

FEATURES

- | I(hold): 0.3~6.0A
- | 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%R.H.,100 hours	±5% typical
Thermal shock	MIL-STD-202,Method 107G +85°C/-40°C,20times	±33% 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}	$P_{d\ typ}$	Ri_{min}	$R1_{max}$
	A	A	V_{DC}	Current A	T_{max} S	A	W	Ω	Ω
SMD2920-030	0.30	0.60	60	1.5	3.0	100	1.5	0.60	4.80
SMD2920-050	0.50	1.00	60	2.5	4.0	100	1.5	0.18	1.40
SMD2920-075	0.75	1.50	33	8.0	0.3	100	1.5	0.10	1.00
SMD2920-075-60	0.75	1.50	60	8.0	0.3	40	1.5	0.10	1.00
SMD2920-100	1.00	2.20	33	8.0	0.5	100	1.5	0.065	0.41
SMD2920-100-60	1.00	2.20	60	8.0	0.5	100	1.5	0.065	0.41
SMD2920-125	1.25	2.50	33	8.0	2.0	100	1.5	0.05	0.25
SMD2920-150	1.50	3.00	33	8.0	2.0	100	1.5	0.035	0.23
SMD2920-185	1.85	3.70	33	8.0	2.5	100	1.5	0.030	0.15
SMD2920-200	2.00	4.00	16	8.0	4.5	100	1.5	0.020	0.12
SMD2920-200-24	2.00	4.00	24	8.0	4.5	100	1.5	0.020	0.12
SMD2920-200-30	2.00	4.00	30	8.0	4.5	100	1.5	0.020	0.12
SMD2920-250	2.50	5.00	16	8.0	16.0	100	1.5	0.020	0.085
SMD2920-250-24	2.50	5.00	24	8.0	16.0	40	1.5	0.020	0.090
SMD2920-260	2.60	5.20	16	8.0	10.0	100	1.5	0.014	0.075
SMD2920-260-24	2.60	5.20	24	8.0	18.0	100	1.5	0.014	0.075
SMD2920-300-6	3.00	6.00	6	8.0	20.0	100	1.5	0.012	0.048
SMD2920-300-16	3.00	6.00	16	8.0	20.0	100	1.5	0.012	0.048
SMD2920-300-24	3.00	6.00	24	8.0	20.0	100	1.5	0.012	0.048
SMD2920-400	4.00	8.00	6	20.0	4.0	40	1.5	0.010	0.040
SMD2920-400-12	4.00	8.00	12	20.0	4.0	40	1.5	0.010	0.040
SMD2920-400-16	4.00	8.00	16	20.0	4.0	40	1.5	0.008	0.040
SMD2920-400-24	4.00	8.00	24	20.0	7.0	50	1.5	0.002	0.012
SMD2920-500	5.00	10.00	8	25.0	5.0	100	1.5	0.005	0.031
SMD2920-500-12	5.00	10.00	12	25.0	5.0	40	1.5	0.005	0.031
SMD2920-500-16	5.00	10.00	16	25.0	5.0	40	1.5	0.005	0.031
SMD2920-600	6.00	12.00	6	25.0	6.0	40	1.5	0.004	0.020
SMD2920-600-12	6.00	12.00	12	25.0	6.0	40	1.5	0.004	0.02

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-IH(A)

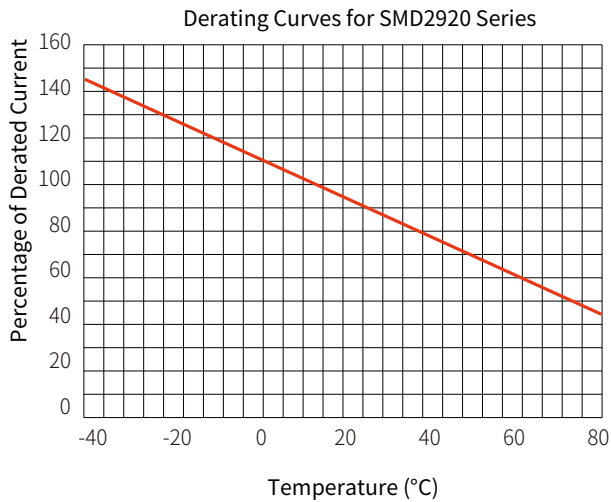
Part Number	Ambient Operating Temperature								
	-40 °C	-20 °C	0 °C	25 °C	40 °C	50 °C	60 °C	70 °C	85 °C
SMD2920-030	0.44	0.37	0.35	0.30	0.28	0.23	0.20	0.16	0.10
SMD2920-050	0.73	0.62	0.59	0.50	0.47	0.38	0.34	0.30	0.24
SMD2920-075	1.09	0.92	0.88	0.75	0.70	0.56	0.50	0.45	0.36
SMD2920-075-60	1.09	0.92	0.88	0.75	0.70	0.56	0.50	0.45	0.36
SMD2920-100	1.45	1.23	1.17	1.00	0.93	0.75	0.67	0.60	0.48
SMD2920-100-60	1.45	1.23	1.17	1.00	0.93	0.75	0.67	0.60	0.48
SMD2920-125	1.81	1.54	1.46	1.25	1.16	0.94	0.84	0.75	0.60
SMD2920-150	2.18	1.85	1.76	1.50	1.40	1.13	1.01	0.90	0.72
SMD2920-185	2.68	2.28	2.16	1.85	1.72	1.39	1.24	1.11	0.89
SMD2920-200	2.90	2.46	2.34	2.00	1.86	1.50	1.34	1.20	0.96
SMD2920-200-24	2.90	2.46	2.34	2.00	1.86	1.50	1.34	1.20	0.96
SMD2920-200-30	2.90	2.46	2.34	2.00	1.86	1.50	1.34	1.20	0.96
SMD2920-250	3.63	3.08	2.93	2.50	2.33	1.88	1.68	1.50	1.20
SMD2920-250-24	3.63	3.08	2.93	2.50	2.33	1.88	1.68	1.50	1.20
SMD2920-260	3.77	3.20	3.04	2.60	2.42	1.95	1.74	1.56	1.25
SMD2920-260-24	3.77	3.20	3.04	2.60	2.42	1.95	1.74	1.56	1.25
SMD2920-300-6	4.35	3.69	3.51	3.00	2.79	2.25	2.01	1.80	1.44
SMD2920-300-16	4.35	3.69	3.51	3.00	2.79	2.25	2.01	1.80	1.44
SMD2920-300-24	4.35	3.69	3.51	3.00	2.79	2.25	2.01	1.80	1.44
SMD2920-400	5.8	4.92	4.68	4.00	3.72	3.00	2.68	2.4	1.92
SMD2920-400-12	5.8	4.92	4.68	4.00	3.72	3.00	2.68	2.4	1.92
SMD2920-400-16	5.8	4.92	4.68	4.00	3.72	3.00	2.68	2.4	1.92
SMD2920-400-24	6.68	5.55	4.70	4.00	3.60	3.10	2.60	2.4	2.0
SMD2920-500	7.25	6.15	5.85	5.00	4.65	3.75	3.35	3.0	2.4
SMD2920-500-12	7.25	6.15	5.85	5.00	4.65	3.75	3.35	3.0	2.4
SMD2920-500-16	7.25	6.15	5.85	5.00	4.65	3.75	3.35	3.0	2.4
SMD2920-600	8.7	7.38	7.02	6.00	5.58	4.5	4.02	3.6	2.88
SMD2920-600-12	8.7	7.38	7.02	6.00	5.58	4.5	4.02	3.6	2.88

DIMENSIONS

Type Number	Package Dimensions (mm)							
	A		B		C		D	E
	min	max	min	max	min	max	min	min
SMD2920-030	6.73	7.98	4.8	5.44	0.6	1.15	0.3	0.15
SMD2920-050	6.73	7.98	4.8	5.44	0.6	1.15	0.3	0.15
SMD2920-075	6.73	7.98	4.8	5.44	0.6	1.15	0.3	0.15
SMD2920-075-60	6.73	7.98	4.8	5.44	0.6	1.30	0.3	0.15
SMD2920-100	6.73	7.98	4.8	5.44	0.6	1.00	0.3	0.15
SMD2920-100-60	6.73	7.98	4.8	5.44	0.7	1.50	0.3	0.15
SMD2920-125	6.73	7.98	4.8	5.44	0.5	1.00	0.3	0.15
SMD2920-150	6.73	7.98	4.8	5.44	0.5	1.20	0.3	0.15
SMD2920-185	6.73	7.98	4.8	5.44	0.6	1.20	0.3	0.15
SMD2920-200	6.73	7.98	4.8	5.44	0.4	0.80	0.3	0.15
SMD2920-200-24	6.73	7.98	4.8	5.44	0.6	1.20	0.3	0.15
SMD2920-250	6.73	7.98	4.8	5.44	0.4	0.80	0.3	0.15
SMD2920-250-24	6.73	7.98	4.8	5.44	0.5	1.20	0.3	0.15
SMD2920-260	6.73	7.98	4.8	5.44	0.4	0.80	0.3	0.15
SMD2920-260-24	6.73	7.98	4.8	5.44	0.4	1.20	0.3	0.15
SMD2920-300-6	6.73	7.98	4.8	5.44	0.4	0.80	0.3	0.15
SMD2920-300-16	6.73	7.98	4.8	5.44	0.60	1.20	0.3	0.15
SMD2920-300-24	6.73	7.98	4.8	5.44	0.60	1.20	0.3	0.15
SMD2920-400	6.73	7.98	4.8	5.44	0.40	1.00	0.3	0.15
SMD2920-400-12	6.73	7.98	4.8	5.44	0.50	1.20	0.3	0.15
SMD2920-400-16	6.73	7.98	4.8	5.44	0.60	1.20	0.3	0.15
SMD2920-400-24	6.73	7.98	4.8	5.44	0.50	1.10	0.3	0.15
SMD2920-500	6.73	7.98	4.8	5.44	0.70	1.50	0.3	0.15
SMD2920-500-12	6.73	7.98	4.8	5.44	0.70	1.50	0.3	0.15
SMD2920-500-16	6.73	7.98	4.8	5.44	0.70	1.50	0.3	0.15
SMD2920-600	6.73	7.98	4.8	5.44	0.70	1.50	0.3	0.15
SMD2920-600-12	6.73	7.98	4.8	5.44	0.70	1.80	0.3	0.15

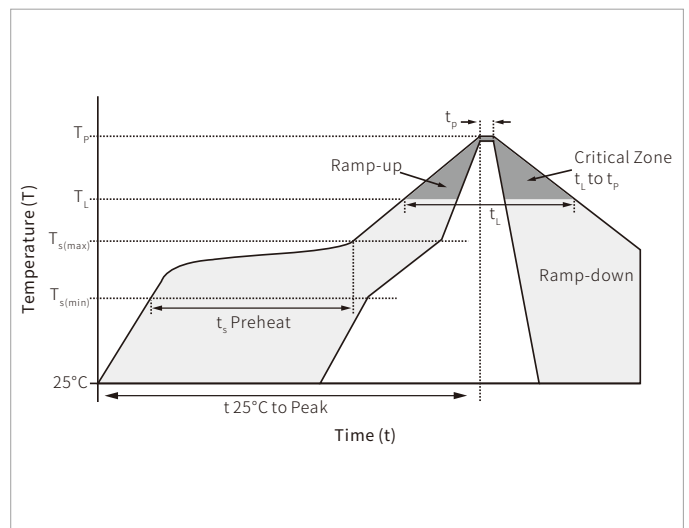
PARAMETER CHARACTERISTIC CURVE

FIG.1: Thermal Derating Curve

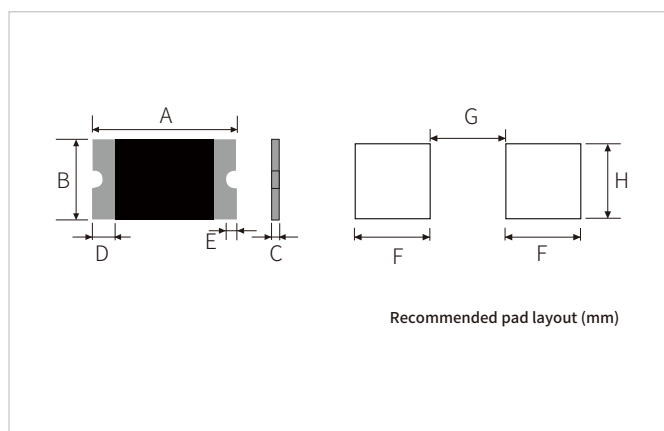


SOLDERING PARAMETERS

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

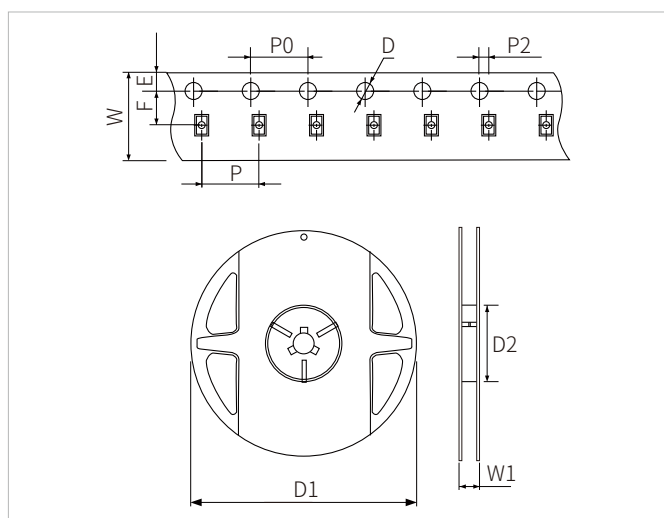


PACKAGE MECHANICAL DATA



Ref.	Dimensions	
	Millimeters	
A	See Dimensions Table	
B		
C		
D		
E		
F	2.3	
G	5.1	
H	5.6	

TAPING AND REEL SPECIFICATIONS



Symbol	Dimensions	
	Millimeters	Inches
W	16.0 ± 0.3	0.63 ± 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	7.5 ± 0.05	0.295 ± 0.002
E	1.75 ± 0.1	0.069 ± 0.002
D	1.55 ± 0.05	0.061 ± 0.002
D1(max)	178	7.007
D2(min)	60	2.362
W1	19.3 ± 1	0.760 ± 0.039

ORDERING INFORMATION

Part Number	QTY/Reel	Reel Size
SMD2920-030/050/075/075-60/100/125/150/200/250/260/300	2000PCS	7"
SMD2920-185/100-60/250-24/300-24/400-16/400-24/500-16/600-12	1500PCS	7"

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By QR Code

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