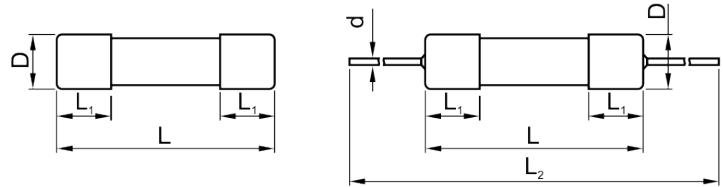


Miniature Fuses (Cartridge Fuse-links)

SCT520&SCT520P Series, Time-Lag, 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 / 30 A: Φ(1.20 ± 0.05)

Description

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

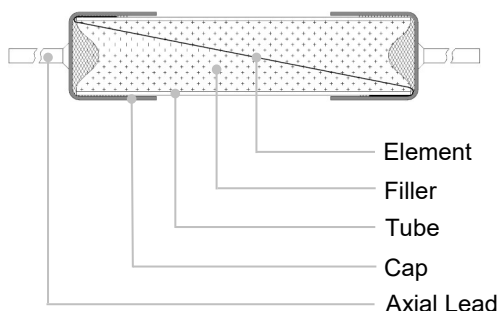
Features

- Φ5 mm × 20 mm
- Time-Lag
- High Breaking Capacity
- Ceramic Tube, Nickel-plated Brass Endcap Construction
- Designed to UL248-14 / IEC 60127-2 & 7
- Lead-free (Pb-free)
- RoHS & REACH Compliant

Applications

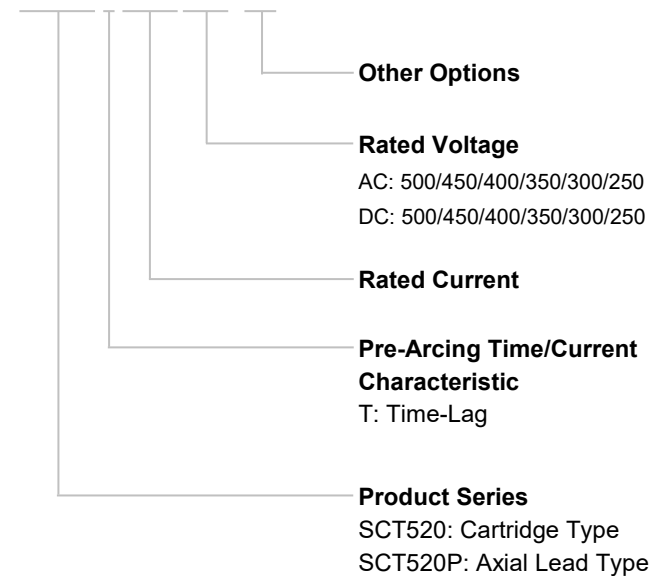
- Power Supply
- Household Appliance
- General Lighting
- Smart Home
- Office Equipment
- Electric Tool
- Medical Equipment
- SPD

Structure Diagram



Part Numbering System

SCT520T1.25A250V-001



Agency Approvals

Agency Approvals	Agency File Number	Ampere Range
	E345932	0.4 A to 30 A
	CQC21012316337 CQC21012316630 CQC21012324758 CQC21012325082	0.4 A to 20 A
	R50538205 R50538319	5 A to 20 A

Miniature Fuses

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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)

SCT520&SCT520P Series, Time-Lag, Ceramic Tube

Specifications

Series	Rated Current	Rated Breaking Capacity	Average Typical Melting I^2t ^a (A ² sec)	Agency Approvals			Environmental	
	(A)			 CQC	 TUV	 cURus	RoHS	REACH
SCT520 SCT520P	0.4	UL (0.4 A-10 A): 10 kA@250 VAC / 300 A@400 VAC 200 A@500 VAC SCT520P 2 kA@300 VAC SCT520 1500 A@300 VAC 3 kA@300 VDC / 500 A@500 VDC UL (12.5 A-20 A): 1 kA@250 VAC SCT520P: 300 A@500 VAC SCT520: 500 A@400 VAC 500 A@300 VDC UL (25 A-30 A): SCT520P: 500 A@250 VAC SCT520: 500 A@300 VAC CQC/TUV (0.4 A to 10 A): 5 kA@250 VDC / 3 kA@300 VDC / 500 A@500 VDC / 1500 A@250 VAC / 300 A@400 VAC / 200 A@500 VAC CQC/TUV (12.5 A to 20 A): 500 A@300 VDC / 1 kA@250 VAC / 300 A@400 VAC	0.06	●	○	●	●	●
SCT520 SCT520P	0.5		0.14	●	○	●	●	●
SCT520 SCT520P	0.63		0.23	●	○	●	●	●
SCT520 SCT520P	0.8		0.96	●	○	●	●	●
SCT520 SCT520P	1		2.2	●	○	●	●	●
SCT520 SCT520P	1.25		4.7	●	○	●	●	●
SCT520 SCT520P	1.6		10.2	●	○	●	●	●
SCT520 SCT520P	2		20	●	○	●	●	●
SCT520 SCT520P	2.5		31	●	○	●	●	●
SCT520 SCT520P	3		45			●	●	●
SCT520 SCT520P	3.15		74	●	○	●	●	●
SCT520 SCT520P	4		96	●	○	●	●	●
SCT520 SCT520P	5		75	●	●	●	●	●
SCT520 SCT520P	6.3		147	●	●	●	●	●
SCT520 SCT520P	8		237	●	●	●	●	●
SCT520 SCT520P	10		500	●	●	●	●	●
SCT520 SCT520P	12.5		820	●	●	●	●	●
SCT520 SCT520P	15		1100			●	●	●
SCT520 SCT520P	16		1300	●	●	●	●	●
SCT520 SCT520P	20		2100	●	●	●	●	●
SCT520 SCT520P	25		3100			●	●	●
SCT520 SCT520P	30		4500			●	●	●

a: I^2t value is measured at 10 I_N .

○: On-going

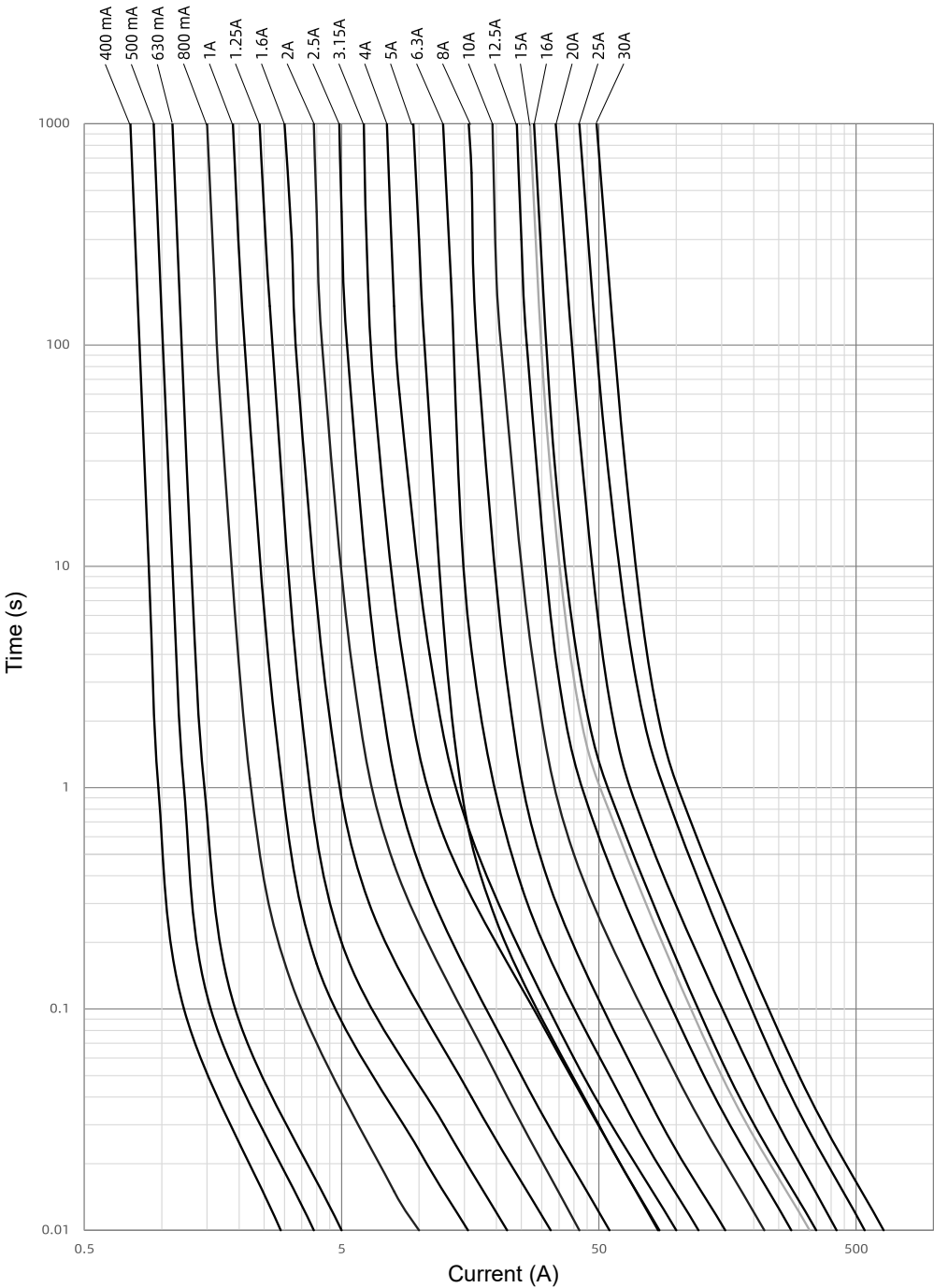
Miniature Fuses
(Cartridge Fuse-links)

SCT520&SCT520P Series, Time-Lag, Ceramic Tube

Opening Time / Current Characteristic

Rated Current (A)	2.1I _N	2.75I _N		4I _N		10I _N	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.
0.4 to 0.8	30 minutes	250 ms	80 s	50 ms	5 s	5 ms	150 ms
1 to 3.15	30 minutes	750 ms	80 s	95 ms	5 s	10 ms	150 ms
4 to 10	30 minutes	750 ms	80 s	150 ms	5 s	10 ms	150 ms
12 to 30	30 minutes	750 ms	80 s	150 ms	8 s	10 ms	150 ms

Time Current Curve (For Reference Only)



Miniature Fuses (Cartridge Fuse-links)

SCT520&SCT520P Series, Time-Lag, Ceramic Tube

Reliability Test

No.	Items	Inspection Standards	Standards
1	High Temp. Test	Test Condition: Temperature: (105 ± 2) °C Time: 1000 hours 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.	MIL-STD-202(Test Method 108) GJB360B(Test Method 108)
2	High Humidity Test	Test Condition: Temperature: (40 ± 2) °C Humidity: 90% to 95% Time: 96 hours 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.	MIL-STD-202(Test Method 103) GJB360B(Test Method 103)
3	Thermal Shock Test	Test Condition: Per Cycle: -40 °C / 30 minutes, 85 °C / 30 minutes Time: 10 Cycles 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.	MIL-STD-202(Test Method 107) GJB360B(Test Method 107)

Miniature Fuses
(Cartridge Fuse-links)

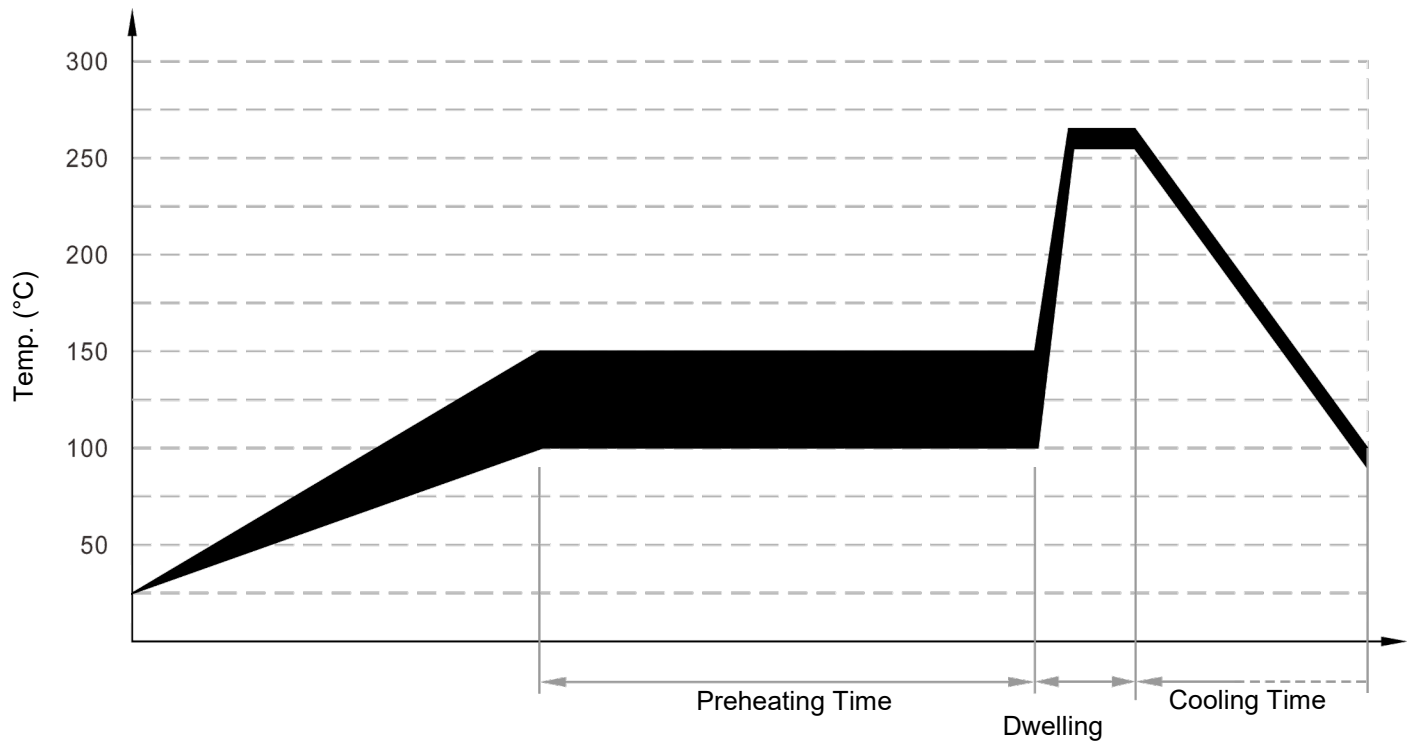
SCT520&SCT520P Series, Time-Lag, Ceramic Tube

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

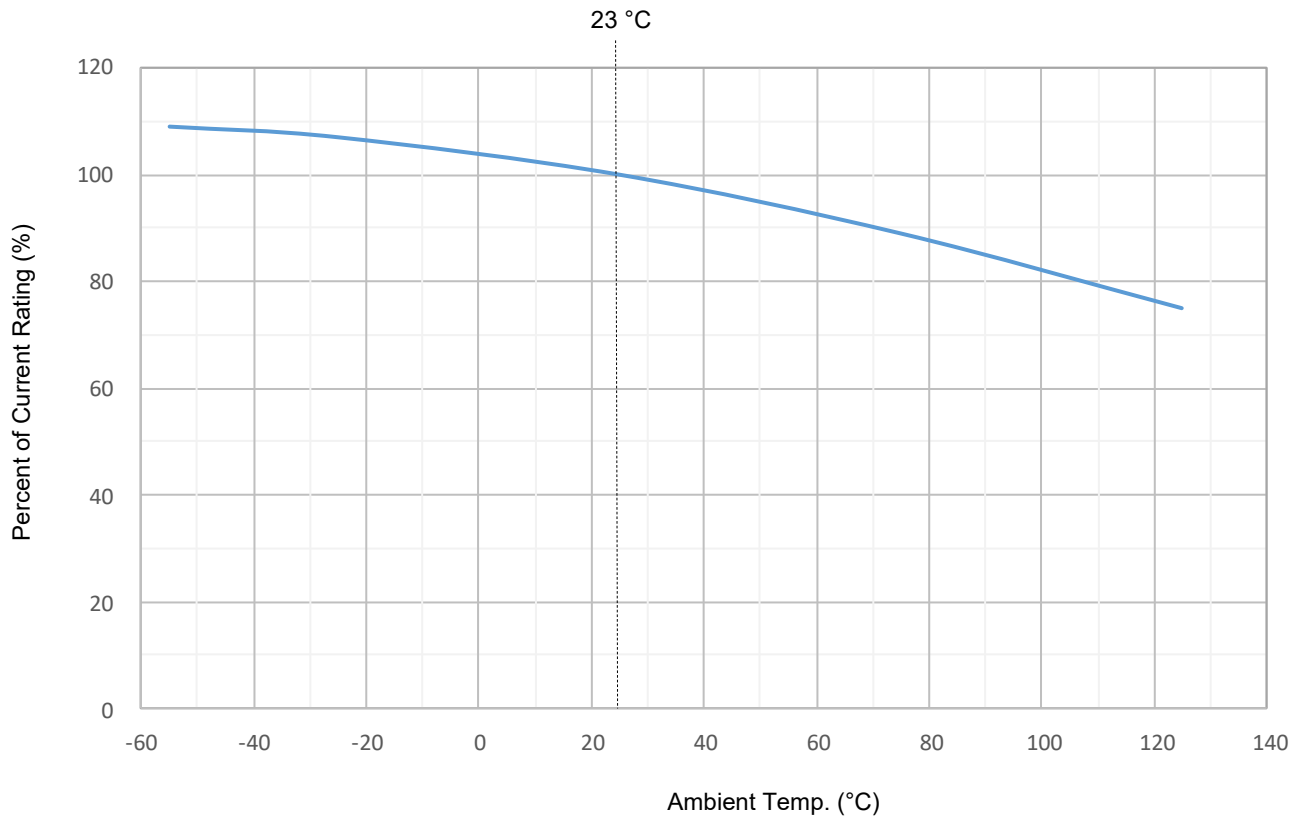
Heating Time: 5 seconds Max.

Miniature Fuses

(Cartridge Fuse-links)

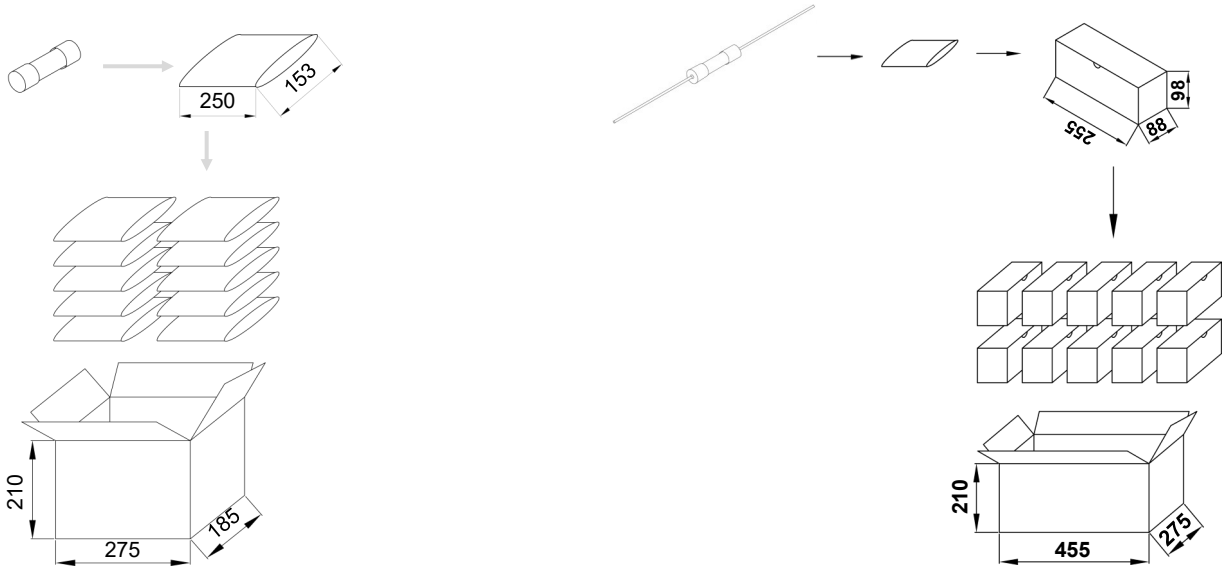
SCT520&SCT520P Series, Time-Lag, Ceramic Tube

Temperature Derating Curve



Packaging Information

All dimensions in mm



Cartridge Type		
Item	PE Bag	Carton
Quantity (PCS)	1,000	10,000
Gross Weight (kg)		8.0×(1±10%)

Axial Lead Type			
Item	PE Bag	Box	Carton
Quantity (PCS)	400	800	8,000
Gross Weight (kg)		9.0×(1±10%)	

Miniature Fuses

(Cartridge Fuse-links)

SCT520&SCT520P Series, Time-Lag, Ceramic Tube



ATTENTION

Inspection

Cold Resistance Test

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

Usage

- Do not touch the fuse body or lead wire when power on, avoiding scald or electric shock.
- 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.