JEMETE
Quality Innovate Win-win

SMD2920 Series Surface Mount PPTC Devices

Features

- compact design saves board space
- RoHS compliant and lead-free
- Halogen-free
- Fast reponse to flault current
- Symmetrical design

Applications

- USB port protection - USB 2.0, 3.0&OTG
- HDMI 1.4 Source protection
- PDAs / digital cameras
- Game console port protection
- PC motherboards-plug and play protection

HF RoHS REACH Pb Free

1.Electrical Characteristics

Model	I-hold	I-trip	Vmax	Imax	Pd typ	Max. Time to trip		R0 min	R1max
						Current	Time		
	(A)	(A)	(Vdc)	(A)	(W)	(A)	(Sec.)	(Ohm)	(Ohm)
2920L030DR	0.30	0.60	60.00	10.00	1.50	1.50	3.00	0.60	4.30
2920L050DR	0.50	1.00	60.00	10.00	1.50	2.50	4.00	0.20	1.40
2920L075DR	0.75	1.50	33.00	40.00	1.50	8.00	0.30	0.10	1.00
2920L075/60MR	0.75	1.50	60.00	10.00	1.50	8.00	0.30	0.10	1.00
2920L100PR	1.00	2.00	33.00	40.00	1.50	8.00	0.50	0.065	0.410
2920L110/60MR	1.10	2.20	60.00	10.00	1.50	8.00	1.00	0.060	0.390
SMDC125F/33-2	1.25	2.50	33.00	40.00	1.50	8.00	2.00	0.050	0.250
2920L150DR	1.50	3.00	33.00	40.00	1.50	8.00	2.00	0.035	0.230
2920L185DR	1.85	3.70	33.00	40.00	1.50	8.00	2.50	0.030	0.150
2920L200/24DR	2.00	4.00	24.00	40.00	1.50	8.00	5.00	0.020	0.125
2920L250DR	2.50	5.00	16.00	40.00	1.50	8.00	20.00	0.015	0.080
2920L260/24DR	2.60	5.20	24.00	40.00	1.50	8.00	20.00	0.014	0.075
2920L300/15DR	3.00	6.00	15.00	40.00	1.50	8.00	25.00	0.010	0.055
2920L330/24MR	3.30	6.60	24.00	40.00	1.50	8.00	5.00	0.010	0.050
2920L400/15MR	4.00	8.00	16.00	40.00	1.50	20.00	4.00	0.008	0.040
2920L500/16MR	5.00	10.00	16.00	40.00	1.50	25.00	5.00	0.005	0.025
2920L600/12MR	6.00	12.00	12.00	40.00	2.00	30.00	2.00	0.003	0.020
2920L700/12MR	7.00	14.00	12.00	40.00	2.00	35.00	2.00	0.0025	0.018

I-hold: Holding Current: maximum current at which the device will not trip in 25℃ still air.

I-trip: Tripping Current: minimum current at which the device will trip in 25℃ still air.

Vmax: Maximum voltage device can withstand without damage at rated current(Imax).

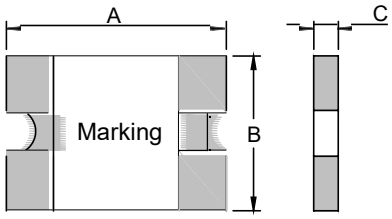
I max: Maximum fault current device can withstand without damage at rated voltage(Vmax).

Pd typ:Typical power dissipated from device when in the tripped state at 25℃ still air.

R0 min:Minimum resistance of device in initial (un-soldered) state.

R1 max:Maximum resistance of device at 25℃ measured one hour after tripping or reflow soldering of 260℃ for 20 sec.

2.Product Dimensions(mm)&Marking



Model	A		B		C		D		E	Marking
	Min	Max	Min	Max	Min	Max	Min	Max	Min	
2920L030DR	6.73	7.98	4.80	5.44	0.65	1.05	0.30	2.50	0.25	
2920L050DR	6.73	7.98	4.80	5.44	0.65	1.05	0.30	2.50	0.25	
2920L075DR	6.73	7.98	4.80	5.44	0.45	0.85	0.30	2.50	0.25	
2920L075/60MR	6.73	7.98	4.80	5.44	0.80	1.30	0.30	2.50	0.25	
2920L100PR	6.73	7.98	4.80	5.44	0.45	0.85	0.30	2.50	0.25	
2920L110/60MR	6.73	7.98	4.80	5.44	0.80	1.30	0.30	2.50	0.25	
SMDC125F/33-2	6.73	7.98	4.80	5.44	0.45	0.85	0.30	2.50	0.25	
2920L150DR	6.73	7.98	4.80	5.44	0.80	1.30	0.30	2.50	0.25	
2920L185DR	6.73	7.98	4.80	5.44	0.80	1.30	0.30	2.50	0.25	
2920L200/24DR	6.73	7.98	4.80	5.44	0.80	1.30	0.30	2.50	0.25	
2920L250DR	6.73	7.98	4.80	5.44	0.80	1.30	0.30	2.50	0.25	
2920L260/24DR	6.73	7.98	4.80	5.44	1.00	1.50	0.30	2.50	0.25	
2920L300/15DR	6.73	7.98	4.80	5.44	0.80	1.30	0.30	2.50	0.25	
2920L330/24MR	6.73	7.98	4.80	5.44	1.00	1.50	0.30	2.50	0.25	
2920L400/15MR	6.73	7.98	4.80	5.44	1.00	1.50	0.30	2.50	0.25	
2920L500/16MR	6.73	7.98	4.80	5.44	1.00	1.50	0.30	2.50	0.25	
2920L600/12MR	6.73	7.98	4.80	5.44	1.20	1.60	0.30	2.50	0.25	
2920L700/12MR	6.73	7.98	4.80	5.44	1.20	1.60	0.30	2.50	0.25	

3.Thermal Derating Chart

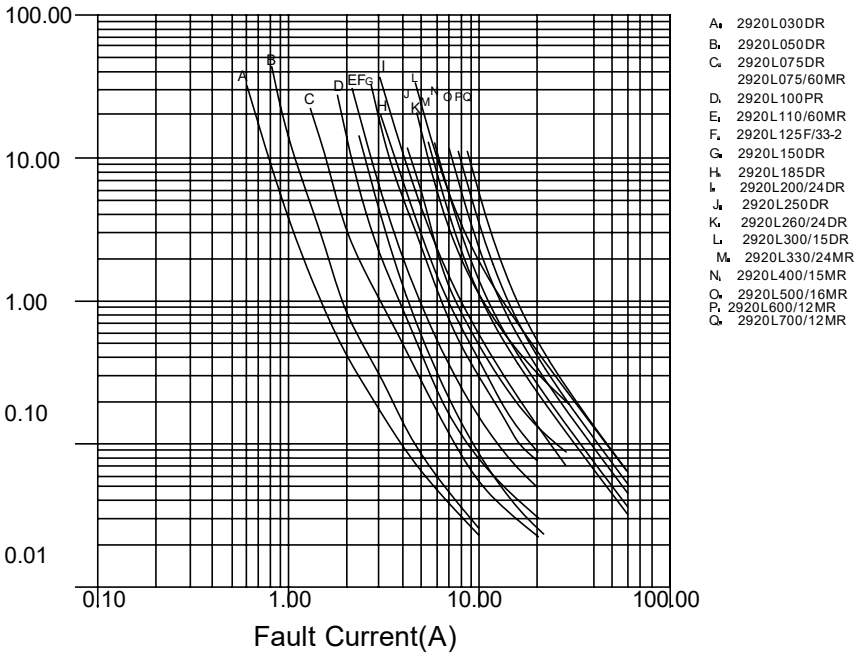
Recommended hold current(A) at am bient Temperature(℃)

Model	Ambient Operating Temperature								
	-40℃	-20℃	0℃	25℃	40℃	50℃	60℃	70℃	85℃
2920L030DR	0.45	0.40	0.35	0.30	0.25	0.23	0.20	0.17	0.14
2920L050DR	0.76	0.67	0.59	0.50	0.42	0.38	0.33	0.29	0.23
2920L075DR	1.13	1.01	0.88	0.75	0.62	0.56	0.50	0.44	0.34
2920L075/60MR	1.13	1.01	0.88	0.75	0.62	0.56	0.50	0.44	0.34
2920L100PR	1.66	1.47	1.29	1.00	0.91	0.83	0.73	0.64	0.50
2920L110/60MR	1.70	1.50	1.34	1.10	1.00	0.90	0.80	0.70	0.55
SMDC125F/33-2	1.89	1.68	1.46	1.25	1.04	0.94	0.83	0.73	0.56
2920L150DR	2.27	2.01	1.76	1.50	1.25	1.13	1.00	0.87	0.74
2920L185DR	2.80	2.47	2.17	1.85	1.54	1.39	1.22	1.07	0.85

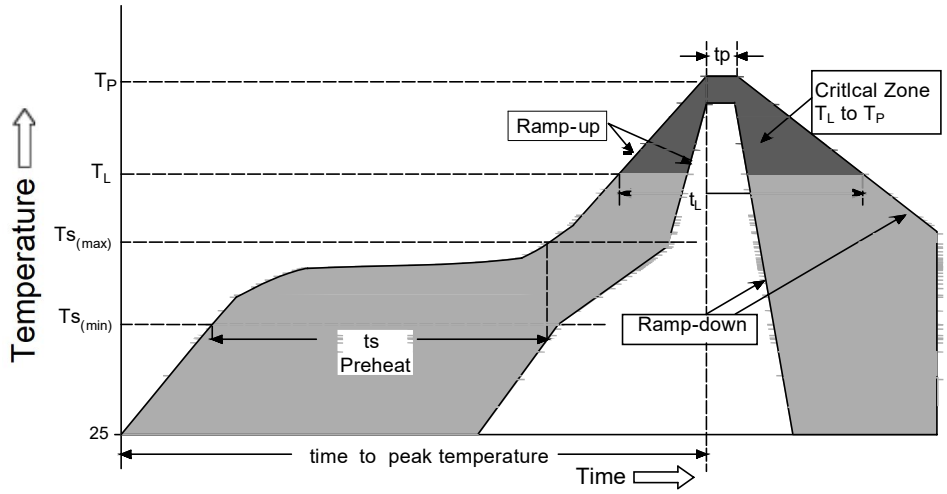
2920L200/24DR	3.14	2.77	2.42	2.00	1.73	1.56	1.38	1.20	0.98
2920L250DR	3.54	3.15	2.81	2.50	2.16	1.98	1.86	1.64	1.38
2920L260/24DR	3.64	3.25	2.91	2.60	2.26	2.08	1.96	1.74	1.48
2920L300/15DR	4.20	3.85	3.44	3.00	2.69	2.50	2.31	2.12	1.83
2920L330/24MR	4.60	4.20	3.75	3.30	2.95	2.75	2.50	2.25	1.70
2920L400/15MR	6.05	5.35	4.70	4.00	3.35	3.00	2.65	2.35	1.80
2920L500/16MR	7.55	6.70	5.85	5.00	4.20	3.77	3.32	2.92	2.23
2920L600/12MR	8.50	7.80	7.00	6.00	5.25	4.85	4.45	4.00	3.40
2920L700/12MR	9.50	8.70	7.90	7.00	6.40	5.85	5.40	4.80	3.95

4. Typical time to trip at 25℃

SMD2920 Series TTT Vs Fault current chart



5.Soldering parameters



Profile Feature		Pb-Free Assembly
Average Ramp-Up Rate ($Ts_{(max)}$ to T_P)		3°C/second max
Pre Heat:	Temperature Min ($Ts_{(min)}$)	150°C
	Temperature Max ($Ts_{(max)}$)	200°C
	Time (Min to Max) (t_s)	60 – 180 secs
Time Maintained Above:	Temperature (T_L)	217°C
	Temperature (t_L)	60 – 150 seconds
Peak / Classification 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.

◆All temperature refer to topside of thepackage, measured on the package body surface

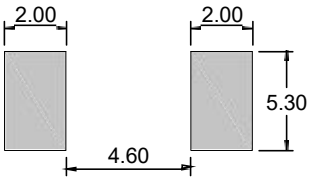
◆If reflow temperature exceeds the recommended profile,devices may not meet the performance requirements

◆Recommended reflow methods: IR,vapor phase oven,hot air oven,N2 environment for lead

◆Recommended maximum paste thickness is 0.25mm (0.010inch)

◆Devices can be cleaned using standard industry methods and solvents

6.Recommended Pad Layout(mm) & Physical Specifications



Terminal Material	Tin-Plated Nickle-Copper (Solder Material: Matte Tin (Sn))
Lead Solderability	Meets EIA Specification RS186-9E, ANSI/J-STD-002 Category 3.

7.Environmental Specifications

Operating Temperature	-40 °C to +85 °C
Maximum Device Surface Temperature in Tripped State	125°C
Passive Aging	+85 °C, 1000 hours ; ±5 % typical resistance change
Humidity Aging	+85 °C, 85 % R.H. 1000 hours; ±5 % typical resistance change
Thermal Shock	MIL–STD–202, Method 107; +85 °C to -40 °C, 20 times;-30 % typical resistance change
Solvent Resistance	MIL–STD–202, Method 215 ; No change
Vibration	MIL–STD–883, Method 2007, Condition A; No change
Moisture Sensivity Level	Level 1, J–STD–020
Storage Conditions	+40 °C Max. 70% RH Max. Packed in original packaging.

8.Test Procedures And Requirements

No.	Test	Test Conditions	Accept/Reject Criteria
1	R0 min	Resistance measurement at 25℃	R0min ≤ R ≤ R1max
2	R1 max	Resistance measurement one hour after post trip	R0min ≤ R ≤ R1max
3	I-hold	Hold rated current 1800 second without trip, @ 25℃	No trip
4	I-trip	Device must trip within 900 second under rated current, @25℃	Trip
5	Max. time to trip	At specified current, 25 °C	T ≤ max. time to trip (seconds)
6	Trip Cycle Life	Vmax, Imax, 100 cycles	No arcing or burning
7	Trip Endurance	Vmax,Imax 24 hours	No arcing or burning
8	Solderability	ANSI/J-STD-002	95 % min. coverage

9.Tape and Reel Specifications&Packaging quantity per Reel

TAPE SPECIFICATIONS: EIA-481-1 (mm)			
Item	2920L075DR 2920L100PR SMDC125F/33-2	2920L030DR 2920L050DR 2920L075/60MR 2920L110/60MR 2920L150DR 2920L185DR 2920L200/24DR 2920L250DR 2920L260/24DR 2920L300/15DR 2920L330/24MR 2920L400/15MR 2920L500/16MR	2920L600/12MR 2920L700/12MR
W	16.00±0.30	16.00±0.30	16.00±0.30
F	7.50±0.10	7.50±0.10	7.50±0.10
E1	1.75±0.10	1.75±0.10	1.75±0.10
D0	1.55±0.05	1.55±0.05	1.55±0.05
D1	1.50±0.10	1.50±0.10	1.50±0.10
P0	4.0±0.10	4.0±0.10	4.0±0.10
P1	8.0±0.10	8.0±0.10	8.0±0.10
P2	2.0±0.10	2.0±0.10	2.0±0.10
A0	5.74±0.10	5.74±0.10	5.74±0.10
B0	8.02±0.10	8.02±0.10	8.02±0.10
T	0.30±0.10	0.30±0.10	0.30±0.10
K0	0.90±0.10	1.30±0.10	1.70±0.10
Leader	390mm	390mm	390mm
Trailer	160mm	160mm	160mm
Q'ty	2,000pcs/Reel	1,500pcs/Reel	1,000pcs/Reel

REEL DIMENSIONS: EIA-481-1 (mm)	
C	Ø178±3.0
D	Ø60.2±0.5
W	17.0±0.2
H	19.5±1.0

单击下面可查看定价，库存，交付和生命周期等信息

>>JEMETE(晶美特)