PROSEMI
Circuit Protection

Surface-Mount Devices | 1206 Size
PTC Resettable Fuses

SRF1206LR Series

Features

- Resettable over current and over temperature protection Standard
- 1206mils footprint
- Fast time-to-trip
- RoHS complaint
- Low resistance

Applications

- USB peripherals including new USB 3.0 / 2.0 ports
- Li-ion / Li-Polymer battery packs
- Smart phones
- E-readers
- LCD / LED HDTV
- Tablet , Notebook PCs and Computer peripherals
- Digital cameras and video cameras
- Hard disk drives
- Game consoles

Electrical Characteristics

Part Number	I_H (A)	I_T (A)	V_{max} (V)	I_{max} (A)	Time to Trip (A)	Time to Trip (Sec)	Pd_{typ} (W)	R_{min} (Ω)	$R1_{max}$ (Ω)
SRF1206P110LR	1.10	2.20	6	50	8.00	0.30	1.20	0.015	0.100
SRF1206P150LR	1.50	3.00	6	50	8.00	0.30	1.20	0.010	0.065
SRF1206P175LR	1.75	3.50	6	50	8.00	1.00	1.20	0.005	0.055
SRF1206P190LR	1.90	3.80	6	50	8.00	5.00	1.20	0.010	0.060
SRF1206P200LR	2.00	4.00	6	50	8.00	1.00	1.20	0.005	0.055
SRF1206P200/12LR	2.00	4.00	12	50	8.00	5.00	1.20	0.008	0.040
SRF1206P260LR	2.60	5.00	6	50	8.00	4.00	1.20	0.003	0.035
SRF1206P300LR	3.00	6.00	6	50	8.00	5.00	1.20	0.003	0.020
SRF1206P300/12LR	3.00	6.00	12	50	8.00	5.00	1.20	0.003	0.020
SRF1206P350LR	3.50	7.00	6	50	18.5	2.00	1.20	0.003	0.030
SRF1206P350/12LR	3.50	7.00	12	50	8.00	5.00	1.50	0.003	0.018
SRF1206P380LR	3.80	8.00	6	50	20.0	2.00	1.20	0.003	0.022
SRF1206P400LR	4.00	8.00	6	50	20.0	2.00	1.20	0.003	0.020
SRF1206P400/12LR	4.00	8.00	12	50	8.00	5.00	1.20	0.003	0.014
SRF1206P450LR	4.50	9.00	6	50	22.5	2.00	1.50	0.002	0.018
SRF1206P450/12LR	4.50	9.00	12	50	22.5	5.00	1.50	0.002	0.014
SRF1206P500LR	5.00	10.00	6	50	25.0	2.00	1.50	0.002	0.018
SRF1206P500/12LR	5.00	10.00	12	50	25.0	5.00	1.50	0.002	0.013
SRF1206P550LR	5.50	11.00	6	50	27.5	2.00	1.50	0.002	0.018
SRF1206P600LR	6.00	12.00	6	50	30.0	2.00	1.50	0.001	0.018

PTC Resettable Fuses — SRF1206LR Series

Electrical Characteristics

Part Number	I_H (A)	I_T (A)	V_{max} (V)	I_{max} (A)	Time to Trip (A)	Time to Trip (Sec)	Pd_{typ} (W)	R_{min} (Ω)	$R1_{max}$ (Ω)
SRF1206P650LR	6.50	13.00	6	50	32.5	2.00	1.50	0.001	0.018
SRF1206P700LR	7.00	14.00	6	50	35.0	2.00	1.50	0.001	0.017
SRF1206P750LR	7.50	15.00	6	50	38.75	2.00	1.50	0.001	0.017

I_H = Hold current: maximum current at which the device will not trip at 25℃ still air.
I_T = Trip current: minimum current at which the device will always trip at 25℃ still air.
V_{max} = Maximum continuous voltage device can withstand without damage at rated current
I_{max} = Maximum fault current device can withstand without damage at rated voltage.
T_{trip} = Maximum time to trip(s) at assigned current.
Pd_{typ} =Typical power dissipation: typical amount of power dissipated by the device when in state air environment.
R_{min} = Minimum resistance of device in initial (un-soldered) state.
$R1_{max}$ = Maximum resistance of device at 25℃ measured one hour after reflow.

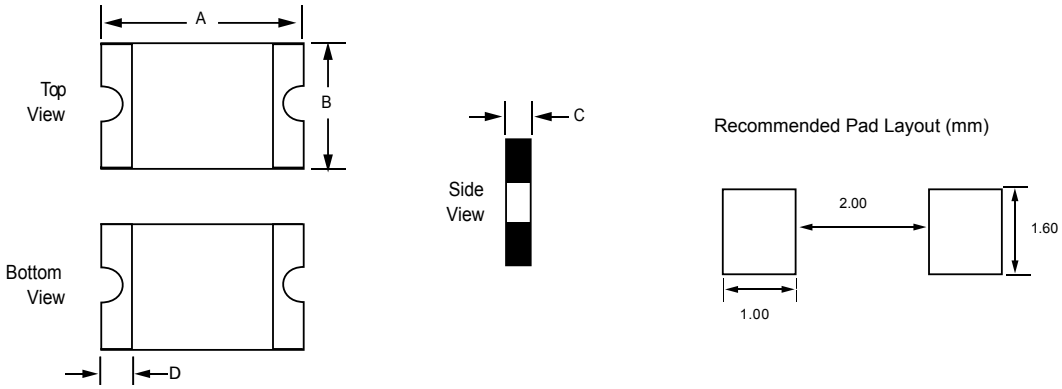
Noted: All electrical function test is conducted after PCB mounted.

Thermal Derating Chart Hold Current (A)

Part Number	Ambient Operating Temperature								
	-40°C	-20°C	0°C	25°C	40°C	50°C	60°C	70°C	85°C
SRF1206P110LR	1.65	1.43	1.27	1.10	0.94	0.83	0.73	0.61	0.44
SRF1206P150LR	2.25	1.95	1.73	1.50	1.28	1.13	1.00	0.83	0.60
SRF1206P175LR	2.63	2.28	2.01	1.75	1.49	1.31	1.17	0.96	0.70
SRF1206P190LR	2.85	2.47	2.19	1.90	1.62	1.50	1.43	1.27	1.05
SRF1206P200LR	3.00	2.60	2.30	2.00	1.70	1.50	1.33	1.10	0.80
SRF1206P200/12LR	2.68	2.33	2.15	2.00	1.55	1.57	1.50	1.44	0.88
SRF1206P260LR	3.50	3.05	2.85	2.60	2.15	1.95	1.80	1.50	1.05
SRF1206P300LR	4.50	3.90	3.45	3.00	2.55	2.25	2.00	1.65	1.20
SRF1206P300/12LR	4.50	3.90	3.45	3.00	2.55	2.25	2.00	1.65	1.20
SRF1206P350LR	5.25	4.55	4.03	3.50	2.98	2.63	2.33	1.93	1.40
SRF1206P350/12LR	5.25	4.55	4.03	3.50	2.98	2.63	2.33	1.93	1.40
SRF1206P380LR	5.70	4.94	4.37	3.80	3.23	2.85	2.53	2.09	1.52
SRF1206P400LR	6.00	5.20	4.60	4.00	3.40	3.00	2.67	2.20	1.60
SRF1206P400/12LR	6.00	5.20	4.60	4.00	3.40	3.00	2.67	2.20	1.60
SRF1206P450LR	6.75	5.85	5.18	4.50	3.83	3.38	3.00	2.48	1.80
SRF1206P450/12LR	6.20	5.65	5.25	4.50	4.15	3.45	3.15	3.00	2.40
SRF1206P500LR	7.50	6.50	5.76	5.00	4.26	3.76	3.30	2.76	2.00
SRF1206P500/12LR	7.50	6.50	5.76	5.00	4.26	3.76	3.30	2.76	2.00
SRF1206P550LR	8.25	7.15	6.33	5.50	4.68	4.13	3.67	3.03	2.20
SRF1206P600LR	9.00	7.80	6.91	6.00	5.11	4.51	4.00	3.31	2.40
SRF1206P650LR	9.75	8.45	7.48	6.50	5.53	4.88	4.33	3.58	2.60
SRF1206P700LR	10.50	9.10	8.06	7.00	5.96	5.26	4.67	3.86	2.80
SRF1206P750LR	11.25	9.75	8.63	7.50	6.38	5.63	5.00	4.13	3.00

Notes: The temperature rerating data is for reference only. Please contact PROSEMI technical support for detail temperature rerating information.

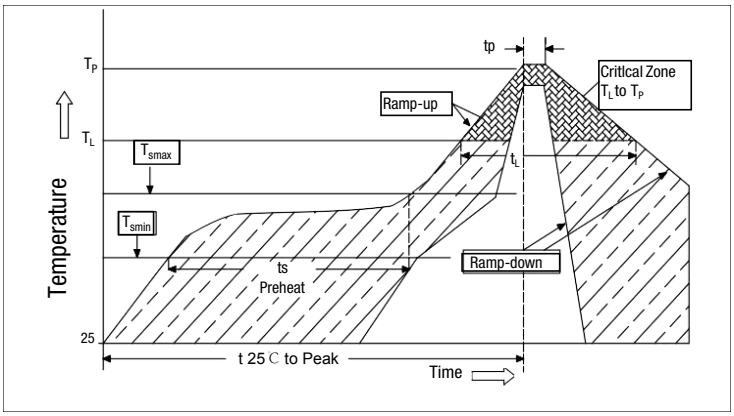
Dimensions (mm)



Part Number	Marking	A		B		C		D
		Min.	Max.	Min.	Max.	Min.	Max.	Min.
SRF1206P110LR	TC	3.00	3.50	1.50	1.80	0.55	0.85	0.25
SRF1206P150LR	T1	3.00	3.50	1.50	1.80	0.50	0.80	0.25
SRF1206P175LR	T2	3.00	3.50	1.50	1.80	0.50	0.80	0.25
SRF1206P190LR	T3	3.00	3.50	1.50	1.80	0.50	0.80	0.25
SRF1206P200LR	TD	3.00	3.50	1.50	1.80	0.50	0.80	0.25
SRF1206P200/12LR	TD	3.00	3.50	1.50	1.80	0.40	0.80	0.25
SRF1206P260R	TE	3.00	3.50	1.50	1.80	0.40	0.80	0.25
SRF1206P300LR	TF	3.00	3.50	1.50	1.80	0.40	0.80	0.25
SRF1206P300/12R	TF	3.00	3.50	1.50	1.80	0.40	0.80	0.25
SRF1206P350LR	T4	3.00	3.50	1.40	1.80	0.70	1.05	0.25
SRF1206P350/12LR	T4	3.00	3.50	1.50	1.80	0.50	1.00	0.25
SRF1206P380LR	TH	3.00	3.50	1.40	1.80	0.70	1.05	0.25
SRF1206P400LR	TI	3.00	3.50	1.40	1.80	0.70	1.05	0.25
SRF1206P400/12LR	TI	3.00	3.50	1.40	1.80	0.70	1.05	0.25
SRF1206P450LR	TK	3.00	3.50	1.40	1.80	0.70	1.05	0.25
SRF1206P450/12LR	T45	3.00	3.50	1.40	1.80	0.70	1.15	0.25
SRF1206P500LR	TL	3.00	3.50	1.40	1.80	0.70	1.05	0.25
SRF1206P500/12LR	T50	3.00	3.50	1.40	1.80	0.80	1.40	0.25
SRF1206P550LR	TN	3.00	3.50	1.40	1.80	0.70	1.05	0.25
SRF1206P600LR	TO	3.00	3.50	1.40	1.80	0.90	1.40	0.25
SRF1206P650LR	TP	3.00	3.50	1.40	1.80	0.90	1.40	0.25
SRF1206P700LR	TR	3.00	3.50	1.40	1.80	0.90	1.40	0.25
SRF1206P750LR	TS	3.00	3.50	1.40	1.80	0.90	1.40	0.25

Solder Reflow Conditions

Reflow Profile	Lead free
Heating rate from Tsmax to Tp	Max.3℃/second
Pre-heat: **Tsmin** **Tsmax** **Tsmin to Tsmax**	 150℃ 200℃ 60~180seconds
Soldering time: **Temperature（TL）** **Time（tL）**	 >217℃ 60~150seconds
Peak temperature（Tp）	260℃
Time at Peak temperature ±5℃（tp）	20~40seconds
Cooling rate	Max.6℃/second
Time from 25℃ to Peak Temperature	8 minutes max



Cautions for Reflow:

1. The printed solder thickness is not over 0.25mm， Excess solder may cause a short circuit, especially during hand soldering;
2. If reflow temperatures exceed the recommended profile, devices may not meet the performance requirements;
3. Device can not be wave soldered. Please contact Prosemi for hand soldering and dip soldering recommendations;
4. Device can't contact solvent;

Note: All temperature in top chart is measured on the surface of devices.

Packaging Options

I hold(A)	Quantity
1.10A~3.00A	4,000pcs
3.50A~5.50A	3,500pcs
5.00A/12V,6.00A~7.50A	3,000pcs

Reel packaging per EIA-481-1 standard