SOCAY

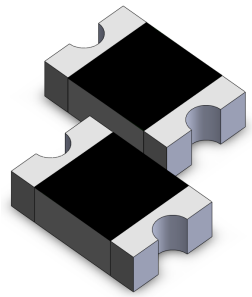
HF RoHS

Surface Mount Resettable PTCs

SCF030-16-0805RC

Features

- Resettable over current and over temperature protection
- Low resistance
- Small size of 0805
- Fast time-to-trip
- Small footprint
- RoHS complaint



Applications

- Computer
- Industrial controls
- Multimedia
- Battery
- Automotive
- Game machines
- Mobile phones
- Portable electronics
- Telephony and broadband

Electrical Parameters

Part Number	Hold Current	Trip Current	Rated Voltage	Max Current	Typical Power	Maximum Time To T_{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)
SCF030-16-0805RC	0.30	0.75	16	40	0.5	8.00	0.10	0.20	1.20

I_{hold}= Hold current: maximum current at which the device will not trip at 25℃ still air reflow soldering of 260℃ for 20 sec.

I_{trip}= Trip current: minimum current at which the device will always trip at 25℃ still air reflow soldering of 260℃ for 20 sec.

V_{max}= Maximum continuous voltage device can withstand without damage at rated current.

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

T_{trip}=Maximum time to trip(s) at assigned current reflow soldering of 260℃ for 20 sec.

$P_{dtyp.}$= Typical power dissipation: typical amount of power dissipated by the device when in state air environment.

R_{min}= Minimum resistance of device in initial (un-soldered) state.

R_{1max}= Maximum resistance of device at 25℃ measured one hour after reflow soldering of 260℃ for 20 sec.

Value specified is determined by using the PWB with 0.030 " *1.5oz copper traces.

Caution: Operation beyond the specified rating may result in damage and possible arcing and flame.

Thermal Derating (Hold Current (A) at Ambient Temperature (℃))

Model	Maximum Ambient Operating Temperature (℃)								
	-40	-20	0	25	40	50	60	70	85
SCF030-16-0805RC	0.47	0.44	0.39	0.30	0.27	0.24	0.22	0.17	0.12

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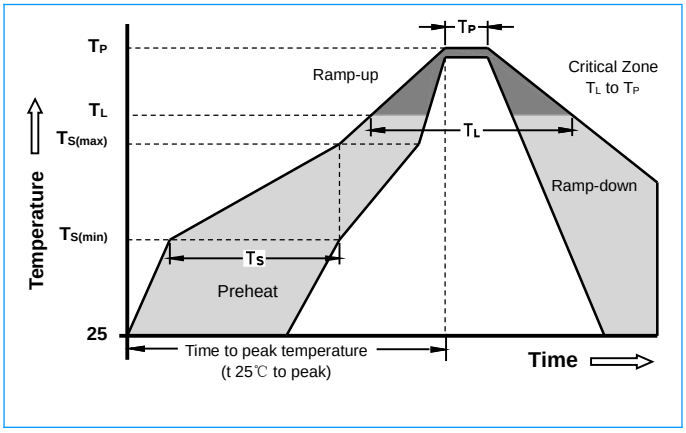
Environmental Specifications

Test Item	Test Conditions	Accept /Reject Criteria
Recommended Storage Conditions	40℃ max, 70% R.H. max	No Change
Passive Aging	85℃, 1000 hours	≤ R_{1max}
Moisture Resistance	85% RH,85℃,1000hrs	≤ R_{1max}
Thermal Shock	MIL-STD-202 Method 107G +85℃ /-40℃ 20 times	≤ R_{1max}
Vibration	MIL-STD-883C, Method 2007.1, Condition A	No Change
Solvent Resistance	MIL-STD-202, Method 215	No Change
Moisture Level Sensitivity	Level 1, J-STD-020C	No Change

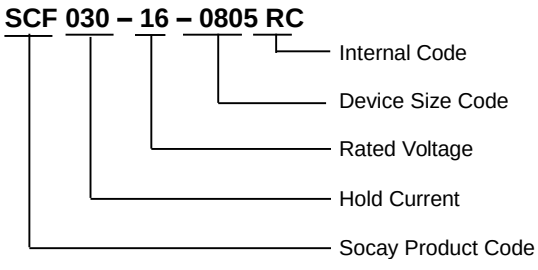
Solder Reflow Recommendation



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℃ 60-180 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**	 20-40 seconds
Ramp-down Rate:	6℃/ second max.
Time 25℃ to Peak Temperature	8 minutes max.

Recommended reflow methods:IR,hot air oven ,nitrogen oven. Devices can be cleaned using standard industry methods and solvents.
Note:
If reflow temperatures exceed the recommended profile,devices may not meet the performance requirements.
Caution: Operation beyond the rated voltage or current may result in rupture electrical arcing or flame.

Part Numbering



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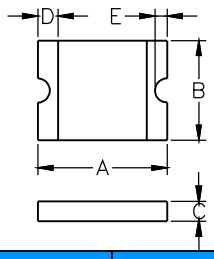
Product Dimensions (Unit: mm)



Part Number	A		B		C		D	E
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Min.
SCF030-16-0805RC	2.00	2.20	1.20	1.50	0.50	1.10	0.20	0.10

Packaging Quantity

Part Number	Packaging Option	Quantity
SCF030-16-0805RC	Tape & Reel	5000 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.