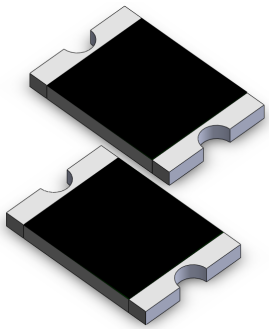
Surface Mount Resettable PTCs

SCF050-2920RB

Features

- RoHS Compliant & Halogen Free
- Faster tripping, 2920 Dimension, Surface mountable, Solid state
- Operation Current: 0.50A
- Maximum Voltage: 60Vdc
- Operating Temperature: -40℃ ~ + 85℃
- Agency recognition:UL/CSA/TUV



Electrical Parameters

Part Number	Hold Current	Trip Current	Rated Voltage	Max Current	Typical Power	Maximum Time To Trip		Resistance		
	I_{hold} (A)	I_{trip} (A)	V_{max} (Vdc)	I_{max} (A)	$P_{dtyp.}$ (W)	Current (A)	Time (Sec.)	R_{min} (Ω)	R_{max} (Ω)	R_{1max} (Ω)
SCF050-2920RB	0.50	1.00	60	100	1.5	2.50	4.00	0.180	0.280	1.400

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.

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 (Vmax).

P_{dtyp} =Maximum power dissipation when device is in the tripped state in 25°C still air environment at rated voltage.

$R_{min/max}$ = Minimum/Maximum device resistance prior to tripping at 25°C.

R_{1max} = Maximum device resistance is measured one hour post reflow.

Test Conditons and Standards

Test Item	Test Conditions	Standard
Initial Resistance	25℃	0.18～1.400Ω
I_H	25℃, 0.50A, 60min	No trip
T_{trip}	25℃, 2.50A	≤4.0s
Trip Endurance	60V, 100A, 1hr	No arcing or burning

Physical Characteristics

Terminal Materials	Tin-Plated Nickle-copper
Soldering Zone	Meets EIA specification RS 186-9E and ANSI/J-STD-002 Category 3.

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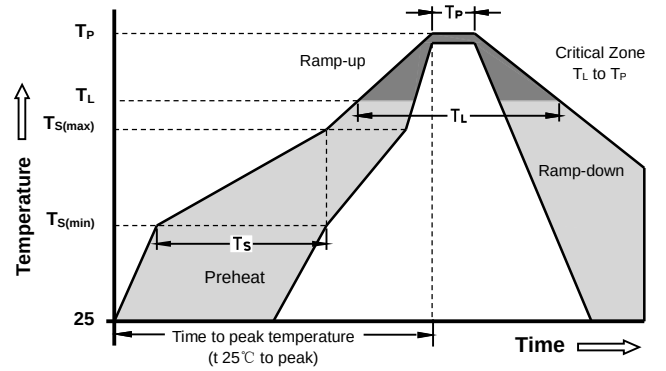
Soldering Parameters

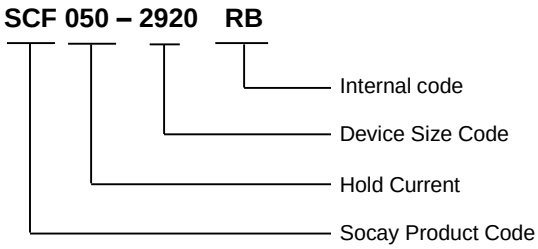


Profile Feature	Pb-Free Assembly
Average Ramp-Up Rate (T_S max to T_P)	3℃/second max.
Preheat : Temperature Min ($T_S$min) Temperature Max ($T_S$max) Time ($T_S$min to $T_S$max)	 150℃ 200℃ 60-120 seconds
Time maintained above: Temperature(T_L) Time (T_L)	 217℃ 60-150 seconds
Peak/Classification Temperature(T_P)	260℃
Time within 5 ℃ of actual peak temperature: Time (T_P)	30 seconds max.
Ramp-down Rate	3℃/ second max.
Time 25℃ to Peak Temperature	8 minutes max.

- Recommended reflow methods: I_R, vapor phase oven, hot air oven, N2 environment for lead-free.
- Devices are not designed to be wave soldered to the bottom side of the board.
- Recommended maximum paste thickness is 0.25mm (0.010inch).
- Devices can be cleaned using standard industry methods and solvents.
- Soldering temperature profile meets RoHS leadfree process.

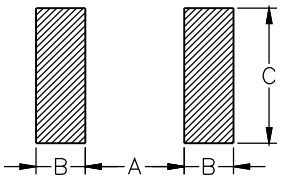
Note 1: All temperature refer to topside of the package,measured on the package body surface.
Note 2: If reflow temperature exceed the recommended profile,devices may not meet the performance requirements.

Part Numbering



Recommended Solder Pad Layout Dimensions (Unit: mm)

The dimension in the table below provide the recommended pad layout for each SCF050-2920RB device



Device	A	B	C
2920 Series	5.1±0.1	2.3±0.1	5.6±0.1

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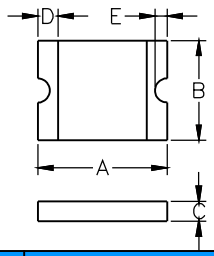
Product Dimensions (Unit: mm)



Part Number	A		B		C		D
	Min.	Max.	Min.	Max.	Min.	Max.	Min.
SCF050-2920RB	6.73	7.98	4.80	5.44	0.50	1.20	0.30

Packaging Quantity

Part Number	Packaging Option	Quantity
SCF050-2920RB	Tape & Reel	2000 PCS

Warning

- Operation beyond the specified maximum ratings or improper use may result in damage and possible electrical arcing and/or flame.
- PPTC device are intended for occasional over-current protection. Application for repeated over-current condition and/or prolonged trip are not anticipated.
- Avoid contact of PPTC device with chemical solvent. Prolonged contact will damage the device performance.