

PPTC Surface Mount Resettable Fuse SCF002-0603RB 0.02A 30Vmax Faster Tripping

Our Product Introduction

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Basic Information

- Place of Origin: Shenzhen, Guangdong, China
- Brand Name: SOCAY
- Certification: UL, TUV, REACH, RoHS, ISO
- Model Number: SCF002-0603RB
- Minimum Order Quantity: 4000PCS
- Price: Negotiable
- Delivery Time: 5-8 work days



Product Specification

- Product Name: PPTC Resettable Fuse
- Package Type: SMD0603
- I Hold: 0.02A
- I Trip: 0.06A
- V Max: 30V
- I Max: 20A
- P Dtyp.: 0.5W
- Maximum Time To Trip Current: 0.2A
- Maximum Time To Trip Time: 1Sec
- Resistance Min: 12Ω
- Resistance Max: 70Ω
- Highlight: PPTC Surface Mount Resettable Fuse, Surface Mount Resettable Fuse 0.02A



More Images



Product Description

Surface Mount Resettable PPTC SCF002-0603RB 0.02A 30Vmax Faster tripping 0603 Dimension Solid Stat

DATASHEET: [SCF0603RB Series_v2108.1.pdf](#)

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_{1max} (Ω)
SCF001-0603RB	0.01	0.03	30.0	20.0	0.50	0.20	1.00	15.00	100.0
SCF002-0603RB	0.02	0.06	30.0	20.0	0.50	0.20	1.00	12.00	70.00
SCF003-0603RB	0.03	0.09	30.0	20.0	0.50	0.15	1.00	6.000	65.00
SCF004-0603RB	0.04	0.12	24.0	20.0	0.50	0.20	1.00	4.000	45.00
SCF005-0603RB	0.05	0.15	24.0	20.0	0.50	0.25	1.00	3.000	35.00
SCF010-0603RB	0.10	0.30	15.0	40.0	0.50	0.50	1.00	0.900	8.000
SCF020-0603RB	0.20	0.50	9.0	40.0	0.50	1.00	0.60	0.550	3.500
SCF025-0603RB	0.25	0.55	9.0	40.0	0.50	8.00	0.08	0.500	3.000
SCF030-0603RB	0.30	0.70	6.0	40.0	0.50	8.00	0.10	0.300	2.000
SCF035-0603RB	0.35	0.75	6.0	40.0	0.50	8.00	0.10	0.200	1.400
SCF040-0603RB	0.40	0.80	6.0	40.0	0.50	8.00	0.10	0.150	0.900
SCF050-0603RB	0.50	1.00	6.0	40.0	0.50	8.00	0.10	0.100	0.800

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 (I_{max}).

I_{max} = Maximum fault current device can withstand without damage at rated voltage (V_{max}).

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

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

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



Features:

- u RoHS Compliant & Halogen Free
- u Faster tripping, 0603 Dimension, Surface mountable, Solid state
- u Operation Current: 0.01A ~ 0.50A
- u Maximum Voltage: 6V ~ 30Vdc
- u Operating Temperature: -40 ~ + 85

Test Item	Test Conditions	Accept / Reject Criteria
Resistance	In still air @ 25	$R_{min} \leq R \leq R_{1max}$
Time to Trip	Specified current, V_{max} , 25	$T \leq$ Maximum Time to Trip
Holding Current	30min, at I_H	No trip
Trip Cycle Life	V_{max} , I_{max} , 100cycles	No arcing or burning
Trip Endurance	V_{max} , 1 hour	No arcing or burning

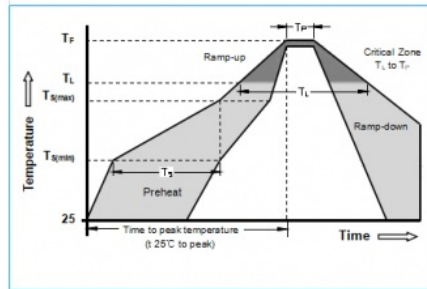
Terminal Materials	Tin-Plated Nickle-copper
Soldering Zone	Meets EIA specification RS 186-9E and ANSI/J-STD-002 Category 3.

Test Item	Test Conditions	Resistance Change
Passive Aging	85 ,1000 hours	$\pm 10\%$
Humidity Aging	85 /85%RH.100 hours	$\pm 5\%$
Thermal Shock	MIL-STD-202, Method 107G +85 /-40 , 20 times	$\pm 33\%$ typical resistance change
Solvent Resistance	MIL-STD-202, Method 215	No change
Vibration	ML-STD-883C, Test Condition A	No change

Model	Maximum ambient operating temperature ()								
	-40	-20	0	25	40	50	60	70	85
SCF001-0603RB	0.014	0.0125	0.0115	0.010	0.0085	0.007	0.006	0.005	0.0035
SCF002-0603RB	0.028	0.025	0.023	0.020	0.017	0.014	0.012	0.010	0.007
SCF003-0603RB	0.042	0.038	0.035	0.030	0.026	0.021	0.018	0.015	0.011
SCF004-0603RB	0.056	0.050	0.046	0.040	0.034	0.028	0.024	0.020	0.014
SCF005-0603RB	0.070	0.063	0.058	0.050	0.043	0.035	0.030	0.025	0.018
SCF010-0603RB	0.140	0.125	0.115	0.100	0.085	0.070	0.060	0.050	0.035
SCF020-0603RB	0.280	0.250	0.230	0.200	0.170	0.140	0.120	0.100	0.070
SCF025-0603RB	0.350	0.310	0.290	0.250	0.210	0.180	0.150	0.130	0.090
SCF030-0603RB	0.420	0.380	0.350	0.300	0.260	0.210	0.180	0.150	0.110
SCF035-0603RB	0.470	0.440	0.390	0.350	0.300	0.270	0.240	0.200	0.140

SCF040-0603RB	0.540	0.500	0.450	0.400	0.340	0.310	0.270	0.230	0.160
SCF050-0603RB	0.670	0.630	0.560	0.500	0.430	0.390	0.340	0.290	0.200

Soldering Parameters



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

- Recommended reflow methods: ie, 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 (0.01inch).
 - 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

SCF XXX - 0603 RB	
Internal code	
Device Size Code	
Hold Current	
Socay Product Code	

Example	
X= SCF001-0603RB	2= SCF020-0603RB
X= SCF002-0603RB	2= SCF025-0603RB
- = SCF003-0603RB	3= SCF030-0603RB
- = SCF004-0603RB	3= SCF035-0603RB
1= SCF005-0603RB	4= SCF040-0603RB
1= SCF010-0603RB	5= SCF050-0603RB

Recommended Solder Pad Layout Dimensions (Unit: mm)

The dimension in the table below provide the recommended pad layout for each SCF0603RB Series device.

Device	A	B	C
0603 Series	0.8 ± 0.1	1.0 ± 0.1	1.0 ± 0.1

Product Dimensions (Unit: mm)

Part Number	A		B		C		D		E
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Max.
SCF001-0603RB	1.45	1.85	0.65	1.05	0.40	0.90	0.15	0.50	0.40
SCF002-0603RB	1.45	1.85	0.65	1.05	0.40	0.90	0.15	0.50	0.40
SCF003-0603RB	1.45	1.85	0.65	1.05	0.40	0.90	0.15	0.50	0.40
SCF004-0603RB	1.45	1.85	0.65	1.05	0.40	0.90	0.15	0.50	0.40
SCF005-0603RB	1.45	1.85	0.65	1.05	0.40	0.75	0.15	0.50	0.40
SCF010-0603RB	1.45	1.85	0.65	1.05	0.40	0.75	0.15	0.50	0.40
SCF020-0603RB	1.45	1.85	0.65	1.05	0.40	0.75	0.15	0.50	0.40
SCF025-0603RB	1.45	1.85	0.65	1.05	0.40	0.75	0.15	0.50	0.40
SCF030-0603RB	1.45	1.85	0.65	1.05	0.40	0.75	0.15	0.50	0.40
SCF035-0603RB	1.45	1.85	0.65	1.05	0.40	0.75	0.15	0.50	0.40
SCF040-0603RB	1.45	1.85	0.65	1.05	0.50	1.20	0.15	0.50	0.40
SCF050-0603RB	1.45	1.85	0.65	1.05	0.50	1.20	0.15	0.50	0.40

Part Number	Quantity	Part Number	Quantity
SCF001-0603RB	4000 PCS	SCF020-0603RB	5000 PCS
SCF002-0603RB	4000 PCS	SCF025-0603RB	5000 PCS
SCF003-0603RB	5000 PCS	SCF030-0603RB	5000 PCS
SCF004-0603RB	5000 PCS	SCF035-0603RB	5000 PCS
SCF005-0603RB	5000 PCS	SCF040-0603RB	4000 PCS
SCF010-0603RB	5000 PCS	SCF050-0603RB	4000 PCS



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