

FEATURES

- | I(hold): 3.0A~9.0A
- | Very high voltage surge capabilities
- | Available in lead-free version
- | Fast response to fault current
- | RoHS compliant, Lead- Free and Halogen-Free
- | Low resistance
- | Compact design saves board space
- | Compatible with high temperature solders



APPLICATIONS

- | USB peripherals
- | Disk drives
- | CD-ROMs
- | General electronics
- | Set-top-box and HDMI
- | Mobile Internet Device (MID)
- | PDAs / digital cameras
- | Game console port protection
- | Plug and play protection for peripherals
- | Mobile phones - battery and port protection

ENVIRONMENTAL SPECIFICATIONS

Test	Conditions	Resistance change
Passive aging	85°C,1000 hours	±10% typical
Humidity aging	85°C/85%RH.100 hours	±5% typical
Thermal shock	MIL-STD-202,Method 107G +85°C/-40°C, 20times	-30% typical
Solvent Resistance	MIL-STD-202,Method 215	No change
Vibration	ML-STD-883C,Test Condition A	No change
Ambient operating conditions : - 40°C to +85°C		
Maximum surface temperature of the device in the tripped state is 125 °C		

PERFORMANCE SPECIFICATION

Type Number	I_{hold}	I_{trip}	V_{max}	Max. Time to Trip		I_{max}	$P_{d\ typ}$	Ri_{min}	$R1_{max}$
	A	A	V	Current A	T_{max} S	A	W	Ω	Ω
SMD1812-300L	3.0	6.0	6.0	15.0	2.0	50.0	1.5	0.003	0.022
SMD1812-300L-12	3.0	6.0	12.0	15.0	2.0	50.0	1.5	0.003	0.022
SMD1812-350L	3.5	7.0	6.0	17.5	2.0	50.0	1.5	0.003	0.02
SMD1812-350L-12	3.5	7.0	12.0	17.5	2.0	50.0	1.5	0.003	0.02
SMD1812-400L	4.0	8.0	6.0	20.0	2.0	50.0	1.8	0.003	0.018
SMD1812-400L-12	4.0	8.0	12.0	20.0	2.0	50.0	1.8	0.003	0.018
SMD1812-450L	4.5	9.0	6.0	22.5	2.0	50.0	1.8	0.003	0.016
SMD1812-450L-12	4.5	9.0	12.0	22.5	2.0	50.0	1.8	0.003	0.016
SMD1812-500L	5.0	10.0	6.0	25.0	2.0	50.0	1.8	0.003	0.014
SMD1812-500L-12	5.0	10.0	12.0	25.0	2.0	50.0	1.8	0.003	0.014
SMD1812-550L	5.5	11.0	6.0	27.5	2.0	50.0	1.8	0.002	0.012
SMD1812-550L-12	5.5	11.0	12.0	27.5	2.0	50.0	1.8	0.002	0.012
SMD1812-600L	6.0	12.0	6.0	30.0	2.0	50.0	1.8	0.002	0.010
SMD1812-600L-12	6.0	12.0	12.0	30.0	2.0	50.0	1.8	0.002	0.010
SMD1812-650L	6.5	13.0	6.0	32.5	2.0	50.0	1.8	0.002	0.008
SMD1812-650L-12	6.5	13.0	12.0	32.5	2.0	50.0	1.8	0.002	0.008
SMD1812-700L	7.0	14.0	6.0	35.0	2.0	50.0	2.0	0.001	0.007
SMD1812-700L-12	7.0	14.0	12.0	35.0	2.0	50.0	2.0	0.001	0.007
SMD1812-750L	7.5	15.0	6.0	37.5	2.0	50.0	2.0	0.001	0.006
SMD1812-750L-12	7.5	15.0	12.0	37.5	2.0	50.0	2.0	0.001	0.006
SMD1812-800L	8.0	16.0	6.0	40.0	2.0	50.0	2.0	0.0008	0.005
SMD1812-800L-12	8.0	16.0	12.0	40.0	2.0	50.0	2.0	0.0008	0.005
SMD1812-850L	8.5	17.0	6.0	42.5	2.0	50.0	2.2	0.0005	0.005
SMD1812-850L-12	8.5	17.0	12.0	42.5	2.0	50.0	2.2	0.0005	0.005
SMD1812-900L	9.0	18.0	6.0	45.0	2.0	50.0	2.2	0.0005	0.005
SMD1812-900L-12	9.0	18.0	12.0	45.0	2.0	50.0	2.2	0.0005	0.005

V_{max} = Maximum operating voltage device can withstand without damage at rated current (I_{max}).

I_{max} = Maximum fault current device can withstand without damage at rated voltage (V_{max}).

I_{hold} = Hold Current. Maximum current device will not trip in 25°C still air.

I_{trip} = Trip Current. Minimum current at which the device will always trip in 25°C still air.

P_d = Power dissipation when device is in the tripped state in 25°C still air environment at rated voltage.

$Ri_{min/max}$ = Minimum/Maximum device resistance prior to tripping at 25°C.

$R1_{max}$ = Maximum device resistance is measured one hour post reflow.

THERMAL DERATING CHART- I_H (A)

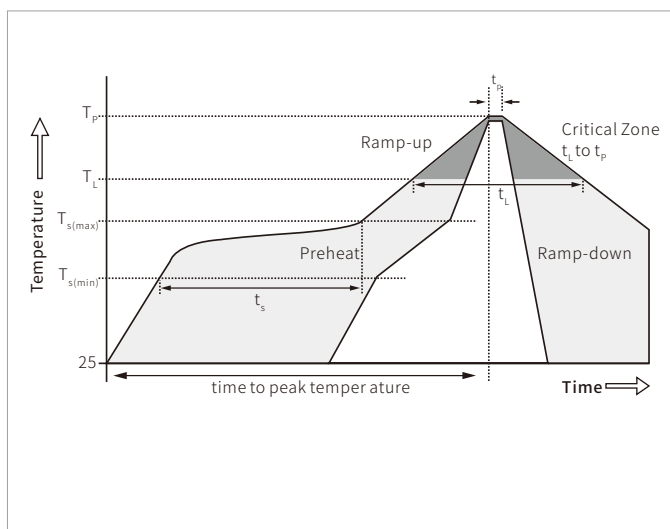
Type Number	Ambient Operation Temperature								
	-40 °C	-20 °C	0 °C	25 °C	40 °C	50 °C	60 °C	70 °C	85 °C
SMD1812-300L	4.35	3.90	3.51	3.00	2.58	2.31	2.07	1.86	1.50
SMD1812-300L-12	4.35	3.90	3.51	3.00	2.58	2.31	2.07	1.86	1.50
SMD1812-350L	5.08	4.55	4.10	3.50	3.01	2.70	2.42	2.17	1.75
SMD1812-350L-12	5.08	4.55	4.10	3.50	3.01	2.70	2.42	2.17	1.75
SMD1812-400L	5.80	5.20	4.68	4.00	3.44	3.08	2.76	2.48	2.00
SMD1812-400L-12	5.80	5.20	4.68	4.00	3.44	3.08	2.76	2.48	2.00
SMD1812-450L	6.54	5.85	5.26	4.50	3.86	3.46	3.10	2.79	2.25
SMD1812-450L-12	6.54	5.85	5.26	4.50	3.86	3.46	3.10	2.79	2.25
SMD1812-500L	7.26	6.50	5.84	5.00	4.29	3.84	3.45	3.11	2.50
SMD1812-500L-12	7.26	6.50	5.84	5.00	4.29	3.84	3.45	3.11	2.50
SMD1812-550L	7.99	7.15	6.43	5.50	4.72	4.23	3.79	3.42	2.75
SMD1812-550L-12	7.99	7.15	6.43	5.50	4.72	4.23	3.79	3.42	2.75
SMD1812-600L	8.72	7.80	7.01	6.00	5.15	4.61	4.14	3.73	3.00
SMD1812-600L-12	8.72	7.80	7.01	6.00	5.15	4.61	4.14	3.73	3.00
SMD1812-650L	9.44	8.45	7.59	6.50	5.58	4.99	4.48	4.04	3.25
SMD1812-650L-12	9.44	8.45	7.59	6.50	5.58	4.99	4.48	4.04	3.25
SMD1812-700L	10.17	9.10	8.18	7.00	6.01	5.38	4.83	4.35	3.50
SMD1812-700L-12	10.17	9.10	8.18	7.00	6.01	5.38	4.83	4.35	3.50
SMD1812-750L	10.89	9.75	8.76	7.50	6.44	5.76	5.18	4.66	3.75
SMD1812-750L-12	10.89	9.75	8.76	7.50	6.44	5.76	5.18	4.66	3.75
SMD1812-800L	11.62	10.40	9.34	8.00	6.87	6.15	5.52	4.97	4.00
SMD1812-800L-12	11.62	10.40	9.34	8.00	6.87	6.15	5.52	4.97	4.00
SMD1812-850L	12.34	11.05	9.93	8.50	7.30	6.53	5.87	5.28	4.25
SMD1812-850L-12	12.34	11.05	9.93	8.50	7.30	6.53	5.87	5.28	4.25
SMD1812-900L	13.07	11.70	10.51	9.00	7.73	6.92	6.21	5.59	4.50
SMD1812-900L-12	13.07	11.70	10.51	9.00	7.73	6.92	6.21	5.59	4.50

DIMENSIONS

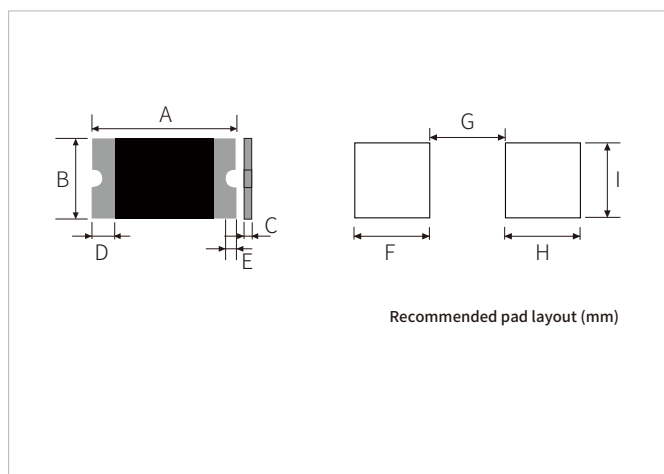
Type Number	A		B		C		D	E
	Min	Max	Min	Max	Min	Max	Min	Min
SMD1812-300L	4.37	4.73	3.07	3.41	0.40	1.00	0.30	0.15
SMD1812-300L-12	4.37	4.73	3.07	3.41	0.40	1.00	0.30	0.15
SMD1812-350L	4.37	4.73	3.07	3.41	0.40	1.20	0.30	0.15
SMD1812-350L-12	4.37	4.73	3.07	3.41	0.40	1.20	0.30	0.15
SMD1812-400L	4.37	4.73	3.07	3.41	0.40	1.20	0.30	0.15
SMD1812-400L-12	4.37	4.73	3.07	3.41	0.40	1.20	0.30	0.15
SMD1812-450L	4.37	4.73	3.07	3.41	0.4	1.40	0.3	0.15
SMD1812-450L-12	4.37	4.73	3.07	3.41	0.4	1.40	0.3	0.15
SMD1812-500L	4.37	4.73	3.07	3.41	0.5	1.40	0.3	0.15
SMD1812-500L-12	4.37	4.73	3.07	3.41	0.5	1.40	0.3	0.15
SMD1812-550L	4.37	4.73	3.07	3.41	0.5	1.40	0.3	0.15
SMD1812-550L-12	4.37	4.73	3.07	3.41	0.5	1.40	0.3	0.15
SMD1812-600L	4.37	4.73	3.07	3.41	0.6	1.60	0.3	0.15
SMD1812-600L-12	4.37	4.73	3.07	3.41	0.6	1.60	0.3	0.15
SMD1812-650L	4.37	4.73	3.07	3.41	0.6	1.60	0.3	0.15
SMD1812-650L-12	4.37	4.73	3.07	3.41	0.6	1.60	0.3	0.15
SMD1812-700L	4.37	4.73	3.07	3.41	0.6	1.60	0.3	0.15
SMD1812-700L-12	4.37	4.73	3.07	3.41	0.6	1.60	0.3	0.15
SMD1812-750L	4.37	4.73	3.07	3.41	0.6	1.60	0.3	0.15
SMD1812-750L-12	4.37	4.73	3.07	3.41	0.6	1.60	0.3	0.15
SMD1812-800L	4.37	4.73	3.07	3.41	0.6	1.60	0.3	0.15
SMD1812-800L-12	4.37	4.73	3.07	3.41	0.6	1.60	0.3	0.15
SMD1812-850L	4.37	4.73	3.07	3.41	0.6	1.60	0.3	0.15
SMD1812-850L-12	4.37	4.73	3.07	3.41	0.6	1.60	0.3	0.15
SMD1812-900L	4.37	4.73	3.07	3.41	0.6	1.60	0.3	0.15
SMD1812-900L-12	4.37	4.73	3.07	3.41	0.6	1.60	0.3	0.15

REFLOW PROFILE

Reflow Condition		Pb-Free assembly
Pre Heat	Temperature Min	150°C
	Temperature Max	200°C
	Time(min to max)	60-180 secs
Average ramp up rate (Liquidus) Temp (T_L) to peak $T_s(max)$ to T_L - Ramp-up Rate		3°C/second max
Reflow	Temperature (T_L) (Liquidus)	
	Temperature (T_L)	60-150 seconds
Peak Temperature (T_p)		260+0/-5 °C
Time within 5°C of actual peak Temperature (t_p)		20~40 seconds
Ramp-down Rate		6°C/second max
Time 25°C to peak Temperature (T_p)		8 minutes max.
Do not exceed		260°C

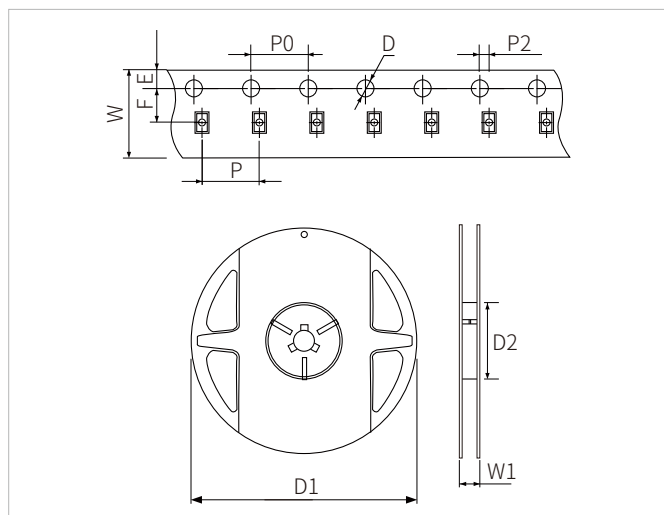


PACKAGE MECHANICAL DATA



Ref.	Dimensions
	Millimeters
A	See Dimensions Table
B	
C	
D	
E	
F	1.5
G	3.0
H	1.5
I	3.5

TAPING AND REEL SPECIFICATIONS



Symbol	Dimensions	
	Millimeters	Inches
W	12.0 ± 0.3	0.472 ± 0.012
P	8.0 ± 0.1	0.315 ± 0.004
P0	4.0 ± 0.1	0.157 ± 0.004
P2	2.0 ± 0.05	0.079 ± 0.002
F	5.5 ± 0.05	0.217 ± 0.002
E	1.75 ± 0.1	0.061 ± 0.002
D	1.55 ± 0.05	0.061 ± 0.002
D1(max)	178	7.007
D2(min)	60	2.362
W1	12.0 ± 1	0.472 ± 0.039

ORDERING INFORMATION

Part Number	Model	QTY/Reel	Reel Size
SMD1812-XXXL	SMD1812-300L~SMD1812-550L-12	2000PCS	7"
	SMD1812-600L~SMD1812-900L-12	1500PCS	

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By QR Code

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