

FEATURES

- | I(hold): 0.05~4.50A
- | 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%
Humidity aging	+85°C, 85%R.H.,100 hours	±5%
Thermal shock	MIL-STD-202,Method 107G +85°C/-40°C,20times	-30% typical resistance change
Resistance to solvent	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}	Ri_{min}	$R1_{max}$
	A	A	V_{DC}	Current A	T_{max} S	A	Ω	Ω
SMD1206-005	0.05	0.15	60.0	0.25	1.50	100	3.600	50.000
SMD1206-005-66	0.05	0.15	66.0	0.25	1.50	10	2.50	40.00
SMD1206-010	0.10	0.25	60.0	0.5	1.00	100	1.600	15.000
SMD1206-010-33	0.10	0.25	33.0	0.5	1.00	100	1.600	15.000
SMD1206-012	0.12	0.29	30	1.00	0.20	100	1.350	10.0
SMD1206-016	0.16	0.37	30	1.00	0.30	100	1.00	6.00
SMD1206-020	0.20	0.46	24.0	8.0	0.08	100	0.350	3.500
SMD1206-020-30	0.20	0.46	30.0	8.0	0.08	100	0.350	3.500
SMD1206-025	0.25	0.50	16.0	8.0	0.08	100	0.350	2.700
SMD1206-025-24	0.25	0.50	24.0	8.0	0.08	100	0.350	2.700
SMD1206-025-30	0.25	0.50	30.0	8.0	0.08	100	0.350	2.700
SMD1206-030	0.30	0.65	16.0	8.0	0.10	100	0.250	2.000
SMD1206-030-30	0.30	0.70	30.0	8.0	0.10	40	0.250	2.000
SMD1206-035	0.35	0.75	16.0	8.0	0.10	100	0.250	1.300
SMD1206-035-24	0.35	0.75	24.0	8.0	0.10	100	0.250	1.400
SMD1206-035-30	0.35	0.75	30.0	8.0	0.10	100	0.250	1.400
SMD1206-050	0.50	1.00	6.0	8.0	0.10	100	0.150	0.700
SMD1206-050-13.2	0.50	1.00	13.2	8.0	0.10	100	0.150	0.750
SMD1206-050-16	0.50	1.00	16	8.0	0.10	100	0.150	0.750
SMD1206-050-24	0.50	1.00	24	8.0	0.10	100	0.150	0.750
SMD1206-050-30	0.50	1.00	30	8.0	0.10	100	0.150	1.000
SMD1206-075	0.75	1.50	6.0	8.0	0.20	100	0.090	0.500
SMD1206-075-13.2	0.75	1.50	13.2	8.0	0.20	100	0.090	0.500
SMD1206-075-16	0.75	1.50	16.0	8.0	0.20	100	0.090	0.500
SMD1206-075-24	0.75	1.50	24.0	8.0	0.20	40	0.090	0.500
SMD1206-100	1.00	1.80	6.0	8.0	0.30	100	0.055	0.270
SMD1206-100-13.2	1.00	1.80	13.2	8.0	0.30	100	0.055	0.330
SMD1206-100-16	1.00	1.80	16.0	8.0	0.30	100	0.055	0.330
SMD1206-100-24	1.00	1.80	24.0	8.0	0.30	40	0.050	0.330
SMD1206-110	1.10	1.80	8.0	8.0	0.30	100	0.050	0.230
SMD1206-110-16	1.10	1.80	16.0	8.0	0.30	100	0.050	0.250
SMD1206-125	1.25	2.50	6.0	8.0	1.00	100	0.040	0.200
SMD1206-150	1.50	3.00	6.0	8.0	1.00	100	0.040	0.130
SMD1206-150-12	1.50	3.00	12.0	8.0	1.00	40	0.040	0.150
SMD1206-175-12	1.75	3.30	12.0	8.0	1.50	40	0.020	0.115
SMD1206-200	2.00	3.50	6.0	8.0	1.00	100	0.018	0.080
SMD1206-200-12	2.00	4.00	12.0	8.0	5.00	40	0.008	0.040
SMD1206-200-16	2.00	3.50	16.0	8.0	1.50	40	0.018	0.090
SMD1206-260-12	2.60	5.20	12.0	8.0	5.00	50	0.004	0.026
SMD1206-300	3.00	6.00	6.00	15.0	2.00	50	0.004	0.020
SMD1206-450	4.50	9.00	6.00	22.5	2.00	50	0.002	0.012

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_g = 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-IH(A)

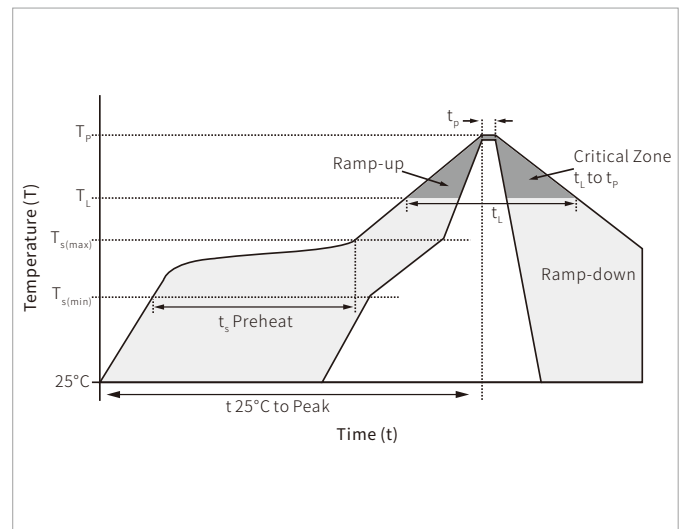
Part Number	Ambient Operating Temperature								
	-40 °C	-20 °C	0 °C	25 °C	40 °C	50 °C	60 °C	70 °C	85 °C
SMD1206-005	0.09	0.08	0.06	0.05	0.04	0.036	0.033	0.029	0.02
SMD1206-005-66	0.08	0.07	0.06	0.05	0.05	0.04	0.04	0.03	0.03
SMD1206-010	0.18	0.16	0.12	0.1	0.08	0.072	0.066	0.058	0.04
SMD1206-010-33	0.18	0.16	0.12	0.1	0.08	0.072	0.066	0.058	0.04
SMD1206-012	0.216	0.192	0.144	0.12	0.096	0.086	0.079	0.070	0.048
SMD1206-016	0.288	0.256	0.192	0.160	0.128	0.115	0.106	0.093	0.064
SMD1206-020	0.31	0.26	0.22	0.20	0.18	0.16	0.15	0.13	0.07
SMD1206-020-30	0.31	0.26	0.22	0.20	0.18	0.16	0.15	0.13	0.07
SMD1206-025	0.37	0.33	0.29	0.25	0.22	0.20	0.17	0.15	0.12
SMD1206-025-24	0.37	0.33	0.29	0.25	0.22	0.20	0.17	0.15	0.12
SMD1206-025-30	0.37	0.33	0.29	0.25	0.22	0.20	0.17	0.15	0.12
SMD1206-030	0.444	0.396	0.348	0.30	0.264	0.24	0.204	0.18	0.144
SMD1206-030-30	0.444	0.396	0.348	0.30	0.264	0.24	0.204	0.18	0.144
SMD1206-035	0.50	0.45	0.40	0.35	0.30	0.27	0.24	0.21	0.15
SMD1206-035-24	0.50	0.45	0.40	0.35	0.30	0.27	0.24	0.21	0.15
SMD1206-035-30	0.50	0.45	0.40	0.35	0.30	0.27	0.24	0.21	0.15
SMD1206-050	0.71	0.64	0.57	0.50	0.42	0.39	0.35	0.31	0.25
SMD1206-050-13.2	0.71	0.64	0.57	0.50	0.42	0.39	0.35	0.31	0.25
SMD1206-050-16	0.71	0.64	0.57	0.50	0.42	0.39	0.35	0.31	0.25
SMD1206-050-24	0.639	0.576	0.513	0.50	0.378	0.351	0.315	0.279	0.225
SMD1206-050-30	0.639	0.576	0.513	0.50	0.378	0.351	0.315	0.279	0.225
SMD1206-075	1.14	1.01	0.88	0.75	0.65	0.59	0.54	0.49	0.41
SMD1206-075-13.2	1.14	1.01	0.88	0.75	0.65	0.59	0.54	0.49	0.41
SMD1206-075-16	1.14	1.01	0.88	0.75	0.65	0.59	0.54	0.49	0.41
SMD1206-075-24	1.14	1.01	0.88	0.75	0.65	0.59	0.54	0.49	0.41
SMD1206-100	1.45	1.31	1.15	1.00	0.84	0.77	0.69	0.61	0.48
SMD1206-100-13.2	1.305	1.179	1.035	1.00	0.756	0.693	0.621	0.549	0.432
SMD1206-100-16	1.305	1.179	1.035	1.00	0.756	0.693	0.621	0.549	0.432
SMD1206-100-24	1.305	1.179	1.035	1.00	0.756	0.693	0.621	0.549	0.432
SMD1206-110	1.595	1.441	1.265	1.10	0.924	0.847	0.759	0.671	0.528
SMD1206-110-16	1.595	1.441	1.265	1.10	0.924	0.847	0.759	0.671	0.528
SMD1206-125	1.813	1.638	1.438	1.250	1.050	0.963	0.863	0.763	0.600
SMD1206-150	2.18	1.94	1.72	1.50	1.28	1.17	1.06	0.96	0.77
SMD1206-150-12	2.18	1.94	1.72	1.50	1.28	1.17	1.06	0.96	0.77
SMD1206-175-12	2.54	2.26	2.01	1.75	1.49	1.37	1.24	1.12	0.90
SMD1206-200	2.60	2.44	2.35	2.00	1.78	1.67	1.50	1.45	1.10
SMD1206-200-12	2.60	2.44	2.35	2.00	1.78	1.67	1.50	1.45	1.10
SMD1206-200-16	2.60	2.44	2.35	2.00	1.78	1.67	1.50	1.45	1.10
SMD1206-260-12	2.60	2.44	2.35	2.00	1.78	1.67	1.50	1.45	1.10
SMD1206-300	4.05	3.66	3.36	3.00	2.50	2.28	2.00	1.62	1.35
SMD1206-450	6.83	5.92	5.47	4.50	3.73	3.34	3.00	2.35	1.55

DIMENSIONS

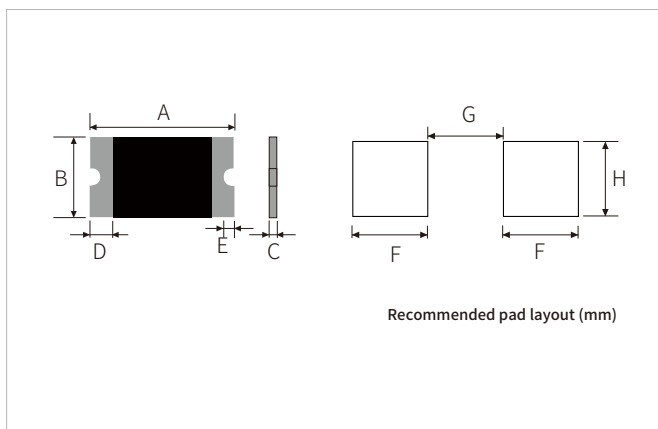
Type Number	Package Dimensions (mm)							
	A		B		C		D	E
	Min	Max	Min	Max	Min	Max	Min	Min
SMD1206-005	3.00	3.50	1.50	1.80	0.60	1.10	0.15	0.10
SMD1206-005-66	3.00	3.50	1.50	1.80	0.60	1.20	0.25	0.20
SMD1206-010	3.00	3.50	1.50	1.80	0.60	1.10	0.15	0.10
SMD1206-010-33	3.00	3.50	1.50	1.80	0.50	1.10	0.15	0.10
SMD1206-012	3.00	3.50	1.50	1.80	0.60	1.10	0.15	0.10
SMD1206-016	3.00	3.50	1.50	1.80	0.40	0.90	0.15	0.10
SMD1206-020	3.00	3.50	1.50	1.80	0.40	0.90	0.15	0.10
SMD1206-020-30	3.00	3.50	1.50	1.80	0.40	0.90	0.15	0.10
SMD1206-025	3.00	3.50	1.50	1.80	0.40	0.90	0.15	0.10
SMD1206-025-24	3.00	3.50	1.50	1.80	0.40	0.90	0.15	0.10
SMD1206-025-30	3.00	3.50	1.50	1.80	0.40	0.90	0.15	0.10
SMD1206-030	3.00	3.50	1.50	1.80	0.40	0.90	0.15	0.10
SMD1206-030-30	3.00	3.50	1.50	1.80	0.60	1.20	0.15	0.10
SMD1206-035	3.00	3.50	1.50	1.80	0.40	0.90	0.15	0.10
SMD1206-035-24	3.00	3.50	1.50	1.80	0.40	0.90	0.15	0.10
SMD1206-035-30	3.00	3.50	1.50	1.80	0.50	1.20	0.15	0.10
SMD1206-050	3.00	3.50	1.50	1.80	0.35	0.85	0.15	0.10
SMD1206-050-13.2	3.00	3.50	1.50	1.80	0.35	0.85	0.15	0.10
SMD1206-050-16	3.00	3.50	1.50	1.80	0.35	0.85	0.15	0.10
SMD1206-050-24	3.00	3.50	1.50	1.80	0.35	0.85	0.15	0.10
SMD1206-050-30	3.00	3.50	1.50	1.80	0.50	1.20	0.15	0.10
SMD1206-075	3.00	3.50	1.50	1.80	0.35	0.85	0.15	0.10
SMD1206-075-13.2	3.00	3.50	1.50	1.80	0.35	0.85	0.15	0.10
SMD1206-075-16	3.00	3.50	1.50	1.80	0.60	1.30	0.15	0.10
SMD1206-075-24	3.00	3.50	1.50	1.80	0.60	1.30	0.15	0.10
SMD1206-100	3.00	3.50	1.50	1.80	0.40	0.80	0.15	0.10
SMD1206-100-13.2	3.00	3.50	1.50	1.80	0.40	1.30	0.15	0.10
SMD1206-100-16	3.00	3.50	1.50	1.80	0.40	1.30	0.15	0.10
SMD1206-100-24	3.00	3.50	1.50	1.80	0.90	1.90	0.15	0.10
SMD1206-110	3.00	3.50	1.50	1.80	0.40	0.80	0.15	0.10
SMD1206-110-16	3.00	3.50	1.50	1.80	0.60	1.30	0.15	0.10
SMD1206-125	3.00	3.50	1.50	1.80	0.60	1.20	0.15	0.10
SMD1206-150	3.00	3.50	1.50	1.80	0.60	1.20	0.15	0.10
SMD1206-150-12	3.00	3.50	1.50	1.80	0.80	1.80	0.15	0.10
SMD1206-175-12	3.00	3.50	1.50	1.80	0.70	1.70	0.15	0.10
SMD1206-200	3.00	3.50	1.50	1.80	0.70	1.70	0.15	0.10
SMD1206-200-12	3.00	3.50	1.50	1.80	0.70	1.70	0.15	0.10
SMD1206-200-16	3.00	3.50	1.50	1.80	0.70	1.80	0.15	0.10
SMD1206-260-12	3.00	3.50	1.50	1.80	0.70	1.70	0.15	0.10
SMD1206-300	3.00	3.50	1.50	1.80	0.70	1.70	0.15	0.10
SMD1206-450	3.00	3.50	1.50	1.80	0.50	1.40	0.15	0.10

SOLDERING PARAMETERS

Reflow Condition		Lead-free assembly
Pre Heat	Temperature Max ($T_{s(min)}$)	150°C
	Temperature Max ($T_{s(max)}$)	200°C
	Time (min to max) (t_s)	60 – 180 secs
Average ramp up rate (Liquidus Temp (T_L) to peak)		3°C/second max
$T_{s(max)}$ to T_L - Ramp-up Rate		3°C/second max
Reflow	Temperature (T_L) (Liquidus)	217°C
	Time (min to max) (t_l)	60 – 150 seconds
Peak Temperature (T_p)		260°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

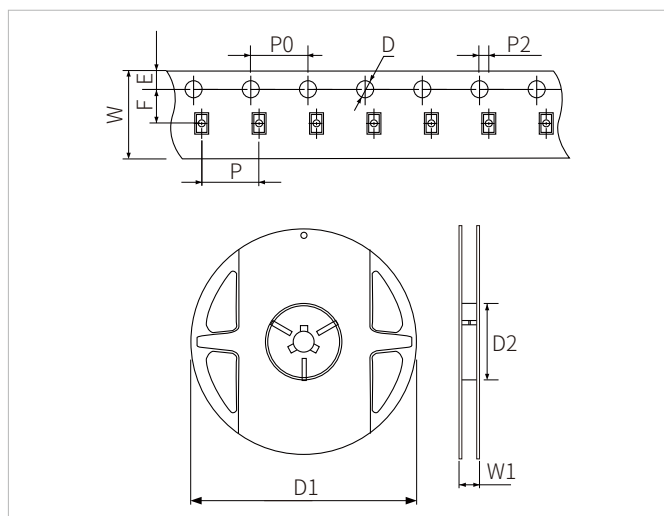


PACKAGE MECHANICAL DATA



Ref.	Dimensions
	Millimeters
A	See Dimensions Table
B	
C	
D	
E	
F	1.0±0.1
G	2.0±0.1
H	1.9±0.1

TAPING AND REEL SPECIFICATIONS



Symbol	Dimensions	
	Millimeters	Inches
W	8.15 ± 0.3	0.321 ± 0.012
P	4.0 ± 0.1	0.157 ± 0.004
P0	4.0 ± 0.1	0.157 ± 0.004
P2	2.0 ± 0.05	0.079 ± 0.002
F	3.5 ± 0.05	0.138 ± 0.002
E	1.75 ± 0.1	0.069 ± 0.004
D	1.55 ± 0.05	0.061 ± 0.002
D1(max)	178 ± 1.0	7.008 ± 0.039
D2(min)	59 ± 1	2.323 ± 0.039
W1	12 ± 1	0.472 ± 0.039

ORDERING INFORMATION

Part Number	QTY/Reel	Reel Size
SMD1206-005,005-66/010,010-33,012,035-30,050-30,050-24,075,075-16,100/13.2,100-16,100-24,125,150-12,200-12	3500PCS	7"
SMD1206-016,020-30,024-24,030,035-24,050-16,075,075-13.2,100,110	5000PCS	

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