瑞隆源电子
RuilongYuan Electronics

Positive Thermal Coefficent Diodes

SMD2920P030~300 Series

The SMD2920 Series PTC provides surface mount overcurrent protection for applications where space is at a premium and resettable protection is desired.

Features

- RoHS compliant, lead-free and halogen-free
- Fast response to fault currents
- Compact design saves board space
- Low resistance
- Low-profile
- Compatible with high temperature solders

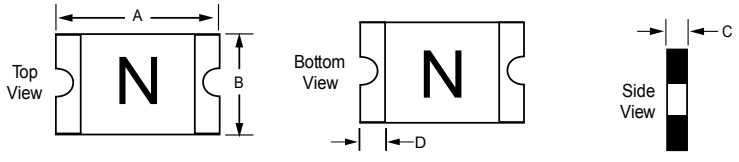
ROHS

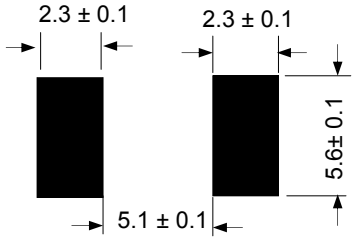
Applications

- USB peripherals
- Disk drives
- CD-ROMs
- Plug and play protection for motherboards and peripherals
- Mobile phones - battery and port protection
- Disk drives
- PDAs / digital cameras
- Game console port protection

Dimension

MARKING CODE VARIES
WITH AMPERAGE RATING
(See Electrical Characteristic Table)
SHOWN IS 1.0AMP RATING





Type Number	A		B		C		D
	Min.	Max.	Min.	Max.	Min.	Max.	Min.
SMD2920P030TF	6.73	7.98	4.80	5.44	0.60	1.15	0.30
SMD2920P050TF	6.73	7.98	4.80	5.44	0.60	1.15	0.30
SMD2920P075TF	6.73	7.98	4.80	5.44	0.60	1.15	0.30
SMD2920P075TF/60	6.73	7.98	4.80	5.44	0.60	1.15	0.30
SMD2920P100TF	6.73	7.98	4.80	5.44	0.40	1.00	0.30
SMD2920P125TF	6.73	7.98	4.80	5.44	0.40	0.90	0.30
SMD2920P150TF	6.73	7.98	4.80	5.44	0.40	0.90	0.30
SMD2920P185TF	6.73	7.98	4.80	5.44	0.30	0.90	0.30
SMD2920P200TF	6.73	7.98	4.80	5.44	0.30	0.90	0.30
SMD2920P200TF/24	6.73	7.98	4.80	5.44	0.30	0.90	0.30
SMD2920P250TF	6.73	7.98	4.80	5.44	0.30	0.90	0.30
SMD2920P260TF	6.73	7.98	4.80	5.44	0.30	0.90	0.30
SMD2920P300TF	6.73	7.98	4.80	5.44	0.30	0.90	0.30
SMD2920P300TF/15	6.73	7.98	4.80	5.44	0.30	0.90	0.30

Electriacl Characteristics

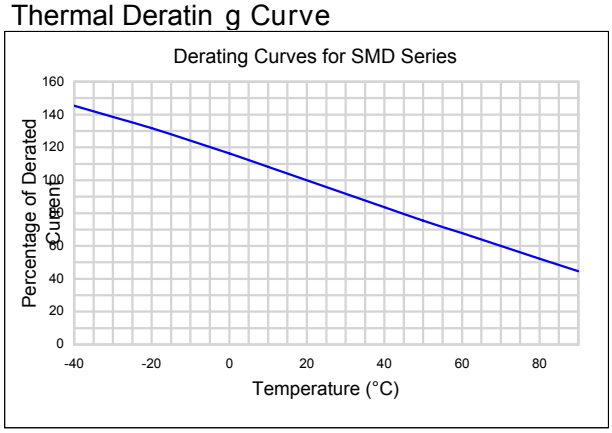
Type Number	Ihold	Itrip	Vmax	Imax	Pd max.	Maximum Time To Trip		Resistance	
	(A)	(A)	$V_{(dc)}$	(A)	(W)	Current (A)	Time (Sec.)	Rmin (Ω)	R1max (Ω)
SMD2920P030TF	0.30	0.60	60	100	1.5	1.50	3.00	0.600	4.800
SMD2920P050TF	0.50	1.00	60	100	1.5	2.50	4.00	0.180	1.400
SMD2920P075TF	0.75	1.50	33	100	1.5	8.00	0.30	0.100	1.000
SMD2920P075TF/60	0.75	1.50	60	100	1.5	8.00	0.30	0.065	1.000
SMD2920P100TF	1.10	2.20	33	100	1.5	8.00	0.50	0.065	0.410
SMD2920P125TF	1.25	2.50	33	100	1.5	8.00	2.00	0.050	0.250
SMD2920P150TF	1.50	3.00	33	100	1.5	8.00	2.00	0.035	0.230
SMD2920P185TF	1.85	3.70	33	100	1.5	8.00	2.50	0.030	0.150
SMD2920P200TF	2.00	4.00	16	100	1.5	8.00	4.50	0.020	0.120
SMD2920P200TF/24	2.00	4.00	24	100	1.5	8.00	4.50	0.020	0.120
SMD2920P250TF	2.50	5.00	16	100	1.5	8.00	16.00	0.020	0.085
SMD2920P260TF	2.60	5.20	6	100	1.5	8.00	10.00	0.014	0.075
SMD2920P300TF	3.00	6.00	6	40	1.5	8.00	20.00	0.012	0.048
SMD2920P300TF/15	3.00	6.00	16	100	1.5	8.00	20.00	0.012	0.048

Ihold = Hold current: maximum current device will pass without tripping in 20°C still air.
Itrip = Trip current: minimum current at which the device will trip in 20°C still air.
Vmax = Maximum voltage device can withstand without damage at rated current (Imax)
Imax = Maximum fault current device can withstand without damage at rated voltage (Vmax)
Pd = Power dissipated from device when in the tripped state at 20°C still air.
Rmin = Minimum resistance of device in initial (un-soldered) state.

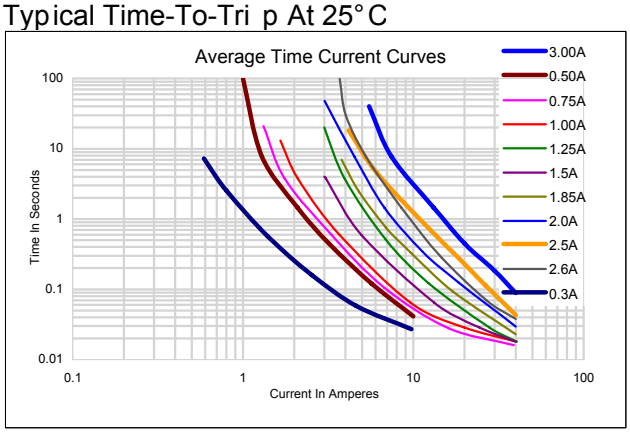
Thermal Derating Chart-IH(A)

Type number	-40℃	-20℃	0℃	23℃	40℃	50℃	60℃	70℃	85℃
SMD2920P030TF	0.45	0.40	0.35	0.30	0.25	0.23	0.20	0.17	0.14
SMD2920P050TF	0.76	0.67	0.59	0.50	0.42	0.38	0.33	0.29	0.23
SMD2920P075TF	1.13	1.01	0.88	0.75	0.62	0.56	0.50	0.44	0.34
SMD2920P075TF/60	1.13	1.01	0.88	0.75	0.62	0.56	0.50	0.44	0.34
SMD2920P100TF	1.66	1.47	1.29	1.10	0.91	0.83	0.73	0.64	0.50
SMD2920P125TF	1.89	1.68	1.46	1.25	1.04	0.94	0.83	0.73	0.56
SMD2920P150TF	2.27	2.01	1.76	1.50	1.25	1.13	1.00	0.87	0.74
SMD2920P185TF	2.80	2.47	2.17	1.85	1.54	1.39	1.22	1.07	0.85
SMD2920P200TF	3.02	2.68	2.34	2.00	1.66	1.50	1.32	1.16	0.90
SMD2920P200TF/24	3.02	2.68	2.34	2.00	1.66	1.50	1.32	1.16	0.90
SMD2920P250TF	3.78	3.35	2.93	2.50	2.08	1.88	1.65	1.45	1.13
SMD2920P260TF	3.64	3.25	2.91	2.60	2.26	2.08	1.95	1.74	1.13
SMD2920P300TF	4.53	4.02	3.51	3.00	2.52	2.26	1.99	1.75	1.34
SMD2920P300TF/15	4.53	4.02	3.51	3.00	2.52	2.26	1.99	1.75	1.34

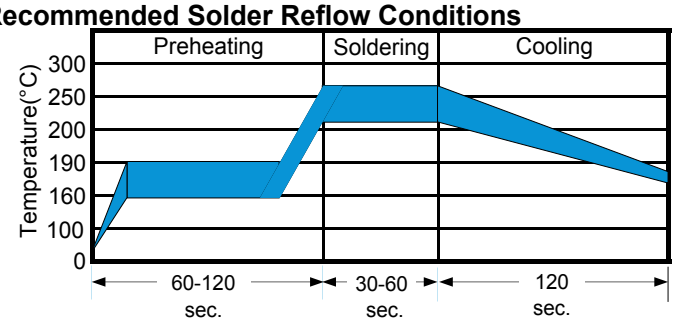
Thermal Deratin g Curve



Typical Time-To-Tri p At 25° C



Recommended Solder Reflow Conditions



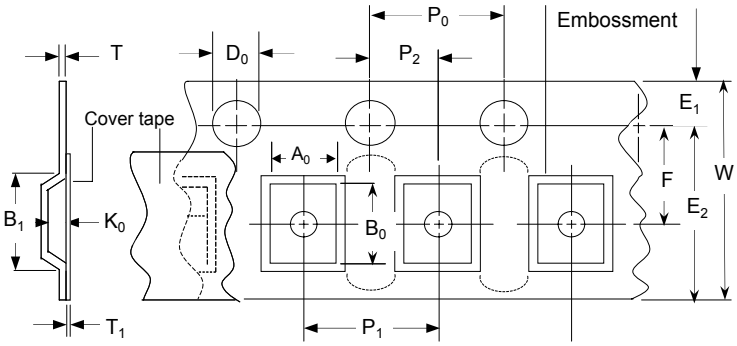
- Recommended reflow methods：IR, vapor phase oven, hot air oven.
- Devices are not designed to be wave soldered to the bottom side of the board.
- Recommended maximum paste thickness is 0.25 mm (0.010 inch).
- Devices can be cleaned using standard method and solvents.

Note：If reflow temperatures exceed the recommended profile, devices may not meet the performance requirements.

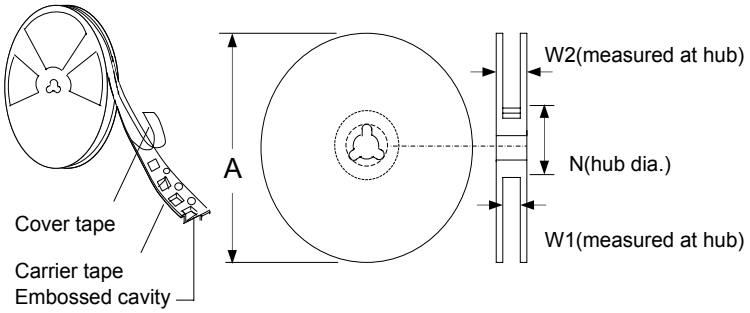
Tape And Reel Specifications (mm)

Governing Specifications	EIA 481-2
W	16.0 ± 0.3
P_0	4.0 ± 0.10
P_1	8.0 ± 0.10
P_2	2.0 ± 0.05
A_0	5.70 ± 0.10
B_0	8.00 ± 0.10
B_1max.	12.1
D_0	1.5 + 0.1, -0
F	7.5 ± 0.05
E_1	1.75 ± 0.10
E_2min.	14.25
Tmax.	0.6
T_1max.	0.1
K_0	0.80 ± 0.1
Leader min.	390
Trailer min.	160
Reel Dimensions	
A max.	178
N min.	60
W_1	16.4 + 2.0, -0.0
W_2max.	22.4

EIA Tape Component Dimentions



EIA Reel Dimentions



Storage And Handling

- Storage conditions：40°C max, 70% R.H.
- Devices may not meet specified performance if storage conditions are exceeded.

Order Information

Packaging

SMD2920	050L	Tape & Reel Quantity
Product name	Hold	
Size 7555mm/2920 mils	Current	2,000 pcs/reel
SMD：surface mount device	0.50A	

Tape & reel packaging per EIA481-1

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