

PTSLR1206

Low resistance SMD PTC fuses



Product features

- Positive temperature coefficient (PTC)
- Surface mount resettable fuse
- Low resistance
- Compact 1206 (3216 metric) footprint
- Voltage rating 6 V
- Current rating from 0.75 A to 5.00 A
- Fast time-to-trip

Applications

- Data ports
- Micromotors and fans
- Low voltage test and measurement
- Low voltage hand held equipment
- PC-based medical equipment
- USB protection
- Secondary Li-ion battery protection
- Game consoles, set top boxes
- Battery charging & charging connections

Agency information

- cURus Recognized file no. E343021
- TUV: File R 50455924

Part number system/ordering:

PTSLR1206V075

- PT= PTC resettable fuse
- S= Surface mount
- LR = Low resistance
- 1206= Dimension code
- 6V= Maximum voltage
- 075= Ihold current rating (075= 0.75 A)

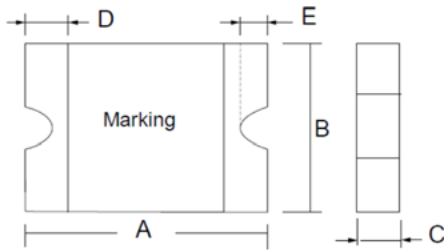
Product specifications

	V _{max} ¹	I _{max} ²	I _{hold} ³	I _{trip} ⁴	P _d ⁵	Time-to-trip (maximum)		Resistance ⁶		Safety approvals		
Part number	(V _{dc})	(A)	(A)	(A)	typical (W)	(A)	(seconds)	Initial (R _i) minimum (Ω)	Post trip (R ₁) maximum (Ω)	Part marking	cURus	TÜV
PTSLR12066V075	6	50	0.75	1.5	0.8	8.0	0.3	0.017	0.18	La	✓	✓
PTSLR12066V110	6	50	1.1	2.2	0.8	8.0	0.3	0.015	0.13	Lb	✓	✓
PTSLR12066V150	6	50	1.5	3.0	0.8	8.0	0.3	0.010	0.080	Lc	✓	✓
PTSLR12066V175	6	50	1.75	3.5	0.8	8.0	0.4	0.005	0.045	L3	✓	✓
PTSLR12066V200	6	50	2.0	4.0	0.8	8.0	0.5	0.005	0.040	L7	✓	✓
PTSLR12066V260	6	50	2.6	5.0	0.8	8.0	4.0	0.003	0.030	L8	✓	✓
PTSLR12066V300	6	50	3.0	6.0	0.8	8.0	4.0	0.003	0.026	L9	✓	✓
PTSLR12066V350	6	50	3.5	7.0	0.8	8.0	5.0	0.003	0.018	L1	✓	✓
PTSLR12066V380	6	50	3.8	8.0	0.8	8.0	5.0	0.002	0.014	L2	✓	✓
PTSLR12066V400	6	50	4.0	8.0	0.8	20	2.0	0.001	0.014	L5	✓	✓
PTSLR12066V450	6	50	4.5	9.0	0.8	22	2.0	0.001	0.014	L6	✓	✓
PTSLR12066V500	6	50	5.0	10	0.8	25	2.0	0.001	0.013	Le	✓	✓

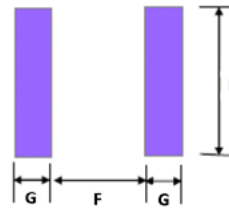
1. V_{max}: Maximum continuous voltage the device can withstand without damage at rated current
2. I_{max}: Maximum fault current the device can withstand without damage at rated voltage
3. I_{hold}: Maximum current the device will pass without interruption at +23 °C still air unless otherwise specified
4. I_{trip}: Minimum current that will transition the device from low resistance to high resistance at +23 °C still air, unless otherwise specified

5. P_d: Power dissipated from the device when in tripped state at +23 °C still air, unless otherwise specified
6. R_i: Minimum resistance of the device prior to tripping at +23 °C
R₁: Maximum resistance of the device one hour after tripping at +23 °C

Dimensions—mm



Recommended pad layout

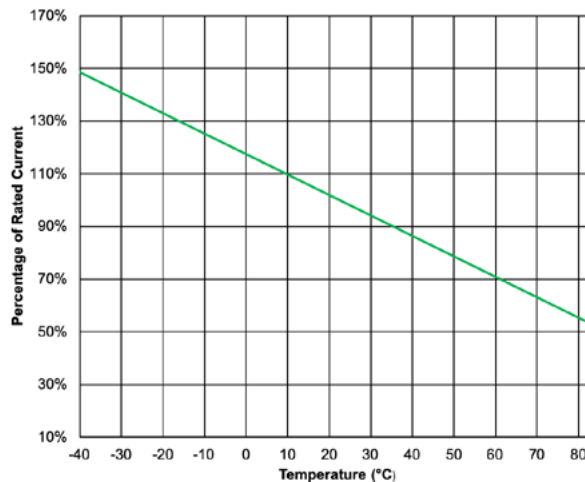


A min	A max	B min	B max	C min	C max	D min	D max	E min	E max	F	G	H
3.00	3.50	1.50	1.80	0.40*	0.70*	0.125	0.75	0.08	0.45	2.0	1.0	1.9
				0.60**	1.20**							

* PTSLR12066V075, PTSLR12066V110, PTSLR12066V150,

** PTSLR12066V175, PTSLR12066V200, PTSLR12066V260, PTSLR12066V300, PTSLR12066V350, PTSLR12066V380, PTSLR12066V400, PTSLR12066V450, PTSLR12066V500

Thermal derating curve



General specifications

Operating temperature: -40 °C to + 85 °C (with derating)

Storage temperature: -10 °C to + 40 °C

Storage relative humidity: ≤75%

Storage condition: Keep away from corrosive atmosphere and sunlight

Passive aging: IEC60738-1, +85 ± 5 °C, 1000 ± 24 hours

Humidity aging: +85 °C, 80 to 85% relative humidity, 100 ± 5 hours

Rapid change of temperature: IEC60738-1, +85 ± 5/-40 ± 5 °C, 20 cycles, 30 minutes

Overload endurance: UL1434, Vmax, 120% Imax, 50 cycles
Vmax, 300% Itrip, 6000 cycles

Trip endurance: UL1434, Vmax, Itrip -1 Imax, 1000 ± 24 hours

Solderability: IEC60068-2-58, +245 ± 5 °C, 3 ± 0.3 seconds

Moisture sensitivity test: J-STD-020, MSL=2a

Packaging information

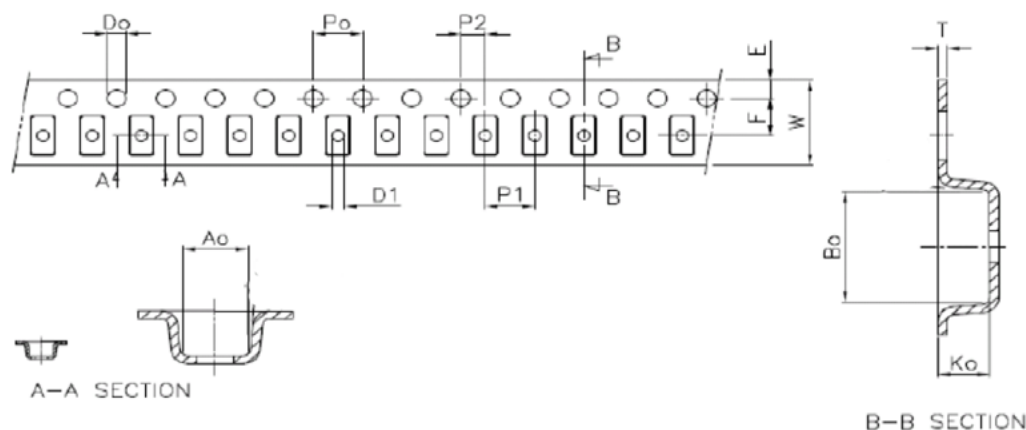
PTSLR12066V075, PTSLR12066V110, PTSLR12066V150,

Supplied in tape and reel packaging, 5000 parts per 7.0" (178 mm) diameter reel

PTSLR12066V175, PTSLR12066V200, PTSLR12066V260, PTSLR12066V300, PTSLR12066V350, PTSLR12066V380, PTSLR12066V400, PTSLR12066V450, PTSLR12066V500

Supplied in tape and reel packaging, 2500 parts per 7.0" (178 mm) diameter reel

Taping specification



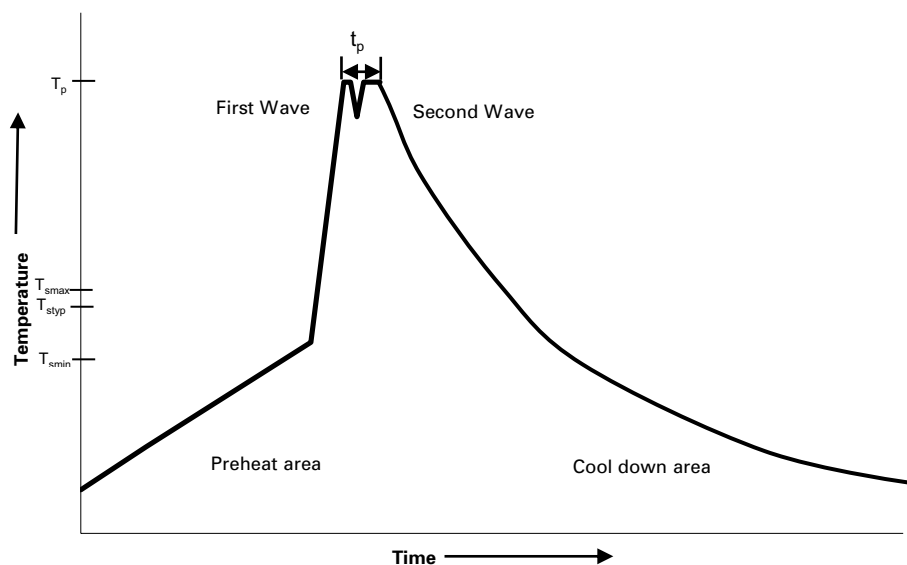
PTSLR12066V075, PTSLR12066V110, PTSLR12066V150,

A ₀	B ₀	K ₀	P ₀	P ₁	P ₂	T	E	F	D ₀	D ₁ min	W	10P ₀
± 0.10	± 0.10	± 0.05	± 0.10	± 0.10	± 0.10	± 0.05	± 0.10	± 0.10	± 0.05		± 0.30	± 0.20
1.85	3.45	0.85	4.0	4.0	2.0	0.23	1.75	3.50	1.55	1.0	8.0	40

PTSLR12066V175, PTSLR12066V200, PTSLR12066V260, PTSLR12066V300, PTSLR12066V350, PTSLR12066V380, PTSLR12066V400, PTSLR12066V450, PTSLR12066V500

A ₀	B ₀	K ₀	P ₀	P ₁	P ₂	T	E	F	D ₀	D ₁ min	W	10P ₀
± 0.10	± 0.10	± 0.05	± 0.10	± 0.10	± 0.10	± 0.05	± 0.10	± 0.10	± 0.05		± 0.30	± 0.20
1.95	3.55	1.40	4.0	4.0	2.0	0.23	1.75	3.50	1.55	1.0	8.0	40

Wave solder profile



Reference EN 61760-1:2006

Profile feature	Standard SnPb solder	Lead (Pb) free solder
Preheat		
• Temperature min. (T_{smin})	100 °C	100 °C
• Temperature typ. (T_{styp})	120 °C	120 °C
• Temperature max. (T_{smax})	130 °C	130 °C
• Time (T_{smin} to T_{smax}) (t_s)	70 seconds	70 seconds
Δ preheat to max Temperature	150 °C max.	150 °C max.
Peak temperature (T_p)*	235 °C – 260 °C	250 °C – 260 °C
Time at peak temperature (t_p)	10 seconds max 5 seconds max each wave	10 seconds max 5 seconds max each wave
Ramp-down rate	~ 2 K/s min ~3.5 K/s typ ~5 K/s max	~ 2 K/s min ~3.5 K/s typ ~5 K/s max
Time 25°C to 25°C	4 minutes	4 minutes

Manual solder

+350 °C (4-5 seconds by soldering iron), generally manual/hand soldering is not recommended

