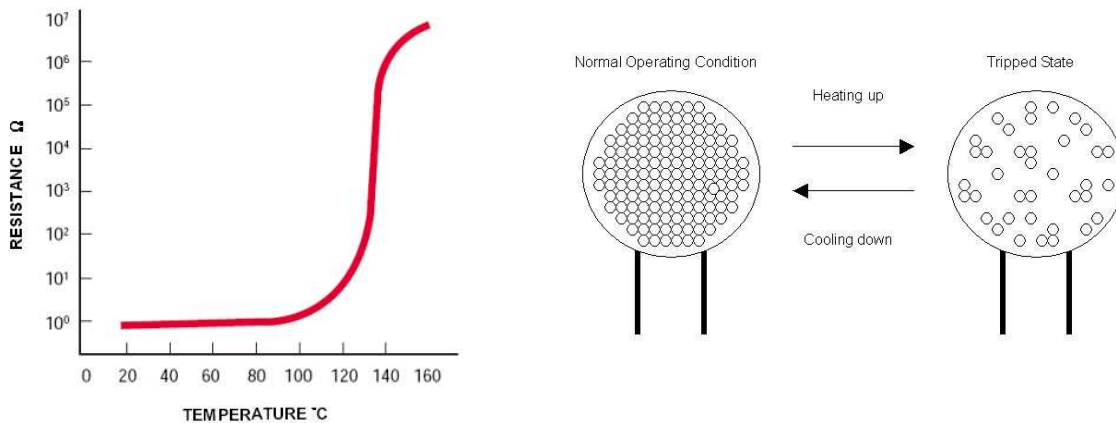


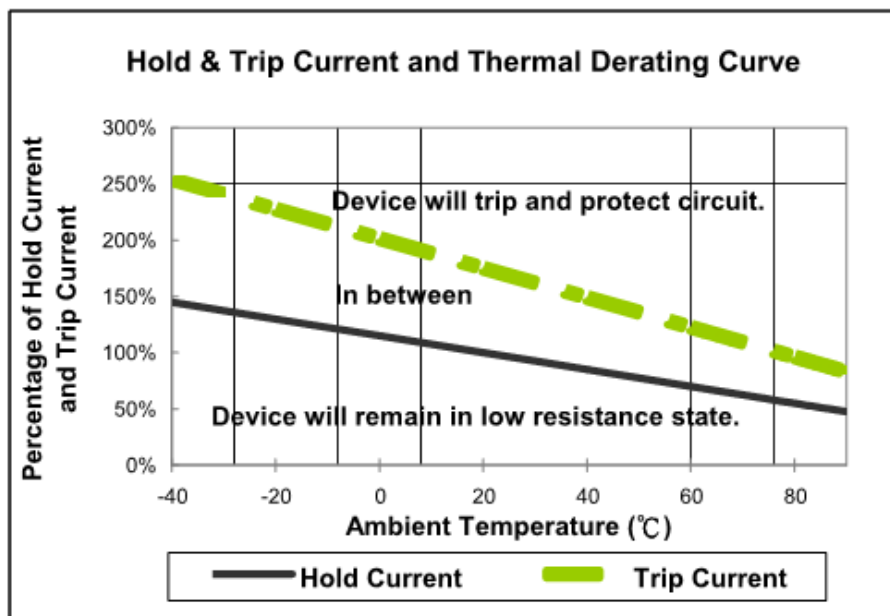
HOW DOES THE RESETTABLE FUSE ORK

Sinochip resettable fuses are designed and made of patented novel polymeric PTC material in thin chip form, developed solely by Sinochip . With electrodes and leads attached on both sides, it is placed in series to protect a circuit. At "normal operating condition" the device remains at an extremely low resistance (milli-ohms) and allows the electrical current to flow through it without any restriction. When overcurrent conditions occur, the polymeric PTC material heats up and its resistance increases sharply. Such a sharp resistance increase (to an insulated status) cuts off the current in the circuit, and consequently protects the element and device in the circuit. Upon fault current being removed, the resettable fuse cools and its resistance drops to the original extremely low value. The resettable fuse is "reset" and allows the current through the circuit again.



TRIP CURRENT, HOLD CURRENT AND THERMAL DERATING

Trip Current (IT) and Hold Current (IH) of Sinochip resettable fuse are rated at 23°C. Typically its Trip Current is twice as much as its Hold Current. Sinochip device does not trip at or below its rated Hold Current, and will trip at or above its Trip Current value. However, due to PTC effect both IT and IH reduce with ambient temperature increase and vice versa. As shown bellow, the currents are reduced nearly 50% at 85°C and increased to 150% at -40°C.



RoHS Compliant & Halogen Free

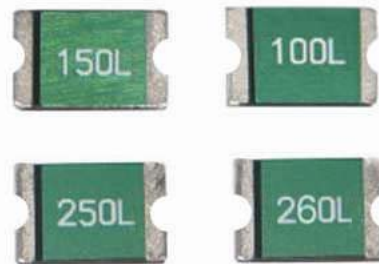
Application: All high-density boards

Product Features: 2920 Dimension, Surface mountable, Solid state,

Faster time to trip than standard SMD devices.

Operation Current: 0.3A~3.0A

Maximum Voltage: 6V~60V_{DC}



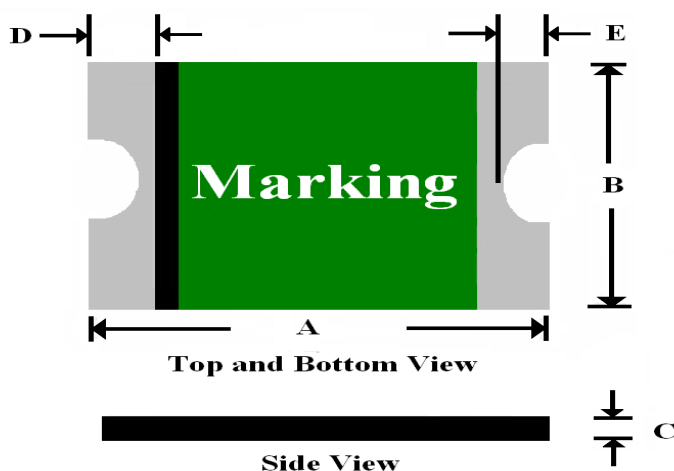
Electrical Characteristics (23°C)

Part Number	Hold Current I _H , A	Trip Current I _T , A	Rated Voltage V _{MAX} , V _{DC}	Max Current I _{MAX} , A	Typ. Power Pd, W	Max Time to Trip		Resistance	
						Current A	Time Sec	R _{MIN} Ohms	R1 _{MAX} Ohms
SMD2920-030-60	0.30	0.60	60	10	1.5	1.5	3.0	1.000	4.800
SMD2920-050-60	0.50	1.00	60	10	1.5	2.5	4.0	0.300	1.400
SMD2920-075-33	0.75	1.50	33	40	1.5	8.0	0.3	0.180	1.000
SMD2920-100-33	1.10	2.20	33	40	1.5	8.0	0.5	0.090	0.410
SMD2920-125-33	1.25	2.50	33	40	1.5	8.0	2.0	0.050	0.250
SMD2920-150-33	1.50	3.00	33	40	1.5	8.0	2.0	0.050	0.230
SMD2920-185-33	1.85	3.70	33	40	1.5	8.0	2.5	0.040	0.150
SMD2920-200-16	2.00	4.00	16	40	1.5	8.0	4.5	0.035	0.120
SMD2920-250-16	2.50	5.00	16	40	1.5	8.0	16.0	0.025	0.085
SMD2920-260-6	2.60	5.20	6	40	1.5	8.0	20.0	0.020	0.075
SMD2920-300-6	3.00	5.20	6	40	1.5	8.0	25.0	0.010	0.048

Thermal Derating for PPTC Device at Various Ambient Temperatures

TEMPERATURE	-40°C	-20°C	0°C	23°C	30°C	40°C	50°C	60°C	70°C	85°C
DERATING %	158%	134%	117%	100%	92%	83%	75%	66%	58%	45%

2920 Product Dimensions (mm)

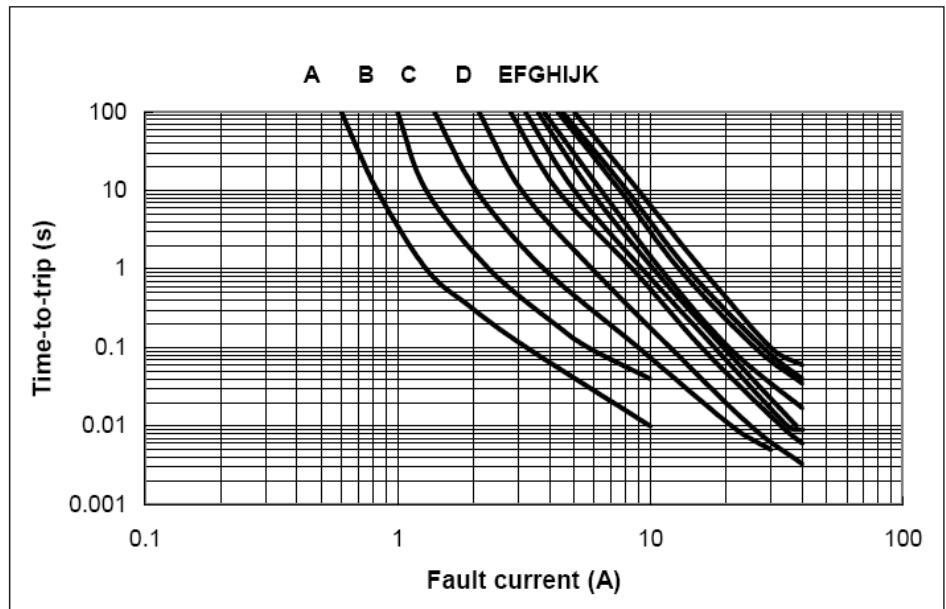




Part Number	A		B		C		D		E	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
SMD2920-030-60	6.73	7.98	4.80	5.44	0.60	1.15	0.50	1.20	0.50	0.90
SMD2920-050-60	6.73	7.98	4.80	5.44	0.60	1.15	0.50	1.20	0.50	0.90
SMD2920-075-33	6.73	7.98	4.80	5.44	0.40	1.15	0.50	1.20	0.50	0.90
SMD2920-100-33	6.73	7.98	4.80	5.44	0.40	1.00	0.50	1.20	0.50	0.90
SMD2920-125-33	6.73	7.98	4.80	5.44	0.40	0.90	0.50	1.20	0.50	0.90
SMD2920-150-33	6.73	7.98	4.80	5.44	0.40	0.90	0.50	1.20	0.50	0.90
SMD2920-185-33	6.73	7.98	4.80	5.44	0.30	0.90	0.50	1.20	0.50	0.90
SMD2920-200-16	6.73	7.98	4.80	5.44	0.30	0.90	0.50	1.20	0.50	0.90
SMD2920-250-16	6.73	7.98	4.80	5.44	0.30	0.90	0.50	1.20	0.50	0.90
SMD2920-260-6	6.73	7.98	4.80	5.44	0.30	0.90	0.50	1.20	0.50	0.90
SMD2920-300-6	6.73	7.98	4.80	5.44	0.40	0.90	0.50	1.20	0.50	0.90

Typical Time-To-Trip at 23°C

- A = SMD2920-030-60
- B = SMD2920-050-60
- C = SMD2920-075-33
- D = SMD2920-100-33
- E = SMD2920-125-33
- F = SMD2920-150-33
- G = SMD2920-185-33
- H = SMD2920-200-16
- I = SMD2920-250-16
- J = SMD2920-260-6
- K = SMD2920-300-6



Standard Package: 2.0K Reel/Tape



RoHS Compliant & Halogen Free

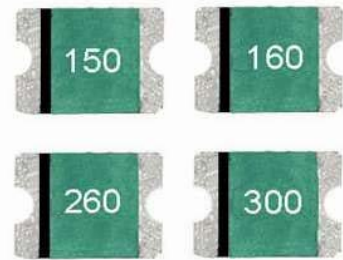


Application: All high-density boards

Product Features: Small surface mount, Solid state Faster time to trip than standard SMD devices Lower resistance than standard SMD devices

Operation Current: 0.1A~3.0A

Maximum Voltage: 6V~60V_{DC} **Temperature Range:** -40°C to 85°C



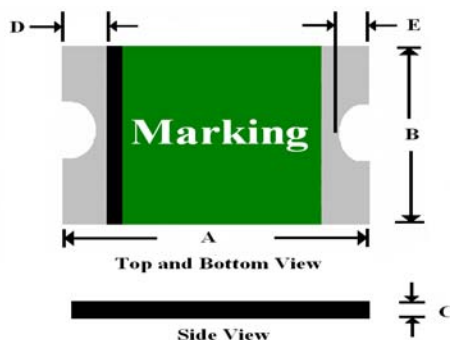
Electrical Characteristics(23°C)

Part Number	Hold Current	Trip Current	Rated Voltage	Max Current	Typ. Power	Max Time to Trip		Resistance	
						Current	Time	R _{MIN}	R1 _{MAX}
						I _H , A	I _T , A	V _{MAX} , V _{DC}	I _{MAX} , A
SMD1812-010-60	0.10	0.30	60	10	0.8	8.0	0.020	1.600	15.00
SMD1812-014-60	0.14	0.30	60	10	0.8	8.0	0.008	1.200	6.500
SMD1812-020-30	0.20	0.40	30	10	0.8	8.0	0.020	0.800	5.000
SMD1812-035-16	0.35	0.70	16	40	0.8	8.0	0.100	0.320	1.500
SMD1812-050-16	0.50	1.00	16	40	0.8	8.0	0.150	0.150	1.000
SMD1812-075-16	0.75	1.50	16	40	0.8	8.0	0.200	0.110	0.450
SMD1812-075-24	0.75	1.50	24	40	1.0	8.0	0.200	0.110	0.290
SMD1812-075-33	0.75	1.50	33	40	1.0	8.0	0.200	0.110	0.400
SMD1812-110-8	1.10	2.20	8	100	0.8	8.0	0.300	0.040	0.210
SMD1812-110-16	1.10	2.20	16	100	0.8	8.0	0.500	0.040	0.180
SMD1812-110-24	1.10	2.20	24	100	1.0	8.0	0.500	0.060	0.200
SMD1812-125-6	1.25	2.50	6	40	0.8	8.0	0.400	0.050	0.140
SMD1812-150-8	1.50	3.00	8	100	0.8	8.0	0.500	0.040	0.110
SMD1812-150-12	1.50	3.00	12	100	1.0	8.0	0.500	0.040	0.110
SMD1812-150-24	1.50	3.00	24	100	1.0	8.0	1.500	0.040	0.120
SMD1812-160-8	1.60	3.20	8	100	0.8	8.0	0.500	0.030	0.100
SMD1812-160-12	1.60	3.20	12	100	1.0	8.0	1.000	0.030	0.100
SMD1812-160-16	1.60	3.20	16	100	1.0	8.0	1.000	0.030	0.100
SMD1812-200-8	2.00	3.50	8	100	1.0	8.0	2.000	0.020	0.070
SMD1812-260-6	2.60	5.00	6	100	1.0	8.0	2.500	0.015	0.047
SMD1812-260-13	2.60	5.00	13.2	100	1.3	8.0	5.000	0.015	0.050
SMD1812-260-16	2.60	5.00	16	100	1.3	8.0	5.000	0.015	0.050
SMD1812-300-6	3.00	5.00	6	100	1.0	8.0	4.000	0.012	0.040

Thermal Derating for PPTC Device at Various Ambient Temperatures

TEMPERATURE	-40°C	-20°C	0°C	23°C	30°C	40°C	50°C	60°C	70°C	85°C
DERATING %	157%	135%	118%	100%	93%	87%	79%	72%	65%	56%

1812 Product Dimensions (mm)

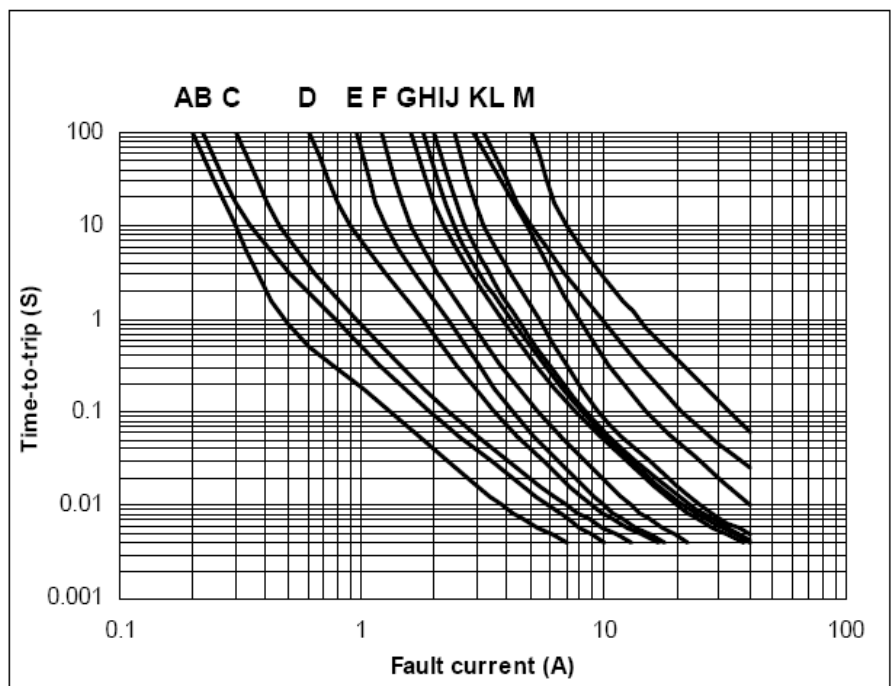




Part Number	A		B		C		D		E	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
SMD1812-010-60	4.37	4.73	3.07	3.41	0.60	0.90	0.30	0.95	0.25	0.65
SMD1812-014-60	4.37	4.73	3.07	3.41	0.60	0.90	0.30	0.95	0.25	0.65
SMD1812-020-30	4.37	4.73	3.07	3.41	0.60	0.90	0.30	0.95	0.25	0.65
SMD1812-035-16	4.37	4.73	3.07	3.41	0.40	0.70	0.30	0.95	0.25	0.65
SMD1812-050-16	4.37	4.73	3.07	3.41	0.35	0.65	0.30	0.95	0.25	0.65
SMD1812-075-16	4.37	4.73	3.07	3.41	0.35	0.65	0.30	0.95	0.25	0.65
SMD1812-075-24	4.37	4.73	3.07	3.41	0.80	1.55	0.25	0.95	0.25	0.65
SMD1812-075-33	4.37	4.73	3.07	3.41	0.80	1.55	0.25	0.95	0.25	0.65
SMD1812-110-8	4.37	4.73	3.07	3.41	0.25	0.55	0.30	0.95	0.25	0.65
SMD1812-110-16	4.37	4.73	3.07	3.41	0.25	0.90	0.30	0.95	0.25	0.65
SMD1812-110-24	4.37	4.73	3.07	3.41	0.80	1.30	0.25	0.95	0.25	0.65
SMD1812-125-6	4.37	4.73	3.07	3.41	0.25	0.55	0.30	0.95	0.25	0.65
SMD1812-150-8	4.37	4.73	3.07	3.41	0.25	0.55	0.30	0.95	0.25	0.65
SMD1812-150-12	4.37	4.73	3.07	3.41	0.60	1.10	0.25	0.95	0.25	0.65
SMD1812-150-24	4.37	4.73	3.07	3.41	0.60	1.55	0.25	0.95	0.25	0.65
SMD1812-160-8	4.37	4.73	3.07	3.41	0.25	0.90	0.30	0.95	0.25	0.65
SMD1812-160-12	4.37	4.73	3.07	3.41	0.60	1.35	0.25	0.95	0.25	0.65
SMD1812-160-16	4.37	4.73	3.07	3.41	0.60	1.35	0.25	0.95	0.25	0.65
SMD1812-200-8	4.37	4.73	3.07	3.41	0.55	1.20	0.25	0.95	0.25	0.65
SMD1812-260-6	4.37	4.73	3.07	3.41	0.55	1.20	0.25	0.95	0.25	0.65
SMD1812-260-13	4.37	4.73	3.07	3.41	0.80	1.55	0.25	0.95	0.25	0.65
SMD1812-260-16	4.37	4.73	3.07	3.41	0.80	1.55	0.25	0.95	0.25	0.65
SMD1812-300-6	4.37	4.73	3.07	3.41	0.80	1.55	0.25	0.95	0.25	0.65

Typical Time-To-Trip at 23°C

- A = SMD1812-010-60
- B = SMD1812-014-60
- C = SMD1812-020-30
- D = SMD1812-035-16
- E = SMD1812-050-16
- F = SMD1812-075-16
075-24/075-33
- G = SMD1812-110-8/
110-16/110-24
- H = SMD1812-125-6
- I = SMD1812-150-8/
150-12/150-24
- J = SMD1812-160-8/
160-12/160-16
- K = SMD1812-200-8
- L = SMD1812-260-8/260-13/
260-16
- M = SMD1812-300-8



RoHS Compliant & Halogen Free



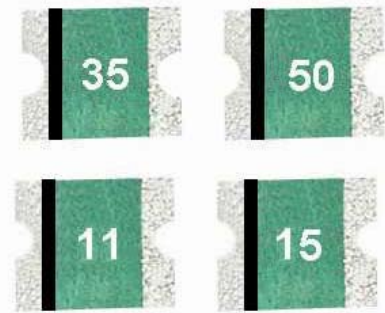
Application: All high-density boards

Product Features: Small surface mount, Solid state Faster time to trip than standard SMD devices

Lower resistance than standard SMD devices

Operation Current: 0.05A~2.00A

Maximum Voltage: 6V~60V_{DC}



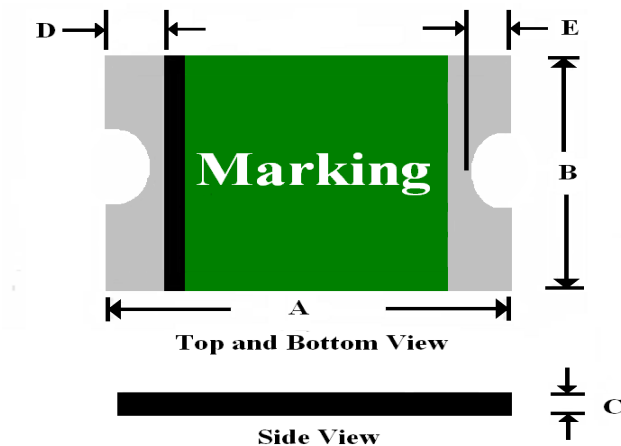
Electrical Characteristics(23°C)

Part Number	Hold Current	Trip Current	Rated Voltage	Max Current	Typ. Power	Max Time to Trip		Resistance	
	I_H, A	I_T, A	V_{MAX}, V_{DC}	I_{MAX}, A	Pd, W	Current	Time	R_{MIN}	$R1_{MAX}$
	A	A	V _{MAX} , V _{DC}	A	W	A	Sec	Ohms	Ohms
SMD1210-005-60	0.05	0.15	60	10	0.60	0.25	3.00	3.600	50.000
SMD1210-010-60	0.10	0.25	60	10	0.60	0.50	1.50	1.600	15.000
SMD1210-020-30	0.20	0.40	30	10	0.60	8.00	0.02	0.800	5.000
SMD1210-035-16	0.35	0.70	16	40	0.60	8.00	0.20	0.320	1.300
SMD1210-050-16	0.50	1.00	16	40	0.60	8.00	0.10	0.250	0.900
SMD1210-075-8	0.75	1.50	8	40	0.60	8.00	0.10	0.130	0.400
SMD1210-110-6	1.10	2.20	6	100	0.80	8.00	0.30	0.060	0.210
SMD1210-150-6	1.50	3.00	6	100	0.80	8.00	0.50	0.040	0.110
SMD1210-175-6	1.75	4.00	6	100	0.80	8.00	0.60	0.020	0.080
SMD1210-200-6	2.00	4.00	6	100	0.80	8.00	1.00	0.015	0.070

Thermal Derating for PPTC Device at Various Ambient Temperatures

TEMPERATURE	-40°C	-20°C	0°C	23°C	30°C	40°C	50°C	60°C	70°C	85°C
DERATING %	155%	132%	115%	100%	92%	83%	75%	64%	59%	46%

SMD1210 Product Dimensions (mm)

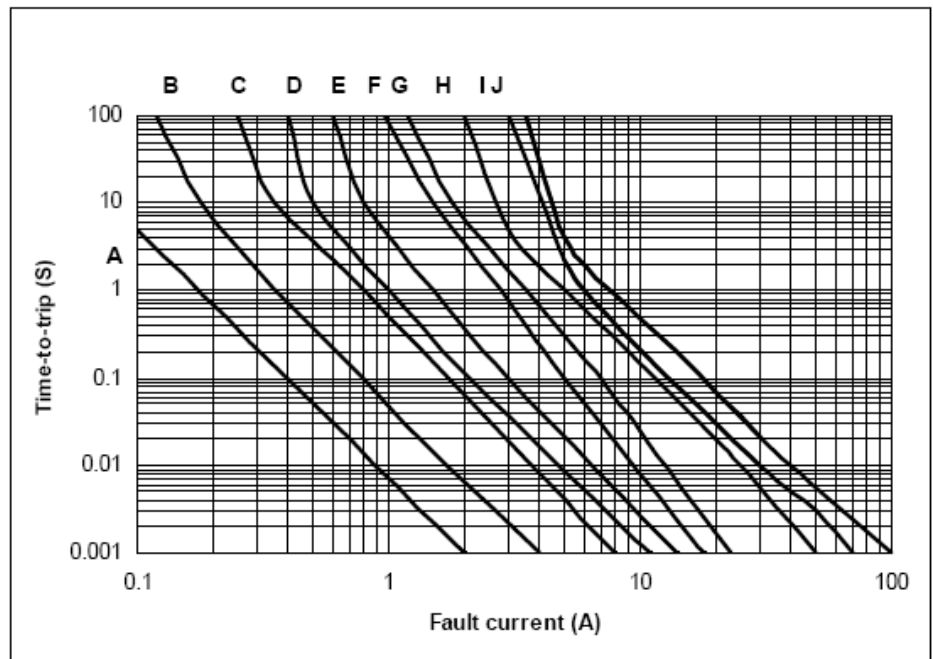




Part Number	A		B		C		D		E	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
SMD1210-005-60	3.00	3.43	2.35	2.80	0.60	1.15	0.25	0.75	0.10	0.45
SMD1210-010-60	3.00	3.43	2.35	2.80	0.60	1.15	0.25	0.75	0.10	0.45
SMD1210-020-30	3.00	3.43	2.35	2.80	0.40	0.85	0.25	0.75	0.10	0.45
SMD1210-035-16	3.00	3.43	2.35	2.80	0.40	0.80	0.25	0.75	0.10	0.45
SMD1210-050-16	3.00	3.43	2.35	2.80	0.30	0.75	0.25	0.75	0.10	0.45
SMD1210-075-8	3.00	3.43	2.35	2.80	0.30	0.70	0.25	0.75	0.10	0.45
SMD1210-110-6	3.00	3.43	2.35	2.80	0.60	1.00	0.25	0.75	0.10	0.45
SMD1210-150-6	3.00	3.43	2.35	2.80	0.50	0.90	0.25	0.75	0.10	0.45
SMD1210-175-6	3.00	3.43	2.35	2.80	0.80	1.40	0.25	0.75	0.10	0.45
SMD1210-200-6	3.00	3.43	2.35	2.80	0.80	1.40	0.25	0.75	0.10	0.45

Typical Time-To-Trip at 23°C

- A =SMD1210-005-60
- B =SMD1210-010-60
- C =SMD1210-020-30
- D =SMD1210-035-16
- E =SMD1210-050-16
- F =SMD1210-075-8
- G =SMD1210-110-6
- H =SMD1210-150-6
- I =SMD1210-175-6
- J =SMD1210-200-6



RoHS Compliant & Halogen Free



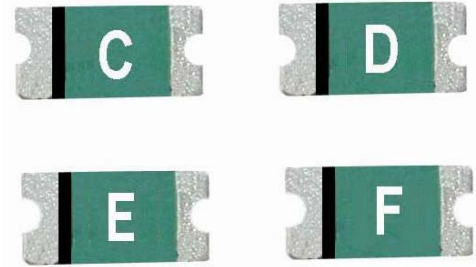
Application: All high-density boards

Product Features: Small surface mount, Solid state Faster time to trip than standard SMD devices

Lower resistance than standard SMD devices

Operation Current: 0.05A~2.00A

Maximum Voltage: 6V~60V_{DC}



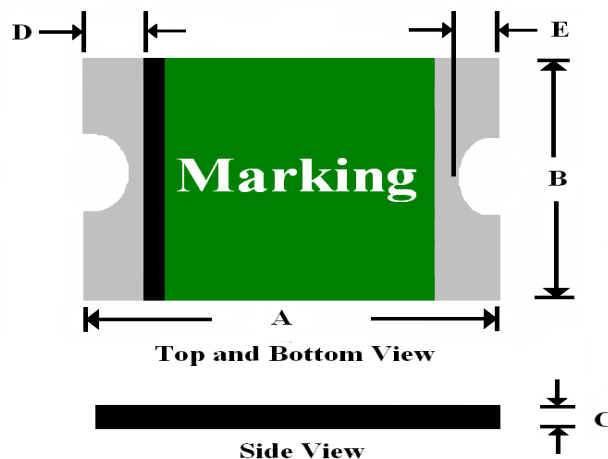
Electrical Characteristics(23℃)

Part Number	Hold Current	Trip Current	Rated Voltage	Max Current	Typ. Power	Max Time to Trip		Resistance	
	I _H , A	I _T , A	V _{MAX} , V _{DC}	I _{MAX} , A	Pd, W	Current	Time	R _{MIN}	R1 _{MAX}
	I _H , A	I _T , A	V _{MAX} , V _{DC}	I _{MAX} , A	Pd, W	A	Sec	Ohms	Ohms
SMD1206-005-60	0.05	0.15	60	10	0.4	0.25	1.50	3.600	50.000
SMD1206-010-60	0.10	0.25	60	10	0.4	0.50	1.00	1.600	15.000
SMD1206-012-48	0.12	0.39	48	10	0.6	1.00	0.20	1.400	6.500
SMD1206-016-48	0.16	0.45	48	10	0.6	1.00	0.30	1.100	5.000
SMD1206-020-30	0.20	0.40	30	10	0.4	8.00	0.10	0.600	2.500
SMD1206-025-16	0.25	0.50	16	40	0.6	8.00	0.08	0.550	2.300
SMD1206-035-16	0.35	0.75	16	40	0.4	8.00	0.10	0.300	1.200
SMD1206-050-8	0.50	1.00	8	40	0.4	8.00	0.10	0.150	0.700
SMD1206-050-24	0.50	1.00	24	100	0.6	8.00	0.10	0.150	0.750
SMD1206-075-6	0.75	1.50	6	100	0.6	8.00	0.20	0.090	0.290
SMD1206-075-16	0.75	1.50	16	100	0.6	8.00	0.20	0.090	0.290
SMD1206-100-6	1.00	1.80	6	100	0.6	8.00	0.30	0.055	0.210
SMD1206-110-6	1.10	2.20	6	100	0.8	8.00	0.30	0.040	0.180
SMD1206-150-6	1.50	3.00	6	100	0.8	8.00	1.00	0.030	0.120
SMD1206-200-6	2.00	3.50	6	100	0.8	8.00	1.50	0.018	0.080

Thermal Derating for PPTC Device at Various Ambient Temperatures

TEMPERATURE	-40℃	-20℃	0℃	23℃	30℃	40℃	50℃	60℃	70℃	85℃
DERATING %	148%	135%	117%	100%	94%	88%	81%	71%	66%	52%

SMD1206 Product Dimensions (mm)

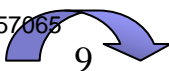
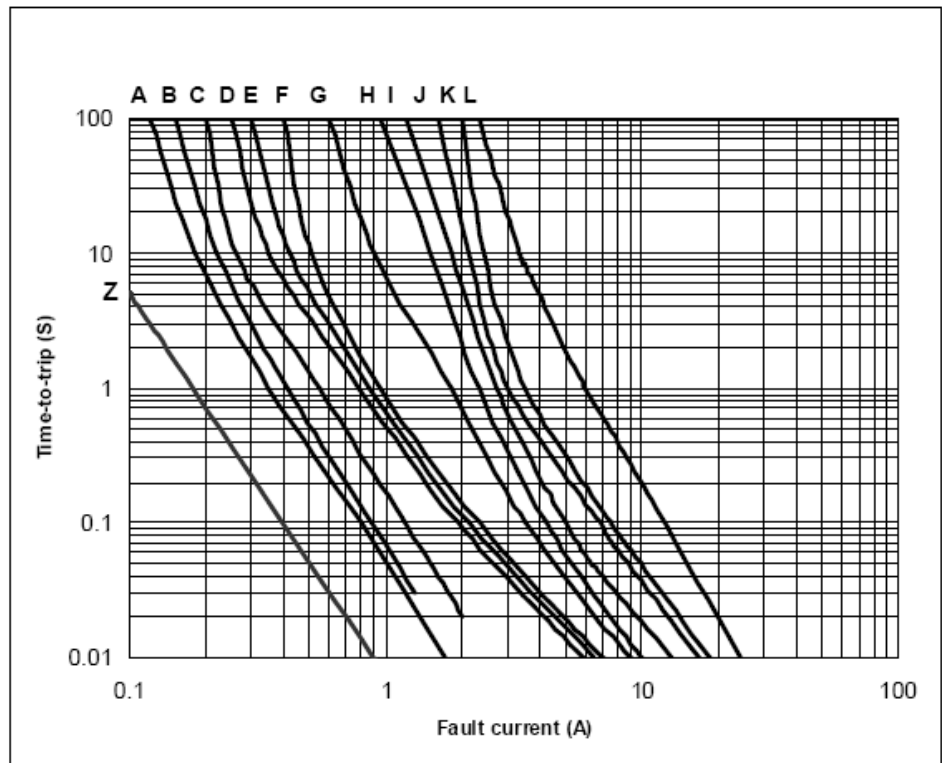




Part Number	A		B		C		D		E	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
SMD1206-005-60	3.00	3.50	1.50	1.80	0.45	0.85	0.10	0.75	0.10	0.45
SMD1206-010-60	3.00	3.50	1.50	1.80	0.45	0.85	0.10	0.75	0.10	0.45
SMD1206-012-48	3.00	3.50	1.50	1.80	0.45	0.85	0.10	0.75	0.10	0.45
SMD1206-016-48	3.00	3.50	1.50	1.80	0.45	0.75	0.10	0.75	0.10	0.45
SMD1206-020-30	3.00	3.50	1.50	1.80	0.45	0.75	0.10	0.75	0.10	0.45
SMD1206-025-16	3.00	3.50	1.50	1.80	0.45	0.75	0.10	0.75	0.10	0.45
SMD1206-035-16	3.00	3.50	1.50	1.80	0.45	0.75	0.10	0.75	0.10	0.45
SMD1206-050-8	3.00	3.50	1.50	1.80	0.25	0.55	0.10	0.75	0.10	0.45
SMD1206-050-24	3.00	3.50	1.50	1.80	0.90	1.30	0.25	0.75	0.10	0.45
SMD1206-075-6	3.00	3.50	1.50	1.80	0.45	1.25	0.25	0.75	0.10	0.45
SMD1206-075-16	3.00	3.50	1.50	1.80	0.45	1.25	0.25	0.75	0.10	0.45
SMD1206-100-6	3.00	3.50	1.50	1.80	0.45	1.00	0.25	0.75	0.10	0.45
SMD1206-110-6	3.00	3.50	1.50	1.80	0.45	1.00	0.25	0.75	0.10	0.45
SMD1206-150-6	3.00	3.50	1.50	1.80	0.80	1.40	0.25	0.75	0.10	0.45
SMD1206-200-6	3.00	3.50	1.50	1.80	0.85	1.60	0.25	0.75	0.10	0.45

Typical Time-To-Trip at 23°C

- Z= SMD1206-005-60
- A= SMD1206-010-60
- B= SMD1206-012-48
- C= SMD1206-016-48
- D= SMD1206-020-30
- E= SMD1206-025-16
- F= SMD1206-035-16
- G= SMD1206-050-8/
SMD1206-050-24
- H= SMD1206-075-6 /
SMD1206-075-16
- I= SMD1206-100-6
- J= SMD1206-110-6
- K= SMD1206-150-6
- L= SMD1206-200-6



RoHS Compliant & Halogen Free



Application : All high-density boards

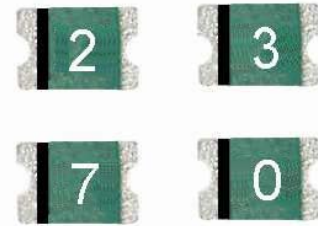
Product Features : Small surface mountable, Solid state,Faster time to trip

than standard SMD devices, Lower resistance than standard SMD devices

Operation Current : 0.1A~1.0A

Maximum Voltage : 6V~15V_{DC}

Temperature Range : -40°C to 85°C



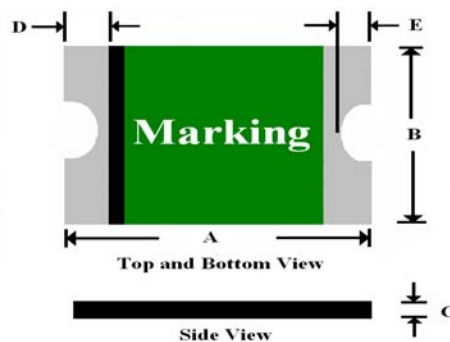
Electrical Characteristics(23°C)

Part Number	Hold Current	Trip Current	Rated Voltage	Max Current	Typ. Power	Max Time to Trip		Resistance	
						Current	Time	R _{MIN}	R1 _{MAX}
	I _H , A	I _T , A	V _{MAX} , V _{DC}	I _{MAX} , A	Pd, W	A	Sec	Ohms	Ohms
SMD0805-010-15	0.10	0.30	15	100	0.5	0.50	1.50	0.700	6.000
SMD0805-020-9	0.20	0.50	9	100	0.5	8.00	0.02	0.400	3.500
SMD0805-035-6	0.35	0.75	6	100	0.5	8.00	0.10	0.250	1.200
SMD0805-050-6	0.50	1.00	6	100	0.5	8.00	0.10	0.150	0.850
SMD0805-075-6	0.75	1.50	6	40	0.6	8.00	0.20	0.090	0.350
SMD0805-100-6	1.00	1.95	6	40	0.6	8.00	0.30	0.060	0.210

Thermal Derating for PPTC Device at Various Ambient Temperatures

TEMPERATURE	-40°C	-20°C	0°C	23°C	30°C	40°C	50°C	60°C	70°C	85°C
DERATING %	145%	130%	116%	100%	91%	84%	76%	69%	61%	53%

SMD0805 Product Dimensions (mm)



Part Number	A		B		C		D		E	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
SMD0805-010-15	2.00	2.30	1.20	1.50	0.55	1.00	0.20	0.60	0.10	0.45
SMD0805-020-9	2.00	2.30	1.20	1.50	0.55	1.00	0.20	0.60	0.10	0.45
SMD0805-035-6	2.00	2.30	1.20	1.50	0.45	0.75	0.20	0.60	0.10	0.45
SMD0805-050-6	2.00	2.30	1.20	1.50	0.55	1.25	0.20	0.60	0.10	0.45
SMD0805-075-6	2.00	2.30	1.20	1.50	0.55	1.25	0.20	0.60	0.10	0.45
SMD0805-100-6	2.00	2.30	1.20	1.50	0.75	1.80	0.20	0.60	0.10	0.45

Typical Time-To-Trip at 23°C

- A = SMD0805-010-15
- B = SMD0805-020-9
- C = SMD0805-035-6
- D = SMD0805-050-6
- E = SMD0805-075-6
- F = SMD0805-100-6

