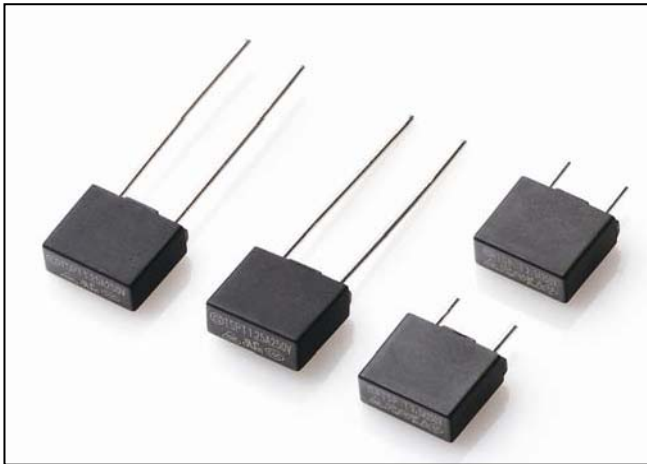


# Type TSP

## Time-Lag Subminiature Fuses Series



### Description

TSP Time-lag type, 250V/300V/400V rated designed in accordance to IEC 60127-3.

### Features

- Lead-free
- Internationally approved
- Reduced PCB space requirements
- Direct solderable or plug-in versions
- Shock safe casing
- Halogen free

### Applications

- Power supplies
- Battery Chargers
- Consumer Electronics
- Industrial Controllers

### Agency Approvals.

Safety Agency	Agency File Number	Ampere Range Volt@I.R.ABILITY
	E485357(LISTED)	100mA-10A 250V AC@50A 100mA-10A 250V DC@100A 100mA-10A 300V AC@50A 100mA-10A 400V AC@50A
	CQC16012142172	250mA-10A 250V AC@50A
	JD60105633	1A-5A 250V AC@50A
	SU05050-15001 SU05050-15002 SU05050-15003	250mA-4A 250V AC@50A
	R 50315914	100mA-10A 250V AC@50A 100mA-10A 300V AC@50A

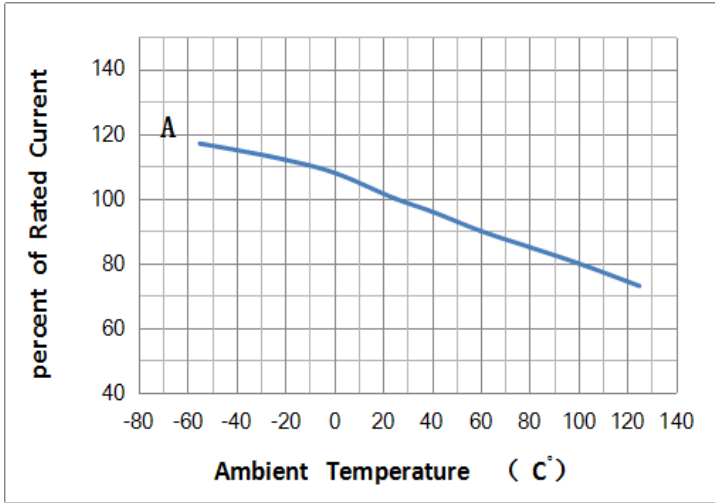
### Electrical Characteristics for Series

% of Ampere Rating	Opening Time
150%	1 Hour ,Min
210%	2min,Max
275%	400ms Min,10s Max
400%	150ms Min,3s Max
1000%	20ms Min,150ms Max

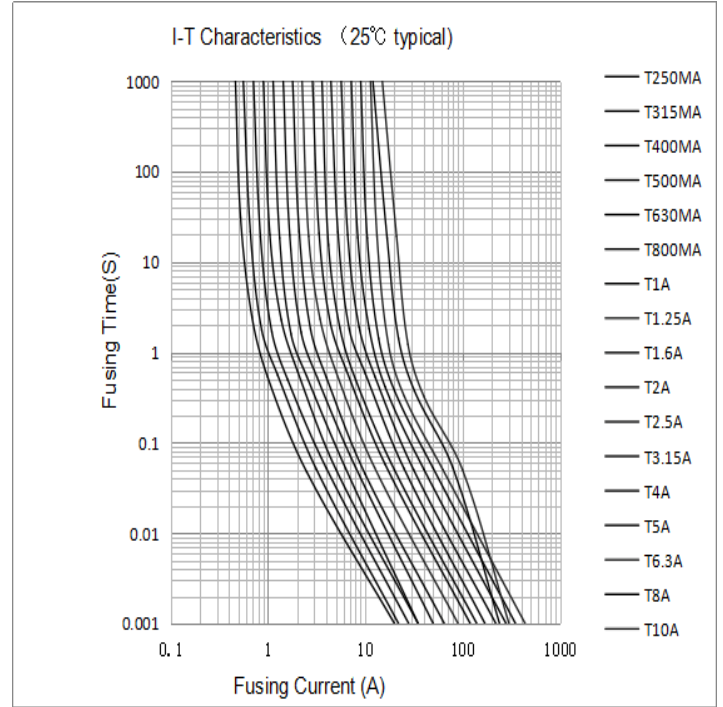
### Electrical Characteristic Specifications by Item

Catalog Number	Rated Current	Voltage Rating	Breaking Capacity	Melting Integral 10In min(A <sup>2</sup> S)	Agency Approvals						
					VDE	CQC	KC	PSE	UL *	TUV *	
TSP0100	100mA	250VAC 250VDC 300VAC 400VAC	50A@250VAC 100A@250VDC 50A@300VAC 50A@400VAC	0.021					•	•	
TSP0125	125mA			0.031						•	•
TSP0160	160mA			0.040						•	•
TSP0200	200mA			0.046						•	•
TSP0250	250mA			0.500	•	•	•			•	•
TSP0315	315mA			0.790	•	•	•			•	•
TSP0400	400mA			1.280	•	•	•			•	•
TSP0500	500mA			2.000	•	•	•			•	•
TSP0630	630mA			3.180	•	•	•			•	•
TSP0800	800mA			5.120	•	•	•			•	•
TSP1100	1.0A			8.000	•	•	•	•		•	•
TSP1125	1.25A			12.50	•	•	•	•		•	•
TSP1160	1.6A			20.48	•	•	•	•		•	•
TSP1200	2.0A			32.00	•	•	•	•		•	•
TSP1250	2.5A			50.00	•	•	•	•		•	•
TSP1315	3.15A			79.38	•	•	•	•		•	•
TSP1400	4.0A			128.00	•	•	•	•		•	•
TSP1500	5.0A			200.00	•	•	•	•		•	•
TSP1630	6.3A	317.52	•	•	•			•	•		
TSP1800	8.0A	512.00			•			•	•		
TSP2100	10.0A	800.00				•		•	•		

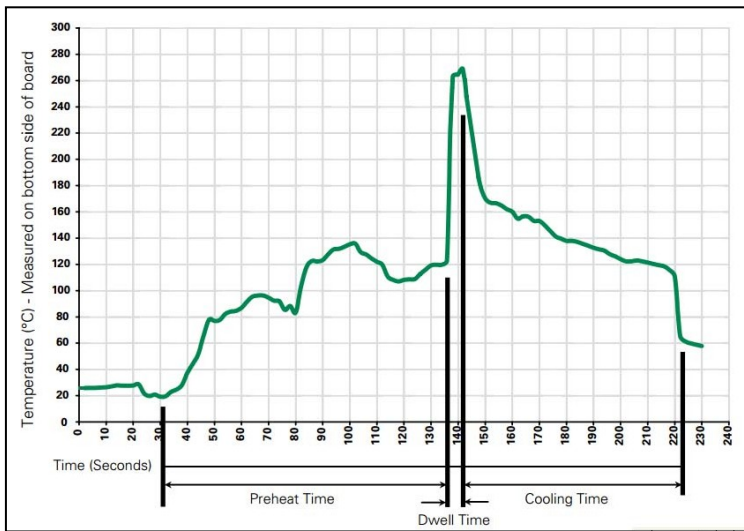
### Temperature Re-rating Curve



### Average Time Current Curves



### Soldering Parameters-Wave Soldering



### Recommended Process Parameters:

Lead-Free Wave Soldering Profile	
Wave Soldering Parameter	
Average ramp-up rate	200 °C/second
Heating rate during preheat	Typical 1-2 °C/second Max 4 °C/second
Final preheat temperature	Within 125 °C of soldering temperature
Peak temperature	260 °C
Time within +0 °C/-5 °C of actual peak temperature	10 seconds
Ramp-down rate	5 °C/second max

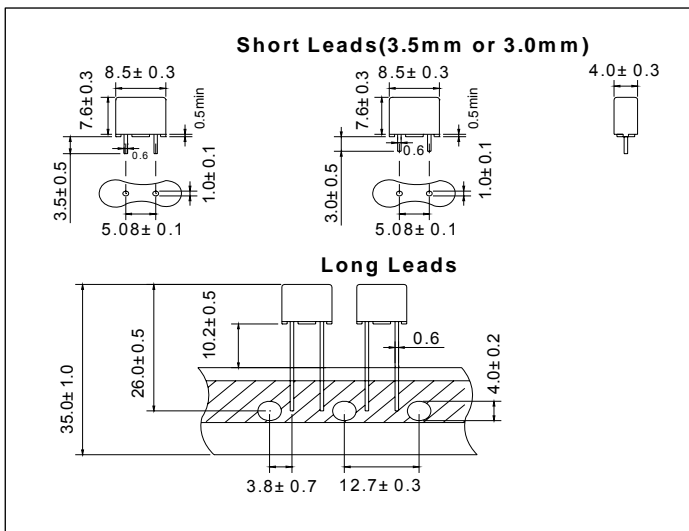


**Product Characteristics**

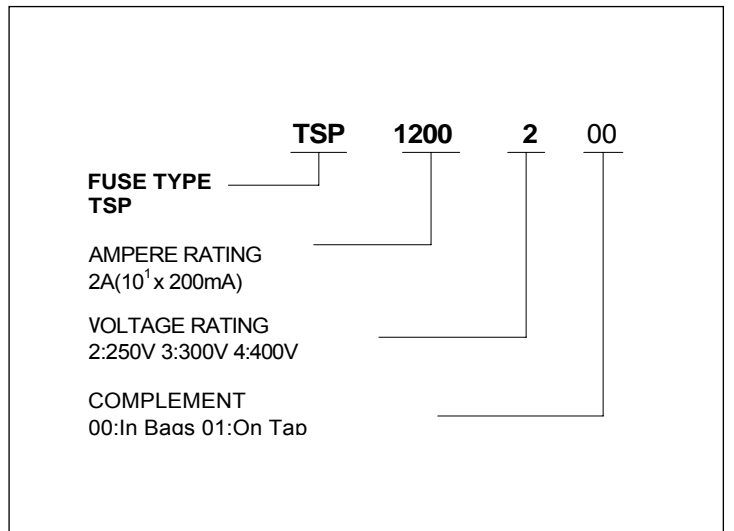
<b>Materials</b>	Base/Cap : Black Thermoplastic Polyamide PA 6.6,UL 94 V-0 Round Pins :Copper Tin-plated
<b>Lead Pull Strength</b>	10 N(IEC 60068-2-21)
<b>Soldering Parameters</b>	260℃, ≤10 sec.(wave) 350℃, ≤3 sec.(soldering iron)
<b>Soldering Heat Resistance</b>	260℃, 10 sec.(IEC 60068-2-20) 350℃, ≤3 sec.(soldering iron)

<b>Operating Temperature</b>	-55℃ to +125℃(consider de-rating)
<b>Climatic Category</b>	-40℃ to +85℃/21 days (EN 60068-1, -2-1, -2-2, -2-78)
<b>Stock Condition</b>	+10℃ to +60℃ Relative humidity ≤75% yearly Average, without dew, maximum Value for 30 days -95%
<b>Vibration Resistance</b>	24 cycles at 15 min. each (EN 60068-2-6) 10-60 Hz at 0.75 mm amplitude 60-2000 Hz at 10 g acceleration

**Mechanical Dimensions(Unit :mm)**



**Ordering Information**



**Packaging**

Packaging Option	Packaging Specification	Quantity
On Tap(01)	N / A	1000PCS/box
In Bags(00)	N / A	1000PCS/bag