SINLOON®

PPTC 高分子正溫度系數可覆式保險絲 | **FSMD2920 Series**

Voltage Range: 6V,16V,33V,60V. | **PPTC SMD Resettable Fuse**

☐ **Application:**
All high-density boaeds

☐ **Feature:**
Small surface mount, Solid state
Faster time to trip than standard SMD devices
Lower resistance than standsrd SMD devices

☐ **Approval**

☐ **Rated:**
Operation Current: 300mA ~ 2.6A
Maximum Voltage: 6V ~ 60V
Temperature Range: -40℃ to 85℃

Figure:

☐ **Ordering Information**
Example: FSMD030-60V-2920

Part No. 2920	Current	Voltage	Reel Tape	Quantity	
FSMD030	0.30A	60V	Φ185mm	2K/Reel	120K/Cts
FSMD050	0.50A	60V	Φ185mm	2K/Reel	120K/Cts
FSMD075	0.75A	33V	Φ185mm	2K/Reel	120K/Cts
FSMD100	1.10A	33V	Φ185mm	2K/Reel	120K/Cts
FSMD125	1.25A	33V	Φ185mm	2K/Reel	120K/Cts
FSMD150	1.50A	33V	Φ185mm	2K/Reel	120K/Cts
FSMD185	1.85A	33V	Φ185mm	2K/Reel	120K/Cts
FSMD200	2.00A	16V	Φ185mm	2K/Reel	120K/Cts
FSMD250	2.50A	16V	Φ185mm	2K/Reel	120K/Cts
FSMD260	2.60A	6V	Φ185mm	2K/Reel	120K/Cts

☐ **Part Marking System**
Example: FSMD030

☐ **Dimension** Unit: mm

Part Number	A		B		C		D
2920	Min	Max.	Min	Max.	Min	Max.	Min
FSMD030	6.73	7.98	4.80	5.44	0.60	1.15	0.35
FSMD050	6.73	7.98	4.80	5.44	0.60	1.15	0.35
FSMD075	6.73	7.98	4.80	5.44	0.60	1.15	0.35
FSMD100	6.73	7.98	4.80	5.44	0.40	1.00	0.35
FSMD125	6.73	7.98	4.80	5.44	0.40	0.90	0.35
FSMD150	6.73	7.98	4.80	5.44	0.40	0.90	0.35
FSMD185	6.73	7.98	4.80	5.44	0.30	0.90	0.35
FSMD200	6.73	7.98	4.80	5.44	0.30	0.90	0.35
FSMD250	6.73	7.98	4.80	5.44	0.30	0.90	0.35
FSMD260	6.73	7.98	4.80	5.44	0.30	0.90	0.35

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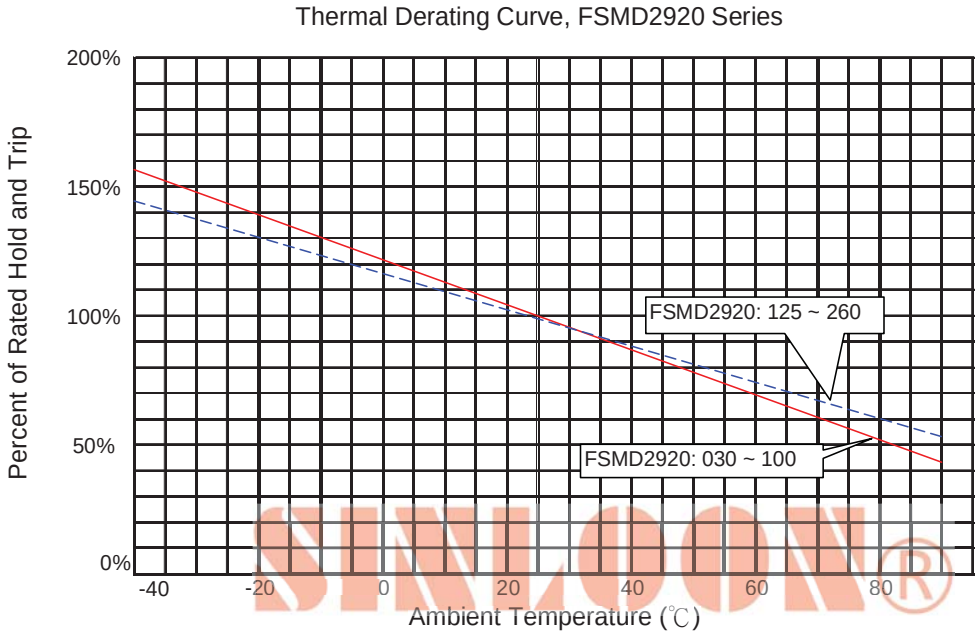
☐ Electrical Characteristics (23℃)

Part Number	Hold Current	Trip Current	Rated Voltage	Max Current	Typical Power	Max. Time to Trip		Resistance Tolerance	
						Current	Time	R_{MIN}	$R1_{Max}$
2920	HI	IT	V_{MAX},V_{AC}	I_{MAX},	Pd.	Amp	Sec	Ω	Ω
FSMD030	0.30A	0.6A	60V	10A	1.5W	1.5	3.0	1.000	4.800
FSMD050	0.50A	1.0A	60V	10A	1.5W	2.5	4.0	0.300	1.400
FSMD075	0.75A	1.5A	33V	40A	1.5W	8.0	0.3	0.180	1.000
FSMD100	1.10A	2.2A	33V	40A	1.5W	8.0	0.5	0.090	0.410
FSMD125	1.25A	2.5A	33V	40A	1.5W	8.0	2.0	0.050	0.250
FSMD150	1.50A	3.0A	33V	40A	1.5W	8.0	2.0	0.050	0.230
FSMD185	1.85A	3.7A	33V	40A	1.5W	8.0	2.5	0.040	0.150
FSMD200	2.00A	4.0A	16V	40A	1.5W	8.0	4.5	0.035	0.120
FSMD250	2.50A	5.0A	16V	40A	1.5W	8.0	16.0	0.025	0.085
FSMD260	2.60A	5.2A	6V	40A	1.5W	8.0	20.0	0.020	0.075

- ◆ I_H: Hold current maximum current at which the device will not trip at 23℃ still air.
- ◆ I_T: Trip current minimum current at which the device will always trip at 23℃ still air.
- ◆ V max : Maximum voltage device can withstand without damage at is rated current.(I max)
- ◆ I max: Maximum fault current device can withstand without damage at rated voltage (V max)
- ◆ Pd: Typical power dissipated type amount of power dissipated by the device when in the tripped state in 23℃ still air environment.
- ◆ R min: Minimum device resistance at 23℃ prior to tripping.
- ◆ R1 Max. : Maximum device resistance at 23℃ measured 1 hour post trip.
- ◆ Termination pad characteristics
- ◆ Termination pad materials: 100% Tin.

☐ Thermal Derating Curve



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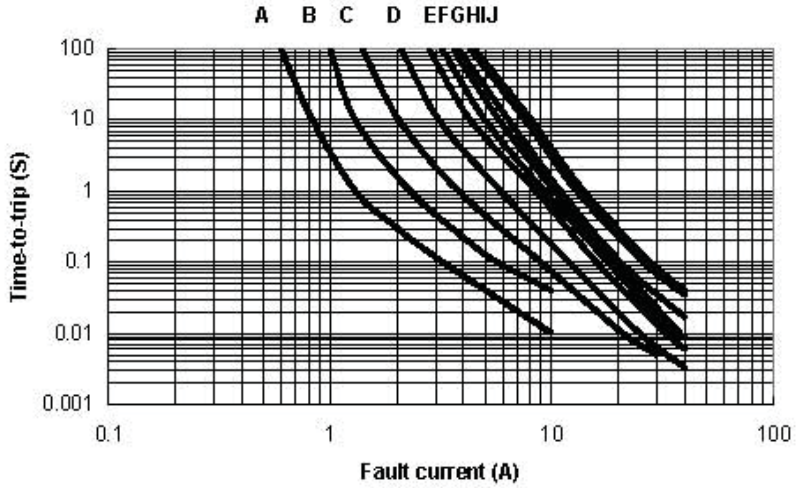
☐ Typical Time to Trip at 23℃

Part No. 2920
A: FSMD030
B: FSMD050
C: FSMD075
D: FSMD100
E: FSMD125
F: FSMD150
G: FSMD185
H: FSMD200
I: FSMD250
J: FSMD260

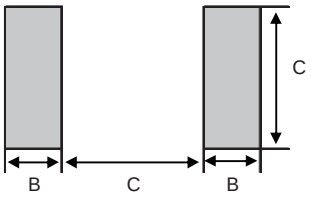


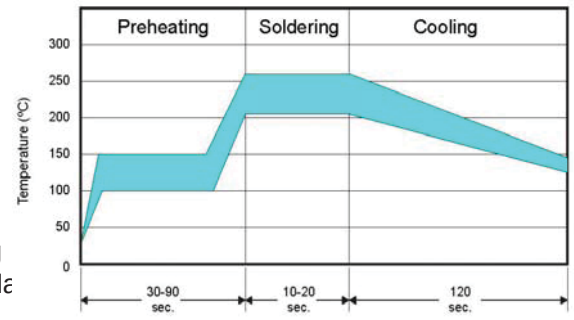
☐ Pad Layouts, Solder Reflow and Rework Recommendstions

The dimension in the table below provide the recommended pad layous for each FSMD-2920 device.

Pad nominal dimensions (mm)

Part No. 2920	A	B	C
FSMD030	5.1	2.3	5.6
FSMD050	5.1	2.3	5.6
FSMD075	5.1	2.3	5.6
FSMD100	5.1	2.3	5.6
FSMD125	5.1	2.3	5.6
FSMD150	5.1	2.3	5.6
FSMD185	5.1	2.3	5.6
FSMD200	5.1	2.3	5.6
FSMD250	5.1	2.3	5.6
FSMD260	5.1	2.3	5.6





Solder reflow

※ Due to “Lead Free” nature, Temperature and Dwelling time for the soldering zone is higher than those for Regula
This may cause damage to other components.

1. Recommended reflow methods; IR , vapor phase oven, hot air oven.
2. The FSMD2920 Series are suitable for use with wave-solder application methods.
3. Recommended maximum paste thickness is 0.25mm.
4. Devices can be cleaned using standard industry methods and solvents.

CAUTION:

If reflow temperatures exceed the recommended Profile, devices may not meet the performance requirements.
Rework: Use standard industry practices.

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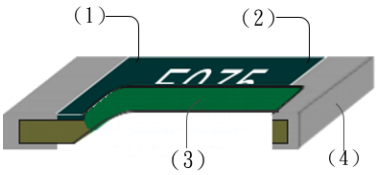
☐ Construction & Materials

(1) Insulation gaps were etched on both sides of the foils of PPTC chips & were covered by solder mask.
(2) Solder mask with white texts printed on it.
(3) PPTC chips made of special formulated conductive polymer.
(4) Outer termination pure SN plated Cu



WARNING:

◆ Devices may not meet specifications if reflow temperatures exceed the recommended profile.
◆ Operation beyond maximum ratings or improper use may result in device damage and possible electrical arcing, flaming or explosion.
◆ The devices may not meet specified ratings if storage conditions exceeded 40°C and 70% relative humidity.
◆ The devices are intended to protect against occasional over-current or over-temperature fault conditions and should not be used when there are repeated fault conditions or prolonged trip events.
◆ The devices should not be placed under pressure or installed in spaces that would prevent thermal expansion, due to any prohibition of thermal expansion of the devices might result improper protection of fault conditions.
◆ MAYLOON reserves the right to change any information or specification within this data book without notice.

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