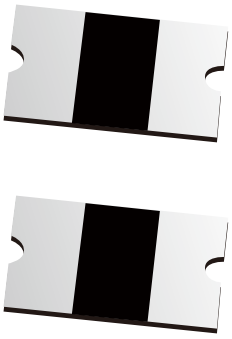
FEATURES

- I(hold): 0.3~12.0A
- 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℃,1000 hrs	±5% typical
Humidity aging	+85℃，85%R.H.,168 hours	±5% typical
Thermal shock	+85℃ to -40℃，20times	±33% typical
Resistance to solvent	MIL-STD-202，Method 215	No change
Vibration	MIL-STD-202，Method 201	No change
Ambient operating conditions : - 40℃ to +85℃		
Maximum surface temperature of the device in the tripped state is 125 ℃		

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
SMD2920-100	1.00	2.20	33	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
SMD2920-250	2.50	5.00	16	8.0	16.0	100	1.5	0.020	0.085
SMD2920-260	2.60	5.20	16	8.0	10.0	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
SMD2920-500/16	5.00	10.0	16	50.0	2.0	50	2.2	0.001	0.014
SMD2920-500/24	5.00	10.0	24	50.0	2.0	50	2.2	0.001	0.014
SMD2920-600/16	6.00	12.0	16	50.0	2.0	50	2.2	0.0008	0.012
SMD2920-600/24	6.00	12.0	24	50.0	2.0	50	2.2	0.0008	0.012
SMD2920-700/16	7.00	14.0	16	50.0	2.0	50	2.2	0.0007	0.010
SMD2920-700/24	7.00	14.0	24	50.0	2.0	50	2.2	0.0007	0.010
SMD2920-800/16	8.00	16.0	16	50.0	2.0	50	2.2	0.0006	0.008
SMD2920-800/24	8.00	16.0	24	50.0	2.0	50	2.2	0.0006	0.008
SMD2920-900/16	9.00	18.0	16	50.0	2.0	50	2.2	0.0006	0.007
SMD2920-900/24	9.00	18.0	24	50.0	2.0	50	2.2	0.0006	0.007
SMD2920-1000/16	10.00	20.0	16	50.0	2.0	50	2.2	0.0005	0.006
SMD2920-1000/24	10.00	20.0	24	50.0	2.0	50	2.2	0.0005	0.006
SMD2920-1100/16	11.00	22.0	16	50.0	2.0	50	2.2	0.0005	0.005
SMD2920-1100/24	11.00	22.0	24	50.0	2.0	50	2.2	0.0005	0.005
SMD2920-1200/16	12.00	24.0	16	50.0	2.0	50	2.2	0.0005	0.0004
SMD2920-1200/24	12.00	24.0	24	50.0	2.0	50	2.2	0.0005	0.0004

V_{max}= Maximum operating voltage device can withstand without damage at rated current (Imax).
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 Operation 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	0.18	0.14
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
SMD2920-100	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
SMD2920-250	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
SMD2920-300/6	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
SMD2920-500/16	7.00	6.75	5.65	5.00	4.54	4.20	3.85	3.45	2.82
SMD2920-500/24	7.00	6.75	5.65	5.00	4.54	4.20	3.85	3.45	2.82
SMD2920-600/16	8.58	7.83	7.05	6.00	5.27	4.87	4.48	4.05	3.38
SMD2920-600/24	8.58	7.83	7.05	6.00	5.27	4.87	4.48	4.05	3.38
SMD2920-700/16	9.48	8.73	7.92	7.00	6.36	5.88	5.41	4.83	3.94
SMD2920-700/24	9.48	8.73	7.92	7.00	6.36	5.88	5.41	4.83	3.94
SMD2920-800/16	11.20	10.26	9.17	8.00	7.17	6.67	6.16	5.66	4.88
SMD2920-800/24	11.20	10.26	9.17	8.00	7.17	6.67	6.16	5.66	4.88
SMD2920-900/16	12.60	11.54	10.32	9.00	8.07	7.49	6.93	6.36	5.49
SMD2920-900/24	12.60	11.54	10.32	9.00	8.07	7.49	6.93	6.36	5.49
SMD2920-1000/16	14.00	12.83	11.47	10.00	8.97	8.33	7.70	7.07	6.10
SMD2920-1000/24	14.00	12.83	11.47	10.00	8.97	8.33	7.70	7.07	6.10
SMD2920-1100/16	15.40	14.11	12.61	11.00	9.86	9.16	8.47	7.77	6.71
SMD2920-1100/24	15.40	14.11	12.61	11.00	9.86	9.16	8.47	7.77	6.71
SMD2920-1200/16	16.80	15.40	13.76	12.00	10.76	10.00	9.24	8.48	7.32
SMD2920-1200/24	16.80	15.40	13.76	12.00	10.76	10.00	9.24	8.48	7.32

DIMENSIONS

Type Number	Package Dimensions (mm)							Package Dimensions (in)						
	A		B		C		D	A		B		C		D
	min	max	min	max	min	max	min	min	max	min	max	min	max	min
SMD2920-030	6.73	7.98	4.8	5.44	0.6	1.15	0.3	0.265	0.314	0.189	0.214	0.024	0.045	0.012
SMD2920-050	6.73	7.98	4.8	5.44	0.6	1.15	0.3	0.265	0.314	0.189	0.214	0.024	0.045	0.012
SMD2920-075	6.73	7.98	4.8	5.44	0.6	1.15	0.3	0.265	0.314	0.189	0.214	0.024	0.045	0.012
SMD2920-100	6.73	7.98	4.8	5.44	0.6	1.10	0.3	0.265	0.314	0.189	0.214	0.024	0.043	0.012
SMD2920-125	6.73	7.98	4.8	5.44	0.6	1.10	0.3	0.265	0.314	0.189	0.214	0.024	0.043	0.012
SMD2920-150	6.73	7.98	4.8	5.44	0.6	1.20	0.3	0.265	0.314	0.189	0.214	0.024	0.047	0.012
SMD2920-185	6.73	7.98	4.8	5.44	0.6	1.20	0.3	0.265	0.314	0.189	0.214	0.024	0.047	0.012
SMD2920-200	6.73	7.98	4.8	5.44	0.4	0.80	0.3	0.265	0.314	0.189	0.214	0.016	0.031	0.012
SMD2920-200/24	6.73	7.98	4.8	5.44	0.6	1.20	0.3	0.265	0.314	0.189	0.214	0.024	0.047	0.012
SMD2920-250	6.73	7.98	4.8	5.44	0.4	0.80	0.3	0.265	0.314	0.189	0.214	0.016	0.031	0.012
SMD2920-260	6.73	7.98	4.8	5.44	0.4	0.80	0.3	0.265	0.314	0.189	0.214	0.016	0.031	0.012
SMD2920-300/6	6.73	7.98	4.8	5.44	0.4	0.80	0.3	0.265	0.314	0.189	0.214	0.016	0.031	0.012
SMD2920-300/16	6.73	7.98	4.8	5.44	0.6	1.20	0.3	0.265	0.314	0.189	0.214	0.024	0.047	0.012
SMD2920-500/16	6.73	7.98	4.8	5.44	0.5	1.4	0.3	0.265	0.314	0.189	0.214	0.020	0.055	0.012
SMD2920-500/24	6.73	7.98	4.8	5.44	0.5	1.4	0.3	0.265	0.314	0.189	0.214	0.020	0.055	0.012
SMD2920-600/16	6.73	7.98	4.8	5.44	0.5	1.4	0.3	0.265	0.314	0.189	0.214	0.020	0.055	0.012
SMD2920-600/24	6.73	7.98	4.8	5.44	0.5	1.4	0.3	0.265	0.314	0.189	0.214	0.020	0.055	0.012
SMD2920-700/16	6.73	7.98	4.8	5.44	0.5	1.4	0.3	0.265	0.314	0.189	0.214	0.020	0.055	0.012
SMD2920-700/24	6.73	7.98	4.8	5.44	0.5	1.4	0.3	0.265	0.314	0.189	0.214	0.020	0.055	0.012
SMD2920-800/16	6.73	7.98	4.8	5.44	0.5	1.4	0.3	0.265	0.314	0.189	0.214	0.020	0.055	0.012
SMD2920-800/24	6.73	7.98	4.8	5.44	0.5	1.4	0.3	0.265	0.314	0.189	0.214	0.020	0.055	0.012
SMD2920-900/16	6.73	7.98	4.8	5.44	0.5	1.4	0.3	0.265	0.314	0.189	0.214	0.020	0.055	0.012
SMD2920-900/24	6.73	7.98	4.8	5.44	0.5	1.4	0.3	0.265	0.314	0.189	0.214	0.020	0.055	0.012
SMD2920-1000/16	6.73	7.98	4.8	5.44	0.5	1.4	0.3	0.265	0.314	0.189	0.214	0.020	0.055	0.012
SMD2920-1000/24	6.73	7.98	4.8	5.44	0.5	1.4	0.3	0.265	0.314	0.189	0.214	0.020	0.055	0.012
SMD2920-1100/16	6.73	7.98	4.8	5.44	0.5	1.4	0.3	0.265	0.314	0.189	0.214	0.020	0.055	0.012
SMD2920-1100/24	6.73	7.98	4.8	5.44	0.5	1.4	0.3	0.265	0.314	0.189	0.214	0.020	0.055	0.012
SMD2920-1200/16	6.73	7.98	4.8	5.44	0.5	1.4	0.3	0.265	0.314	0.189	0.214	0.020	0.055	0.012
SMD2920-1200/24	6.73	7.98	4.8	5.44	0.5	1.4	0.3	0.265	0.314	0.189	0.214	0.020	0.055	0.012

PARAMETER CHARACTERISTIC CURVE

FIG.1: Thermal Derating Curve

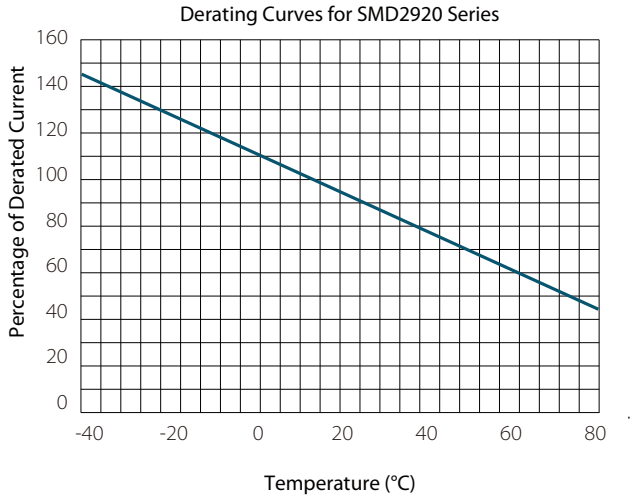
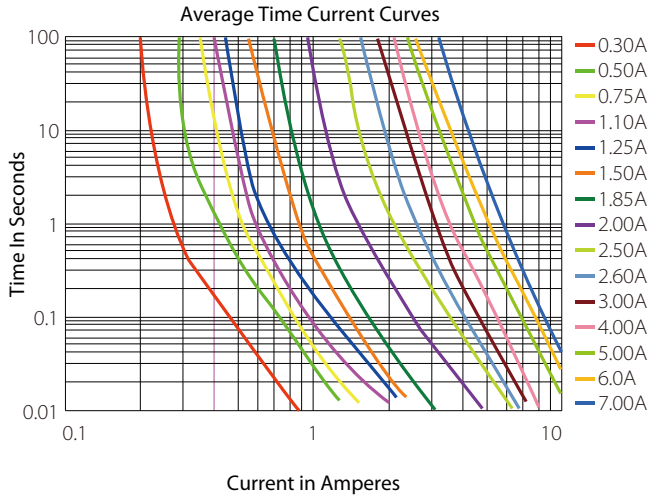
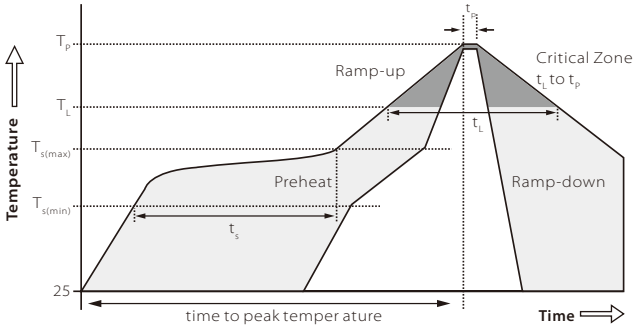


FIG.2: Average Time-Current Curve

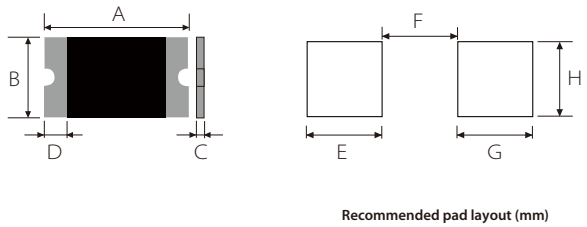


REFLOW PROFILE

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)	217℃
	Temperature (T_L)	60-150 seconds
Peak Temperature (T_p)		260+0/-5 °C
Time within 5°C of actual peak Temperature (tp)		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



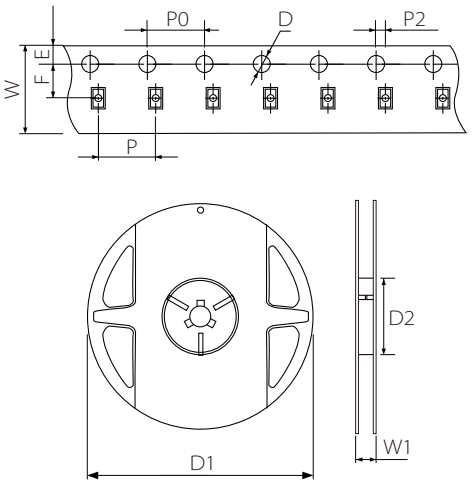
PACKAGE MECHANICAL DATA



Recommended pad layout (mm)

Ref.	Dimensions
	Millimeters
A	See Dimensions Table
B	
C	
D	
E	2.2
F	5.0
G	2.2
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	16.4±0.5	0.646±0.02

ORDERING INFORMATION

Part Number	QTY/Reel	Reel Size
SMD2920xxx	1500PCS	7″

To find your local partner within Semiwell's website : www.semiwell.com.cn