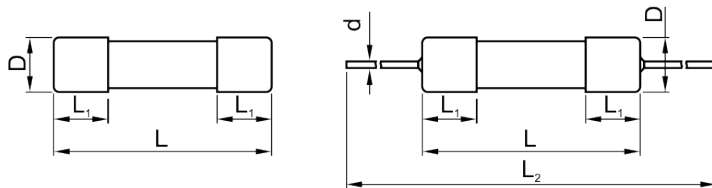


Miniature Fuses (Cartridge Fuse-links)

SGT520 Series, Time-Lag, Glass Tube



Dimensions (mm)



L	L ₁	L ₂	D	d
20 ± 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(1.0 ± 0.05)

Description

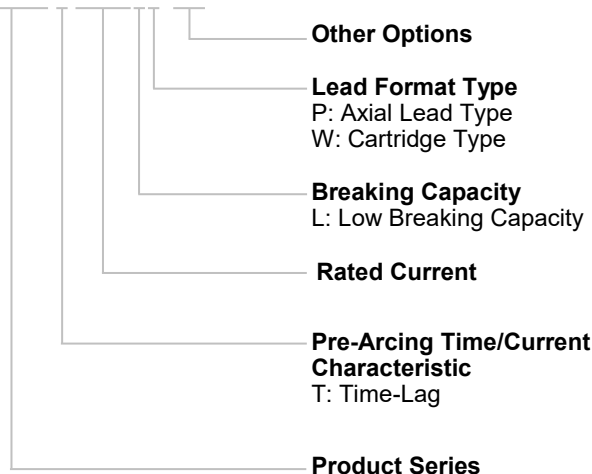
Φ5 × 20 mm, Time-Lag, glass body cartridge fuse, designed to IEC & UL standards.

Features

- Φ5 × 20 mm
- Time-Lag
- Low-Breaking Capacity
- Glass Tube, Nickel-Plated Brass End cap Construction
- Designed to IEC 60127-2 Sheet 3, GB/T 9364-2 Sheet 3
- Lead-free (Pb-free)
- RoHS & REACH Compliant

Part Numbering System

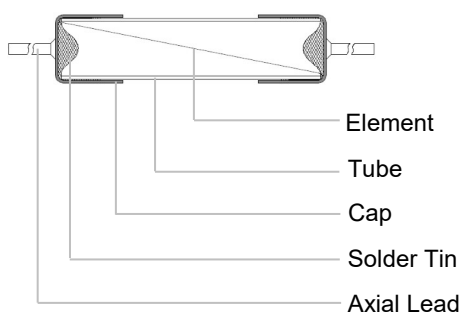
SGT520T1.25ALP-001



Applications

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

Structure Diagram



Agency Approvals

Agency Approvals	Agency File Number	Ampere Range (A)
	E345932	1 A to 10 A
	40033355	1 A to 10 A
	2020980207000068 2020980207000072	1 A to 6.3 A
	SU05023-11006 SU05023-11004 SU05023-11005	1 A to 2 A 3.15 A to 6.3 A 8 A to 10 A

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)

SGT520 Series, Time-Lag, Glass Tube

Specifications

Series	Rated Current	Rated Voltage	Rated Breaking Capacity	Max. Voltage Drop ^a	Average Typical Melting I^2t ^b	Agency Approvals				Environmental	
	(A)	(VAC)		(mV)	(A ² sec)					RoHS	REACH
						CCC	VDE	KC	cURus		
SGT520	0.5	250	35 A@250 VAC	900	1.02	○	○	○	○	●	●
SGT520	0.63	250		300	1.78	○	○	○	○	●	●
SGT520	0.8	250		250	3.52	○	○	○	○	●	●
SGT520	1	250		150	5.7	●	●	●	●	●	●
SGT520	1.25	250		150	11.2	●	●	●	●	●	●
SGT520	1.6	250		150	21	●	●	●	●	●	●
SGT520	2	250		150	30.8	●	●	●	●	●	●
SGT520	2.5	250		120	22	○	○	○	○	●	●
SGT520	3.15	250		100	103	●	●	●	●	●	●
SGT520	4	250		50 A@250 VAC	100	68	○	○	○	○	●
SGT520	5	250	50 A@250 VAC	100	117	●	●	●	●	●	●
SGT520	6.3	250	63 A@250 VAC	100	230	●	●	●	●	●	●
SGT520	8	250	80 A@250 VAC	100	355		●	●	●	●	●
SGT520	10	250	100 A@250 VAC	100	570		●	●	●	●	●
SGT520	12	250	120 A@250 VAC	90	750				○	●	●
SGT520	12.5	250	125 A@250 VAC	80	890				○	●	●
SGT520	15	250	150 A@250 VAC	80	1215				○	●	●
SGT520	16	250	160 A@250 VAC	80	1280				○	●	●
SGT520	20	250	200 A@250 VAC	80	3680				○	●	●

a: Max. Voltage Drop (voltage drop is measured at (23 ± 1) °C ambient temp. at rated current).

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

○: Pending.

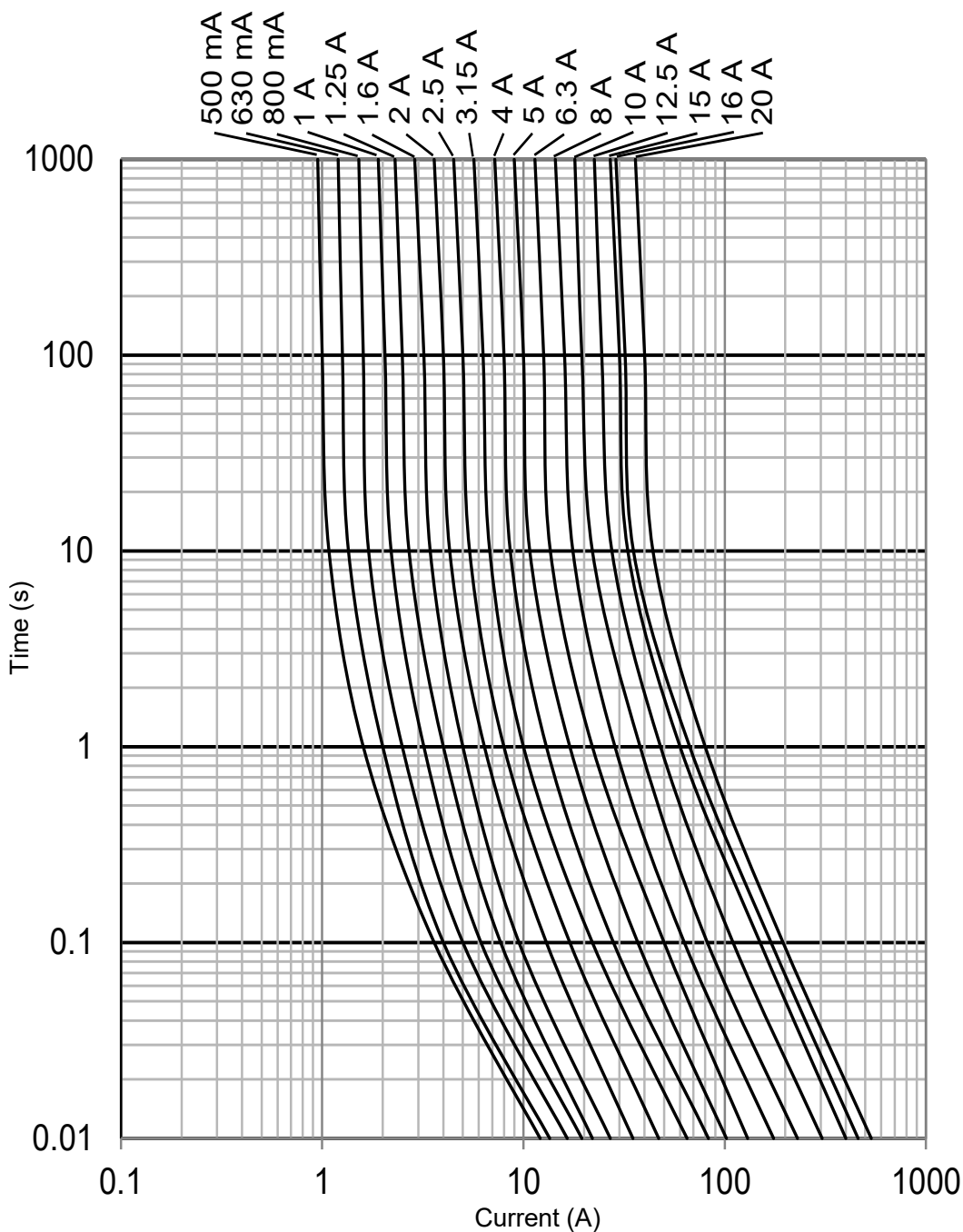
Miniature Fuses (Cartridge Fuse-links)

SGT520 Series, Time-Lag, Glass 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.
0.5 to 20	2 minutes	600 ms	10 s	150 ms	3 s	20 ms	300 ms

Time Current Curve (For Reference Only)



Miniature Fuses

Miniature Fuses

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)

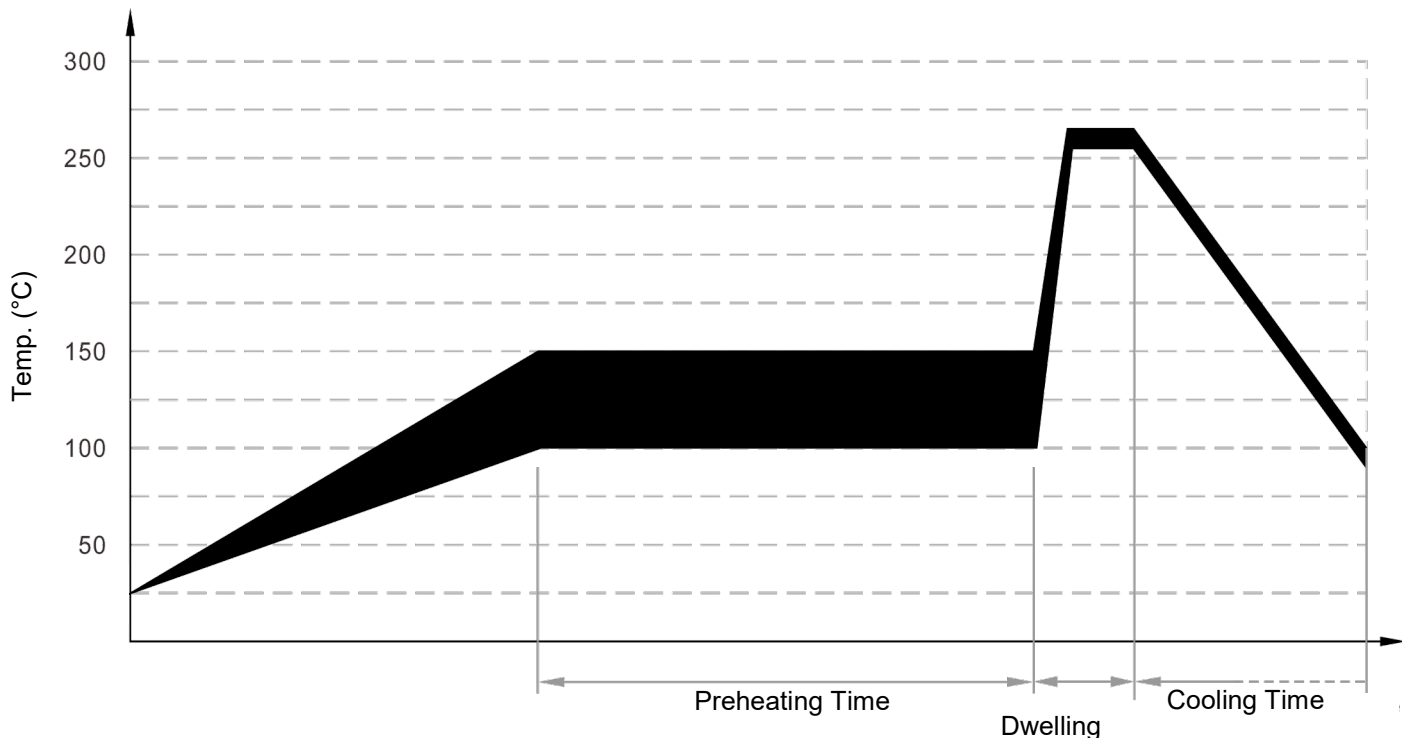
SGT520 Series, Time-Lag, Glass Tube

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

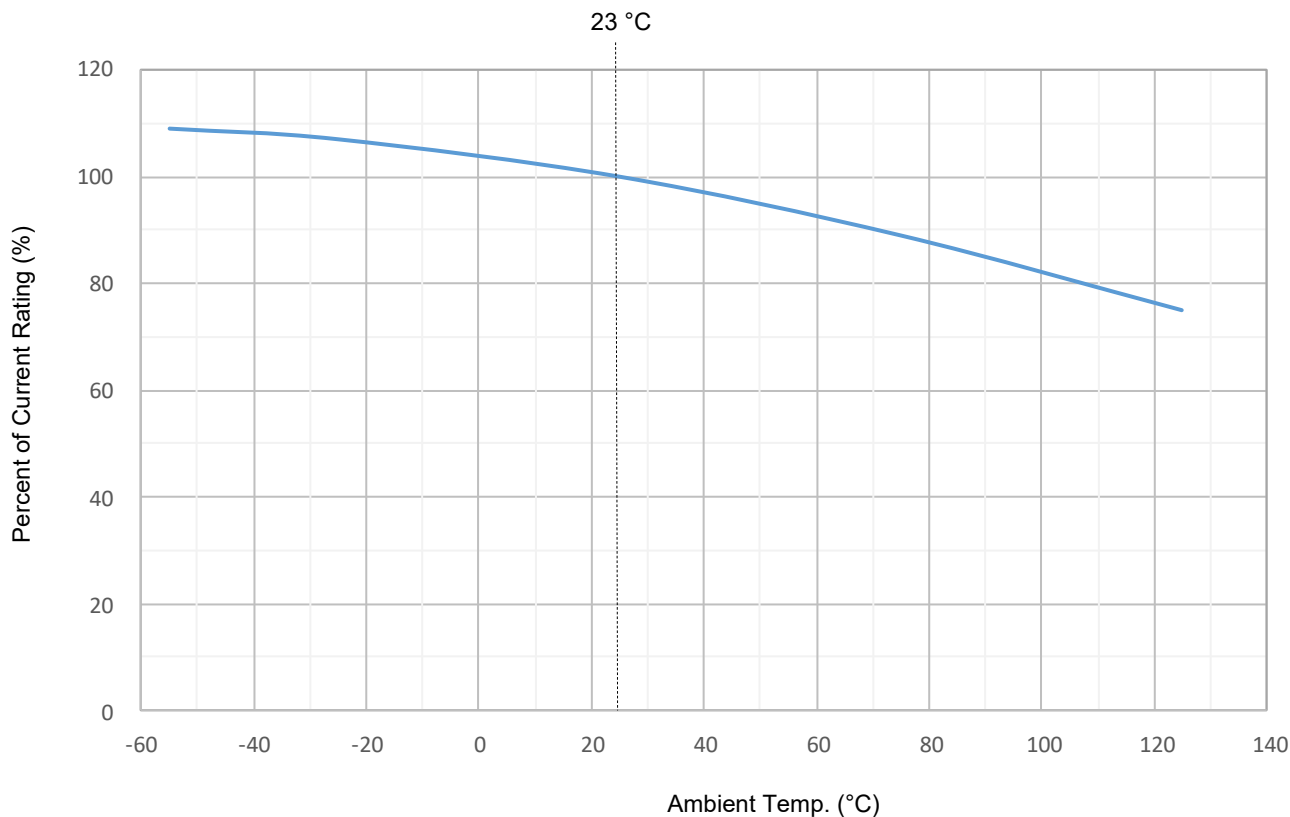
Solder Iron Temp.: (350 ± 5) °C

Heating Time: 5 seconds Max.

Miniature Fuses (Cartridge Fuse-links)

SGT520 Series, Time-Lag, Glass Tube

Temperature Derating Curve

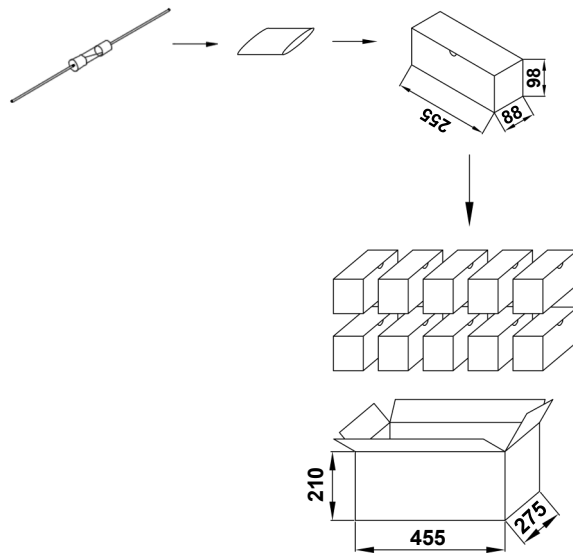
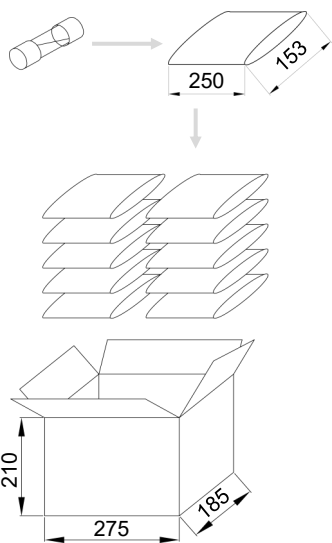


Miniature Fuses

Miniature Fuses

Packaging Information

All dimensions in mm



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



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.