

# SML1210 Series

Surface-Mount Low Resistance PTC Device  
 Rev Letter: A/T  
 Rev Date: 2016-12-1



## Feature

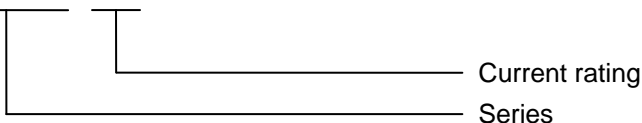
- Resettable overcurrent protection
- Very Low resistance
- High current rating
- Fast time-to-trip
- Small footprint
- ROHS compliant and Halogen free

## Application

- Mobile phone battery packs
- Cordless phone battery packs
- Mobile radio packs
- Computer battery packs
- Camcorder battery packs
- PDA battery packs

## Part Number

SML1210 XXX



## Typical Ratings and Characteristics

- Maximum Operating Voltage: 6Vdc
- Maximum Interrupt Current: 50A

Part Number	HOLD CURRENT & TRIP CURRENT (AMPS)						TIME-TO-TRIP (SECONDS)	REFERENCE RESISTANCE (OHMS)	TWO HOURS POST REFLOW RESISTANCE (OHMS)	TRIPPED STATE POWER DISSIPATION (WATTS)
	0°C		25°C		60°C		25°C	25°C	25°C	25°C, 6V
	HOLD	TRIP	HOLD	TRIP	HOLD	TRIP	MAX	MIN	MAX	MAX
SML1210110	1.5	4.5	1.1	3.0	0.6	1.2	5.5A/5S	0.012	0.045	1.0
SML1210150	1.8	5.2	1.5	3.8	0.9	2.2	7.5A/5S	0.006	0.030	1.0
SML1210-190	2.3	5.4	1.9	4.9	1.1	2.5	9.5A/5S	0.006	0.026	1.0
SML1210-200	2.4	6.2	2.0	6.0	1.2	3.0	10.0A/5S	0.004	0.020	1.0
SML1210-220	2.7	5.8	2.2	5.6	1.5	3.5	11.0A/5S	0.003	0.020	1.0
SML1210-260	3.0	8.0	2.6	5.0	2.0	4.0	13.0A/5S	0.003	0.018	1.0
SML1210-300	3.3	8.6	3.0	8.0	2.1	4.2	15.0A/5S	0.002	0.015	1.2
SML1210-350	3.7	9.0	3.5	8.0	2.5	5.6	17.5A/5S	0.001	0.014	1.2
SML1210-380	4.4	9.3	3.8	8.0	2.7	5.8	19.0A/5S	0.001	0.013	1.2
SML1210-400	4.7	9.8	4.0	8.0	3.0	6.0	20.0A/5S	0.001	0.012	1.2
SML1210-500	5.5	11.0	5.0	8.0	4.0	7.8	25.0A/5S	0.001	0.010	1.4
SML1210-550	5.8	11.6	5.5	9.0	4.2	8.4	27.5A/5S	0.001	0.009	1.4
SML1210-600	6.2	12.4	6.0	10.0	4.5	9.0	30.0A/5S	0.001	0.009	1.4
SML1210-650	7.2	12.6	6.5	13.0	4.8	9.6	32.5A/5S	0.001	0.009	1.4
SML1210-700	7.8	15.6	7.0	14.0	5.0	10.0	35.0A/5S	0.001	0.009	1.4

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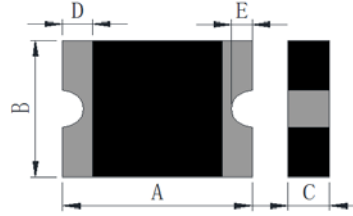
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SML1210-750	8.6	17.2	7.5	15.0	5.2	10.4	37.5/5S	0.001	0.007	1.4
SML1210-800	8.6	17.2	8.0	15.0	5.4	10.8	40.0A/5S	0.001	0.009	1.4

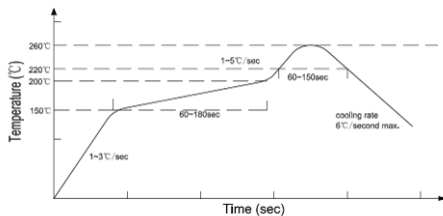
\*The max resistance of two-hours post reflow is a reference value. The value may change a little according to reflow conditions and soldering state.



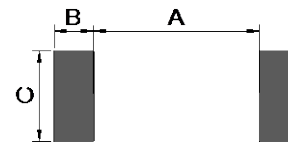
## Product Dimension and Foot Print

	A(mm)	B(mm)	C(mm)	D(mm)	E(mm)
	Max	Max	Max	Min	Min
SML1210110	3.45	2.8	0.7	0.25	0.1
SML1210150	3.45	2.8	0.7	0.25	0.1
SML1210-190	3.45	2.8	0.7	0.25	0.1
SML1210-200	3.45	2.8	0.7	0.25	0.1
SML1210-220	3.45	2.8	0.7	0.25	0.1
SML1210-260	3.45	2.8	0.7	0.25	0.1
SML1210-300	3.45	2.8	1.0	0.25	0.1
SML1210-350	3.45	2.8	1.0	0.25	0.1
SML1210-380	3.45	2.8	1.0	0.25	0.1
SML1210-400	3.45	2.8	1.0	0.25	0.1
SML1210-500	3.45	2.8	1.0	0.25	0.1
SML1210-550	3.45	2.8	1.0	0.25	0.1
SML1210-550	3.45	2.8	1.0	0.25	0.1
SML1210-600	3.45	2.8	1.0	0.25	0.1
SML1210-650	3.45	2.8	1.0	0.25	0.1
SML1210-700	3.45	2.8	1.1	0.25	0.1
SML1210-750	3.45	2.8	1.1	0.25	0.1
SML1210-800	3.45	2.8	1.1	0.25	0.1

## Solder Reflow Recommendation



Reflow -curve



footprint(mm)

\* Recommended reflow methods: IR, hot air oven, nitrogen oven \* Recommended maximum paste thickness: 0.25mm (0.010 inch) \* Devices can be cleaned using standard industry methods and solvents. \* Solder temperature and time should be controlled strictly in recommended conditions.

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**Note:**

If reflow temperatures exceed the recommended profile, devices may not meet the performance requirements.

**Caution:** Operation beyond the rated voltage or current may result in rupture electrical arcing or flame

## Packaging and Marking Information

Part number	Tape & Reel		Part Marking	Recommended Pad Layout Figures(mm)		
	Quantity	Tape spc code		Dimension A	Dimension B	Dimension C
SML1210110	3500	1210B	b	2.00	1.00	2.50
SML1210150	3500	1210B	p	2.00	1.00	2.50
SML1210-190	3500	1210B	m	2.00	1.00	2.50
SML1210-200	3500	1210B	s	2.00	1.00	2.50
SML1210-220	3500	1210B	r	2.00	1.00	2.50
SML1210-260	3500	1210B	t	2.00	1.00	2.50
SML1210-300	3500	1210B	u	2.00	1.00	2.50
SML1210-350	3500	1210B	v	2.00	1.00	2.50
SML1210-380	3500	1210B	g	2.00	1.00	2.50
SML1210-400	3500	1210B	w	2.00	1.00	2.50
SML1210-500	3500	1210B	o	2.00	1.00	2.50
SML1210-550	3500	1210B	c	2.00	1.00	2.50
SML1210-600	3500	1210B	f	2.00	1.00	2.50
SML1210-650	3500	1210B	h	2.00	1.00	2.50
SML1210-700	3500	1210B	x	2.00	1.00	2.50
SML1210-750	3500	1210B	e	2.00	1.00	2.50
SML1210-800	3500	1210B	a	2.00	1.00	2.50



**WARNING:**

- Operation beyond the maximum ratings or improper use may result in device damage and possible electrical arcing and flame.
- The devices are intended for protection against occasional overcurrent or over-temperature fault conditions and should not be used when repeated fault conditions or prolonged trip events are anticipated.
- Contamination of the PPTC material with certain silicon based oils or some aggressive solvents can adversely impact the performance of the devices.
- Device performance can be impacted negatively if devices are handled in a manner inconsistent with recommended electronic, thermal and mechanical procedures for electronic components.
- Operation in circuit with a large inductance can generate a circuit voltage (L di/dt) above the rated voltage of the PPTC device.

Prepare	Approval	Accept