
SCF520 SCF520P	15		315	●	●	●	●	●
SCF520 SCF520P	16		480	●	●	●	●	●
SCF520 SCF520P	20		1250	●	●	●	●	●
SCF520 SCF520P	25		2000	●	●	●	●	●

a: I^2t value is measured at 10 I_N . ○ : Pending. Breaking Capacity (CQC/TUV):
 SCF520 (0.4 A / 0.5 A / 0.63 A / 1 A / 1.6 A / 2 A / 2.5 A / 3.15 A / 5 A): 5000 A@250 VAC / DC, 300 A@600 VAC / DC, 3000 A@300 VAC
 SCF520 (0.8 A / 1.25 A / 4 A / 6.3 A / 12.5 A / 16 A): 5000 A@250 VAC / DC, 300 A@600 VDC, 3000 A@300 VAC, 200 A@500 VAC
 SCF520 (10 A): 5000 A@250 VAC / DC, 300 A@500 VAC / DC, 3000 A@300 VAC
 SCF520 (20 A): 5000 A@250 VDC, 200 A@350VAC
 SCF520P (0.4 A / 0.8 A / 1 A / 4 A / 5 A / 6.3 A / 8 A / 10 A): 5000 A@250 VAC / DC, 300 A@600 VDC, 3000 A@300 VAC, 300 A@500 VAC
 SCF520P (0.5 A / 0.63 A / 1.25 A / 1.6 A / 2 A / 2.5 A / 3.15 A): 5000 A@250 VAC / DC, 300 A@600 VAC / DC, 3000 A@300 VAC
 SCF520P (12.5 A / 16 A): 5000 A@250 VAC / DC, 300 A@600 VDC, 3000 A@300 VAC, 200 A@420 VAC
 SCF520P (20 A): 5000 A@250 VDC, 200 A@420 VDC, 200 A@350 VAC

Miniature Fuses

Miniature Fuses

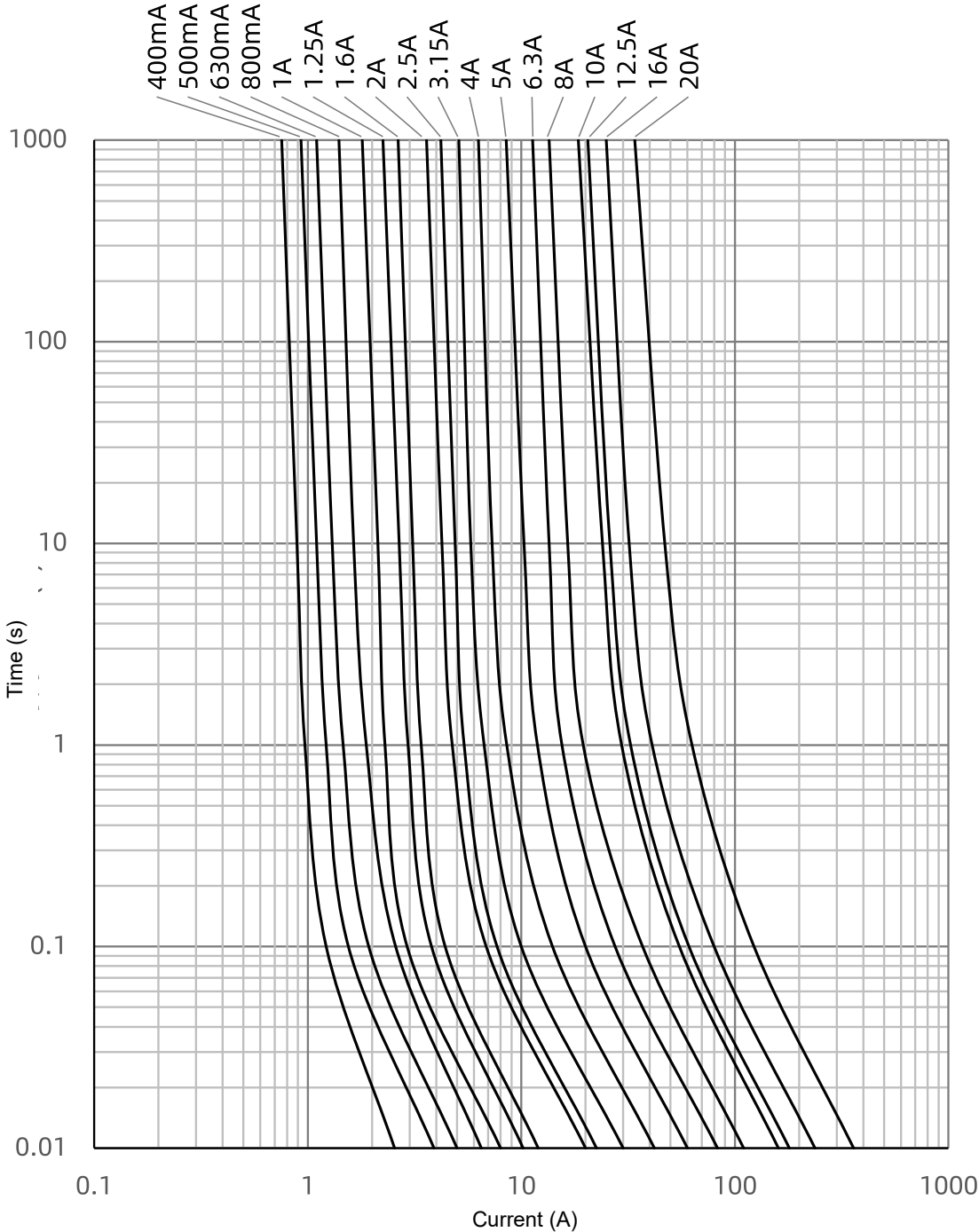
Miniature Fuses (Cartridge Fuse-links)

SCF520&SCF520P Series, Fast Acting, Ceramic Tube

Opening Time / Current Characteristic

Rated Current (A)	2.1I _N	2.75I _N		4I _N		10I _N
	Max.	Min.	Max.	Min.	Max.	Max.
0.4 to 10	30 minutes	40 ms	20 s	10 ms	1 s	30 ms
12 to 25	30 minutes	40 ms	20 s	10 ms	1 s	80 ms

Time Current Curve (For Reference Only)



Miniature Fuses

Miniature Fuses

Miniature Fuses (Cartridge Fuse-links)

SCF520&SCF520P Series, Fast Acting, Ceramic Tube

Reliability Test

No.	Items	Inspection Standards	Standards
1	High Temp. Test	<p>Test Condition: Temperature: (105 ± 2) °C Time: 1000 hours</p> <p>Test Requirement: After the test, the voltage drop shall not have changed by more than 10% of the value measured before the test. The clearing time of the fuse shall be in range.</p>	<p>MIL-STD-202(Test Method 108) GJB360B(Test Method 108)</p>
2	High Humidity Test	<p>Test Condition: Temperature: (40 ± 2) °C Humidity: 90% to 95% Time: 96 hours</p> <p>Test Requirement: After the test, the voltage drop shall not have changed by more than 10 % of the value measured before the test. The clearing time of the fuse shall be in range.</p>	<p>MIL-STD-202(Test Method 103) GJB360B(Test Method 103)</p>
3	Thermal Shock Test	<p>Test Condition: Per Cycle: -40 °C / 30 minutes, 85 °C / 30 minutes Time: 10 Cycles</p> <p>Test Requirement: After the test, the voltage drop shall not have changed by more than 10 % of the value measured before the test. The clearing time of the fuse shall be in range.</p>	<p>MIL-STD-202(Test Method 107) GJB360B(Test Method 107)</p>

Miniature Fuses

Miniature Fuses

Miniature Fuses (Cartridge Fuse-links)

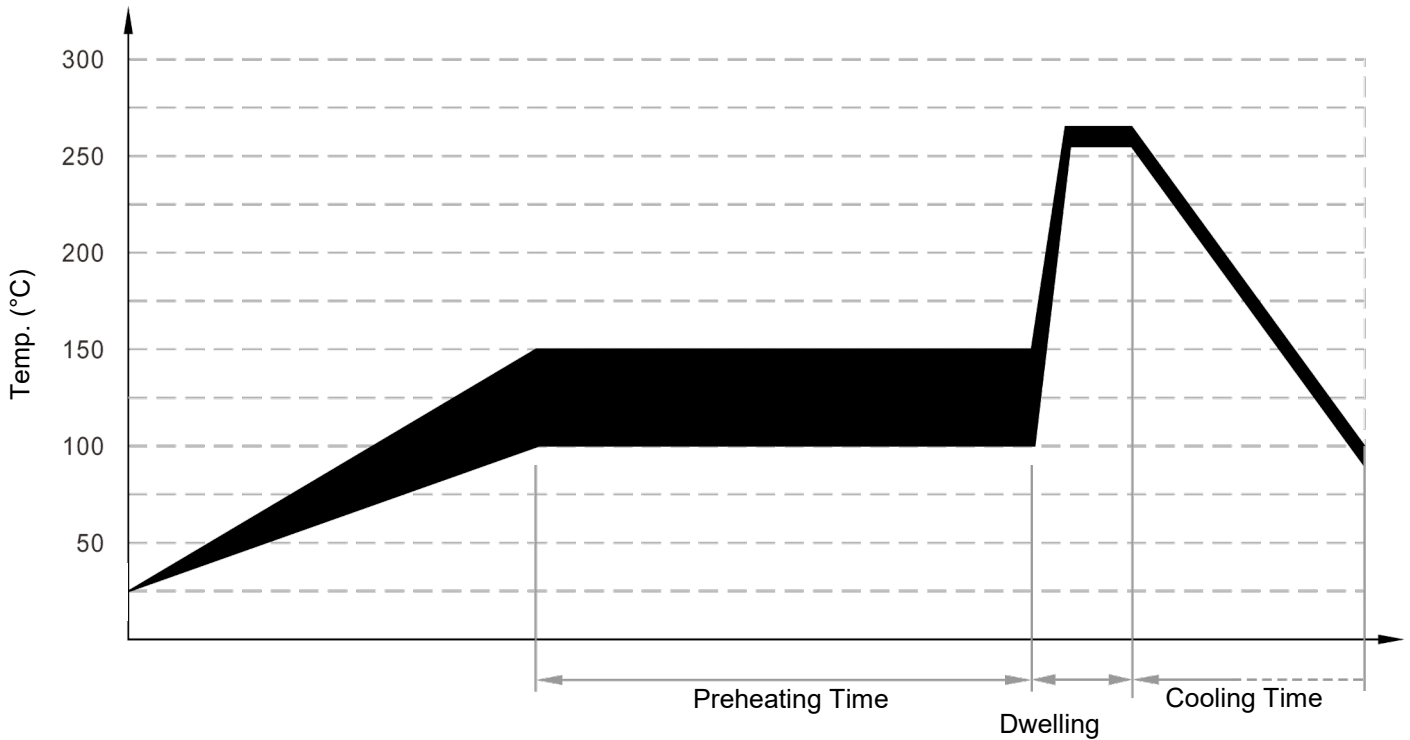
SCF520&SCF520P Series, Fast Acting, Ceramic Tube

Installation

Mechanical stress

Do not apply mechanical stress to the fuse body during or after the installation.

Wave soldering Parameters (For Reference Only)



Item	Temp. (°C)	Time (s)
Preheating	100 to 150	60 to 180
Dwelling	260 ± 5	2 to 5

Recommended Hand-Soldering Parameters

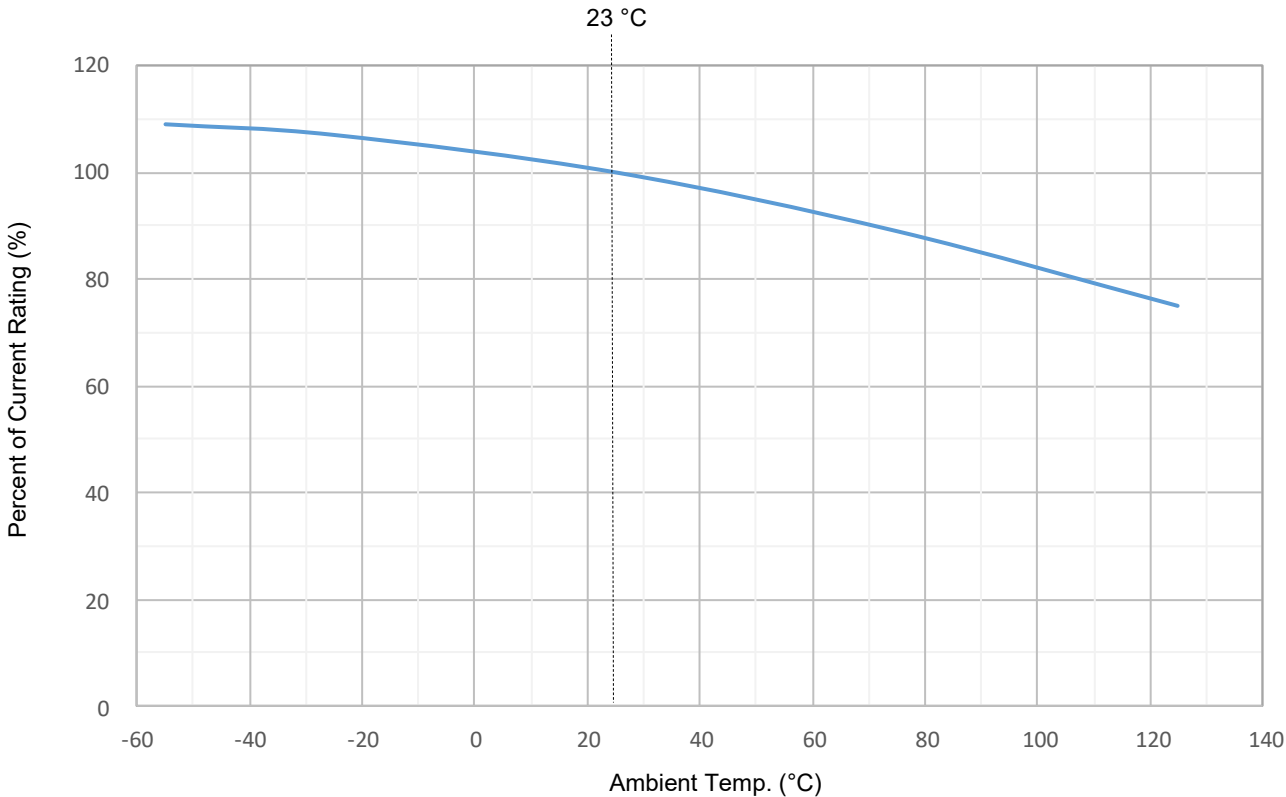
Solder Iron Temp.: (350 ± 5) °C

Heating Time: 5 seconds Max.

Miniature Fuses (Cartridge Fuse-links)

SCF520&SCF520P Series, Fast Acting, Ceramic Tube

Temperature Derating Curve

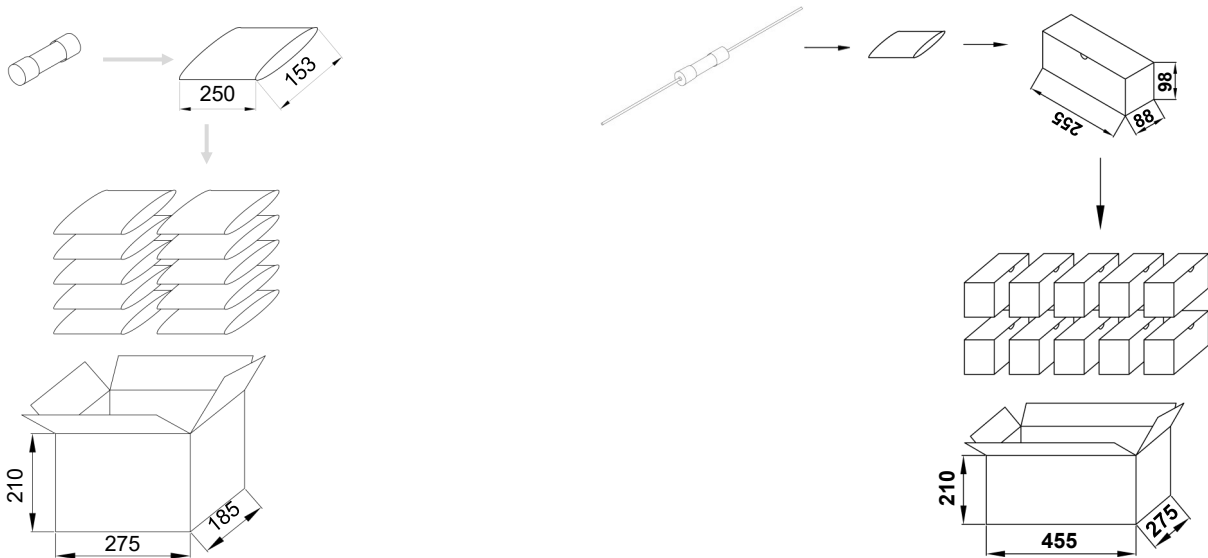


Miniature Fuses

Miniature Fuses

Packaging Information

All dimensions in mm



Cartridge Type		
Item	PE Bag	Carton
Quantity (PCS)	1,000	10,000
Gross Weight (kg)	13.5 × (1±10%)	

Axial Lead Type			
Item	PE Bag	Box	Carton
Quantity (PCS)	400	800	8,000
Gross Weight (kg)	15.0 × (1±10%)		



ATTENTION

Inspection

Cold Resistance Test

- a. Applied current shall be less than 10% of rated current, at ambient Temp. of (23 ± 2) °C.
- b. (4-Wire) Resistance Measurement.

Usage

- a. Do not touch the fuse body or lead wire when power on, avoiding scald or electric shock.
- b. Air pressure is 80 kPa to 106 kPa. These values represent an altitude of +2000 m to -500 m, respectively.

Replacement

For safety reasons, the Fuse is the non-resettable product, please ensure that the alternative Fuse is the same type when replace it.

Storage

Please store the fuse in the environment without high temperature, high humidity or corrosive gas, to avoid reducing the solderability of the lead wire. Please use them up within 1 year after receiving the goods.