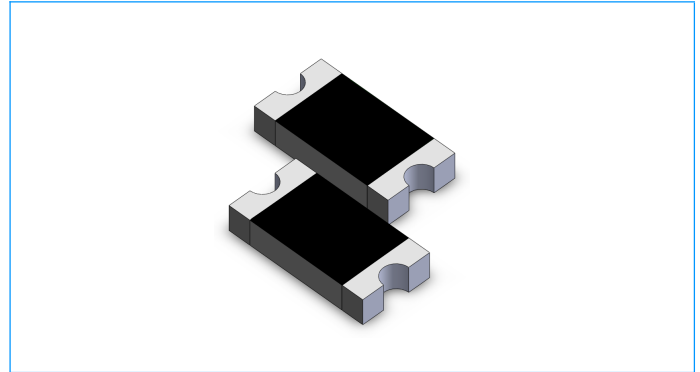


Surface Mount Resettable PTCs

SCF005-1206RB

Features

- RoHS Compliant & Halogen Free
- Faster tripping, 1206 Dimension, Surface mountable, Solid state
- Operation Current: 0.05A
- Maximum Voltage: 60Vdc
- Operating Temperature: -40°C ~ + 85°C
- 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_{1max} (Ω)
SCF005-1206RB	0.05	0.15	60.0	100	0.4	0.25	1.50	3.600	50.00

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.

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

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

Thermal Derating Chart - I_H (A)

Model	Maximum ambient operating temperature (°C)								
	-40	-20	0	25	40	50	60	70	85
SCF005-1206RB	0.09	0.08	0.06	0.05	0.04	0.036	0.033	0.029	0.02

Test Procedures and Requirements

Test Item	Test Conditions	Accept/Reject Criteria
Resistance	In still air at 25°C	$R_{min} \leq R \leq R_{max}$
Time to Trip	Specified current, V_{max} , 25°C	Tmaximum Time to Trip
Hold 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

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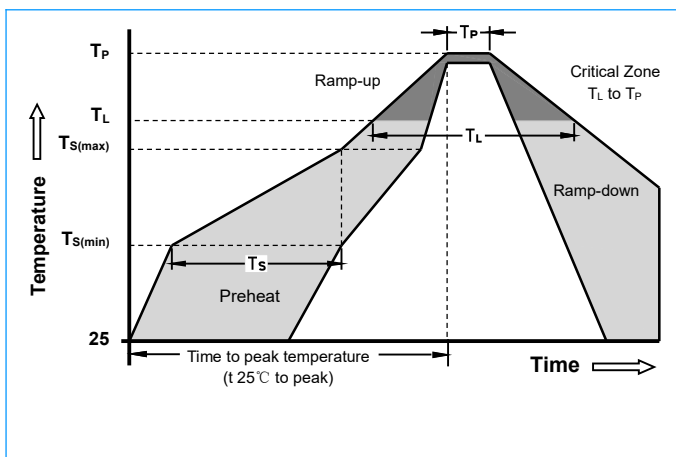
Physical Characteristics

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

Environmental Specifications

Test Item	Test Conditions	Resistance Change
Passive Aging	85°C, 1000 hours	±10%
Humidity Aging	85°C/85%RH. 1000 hours	±5%
Thermal Shock	MIL-STD-202, Method 107G +85°C/-40°C, 20 times	-30% typical resistance change
Solvent Resistance	MIL-STD-202, Method 215	No change
Vibration	ML-STD-883C, Test Condition A	No change

Soldering Parameters



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

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

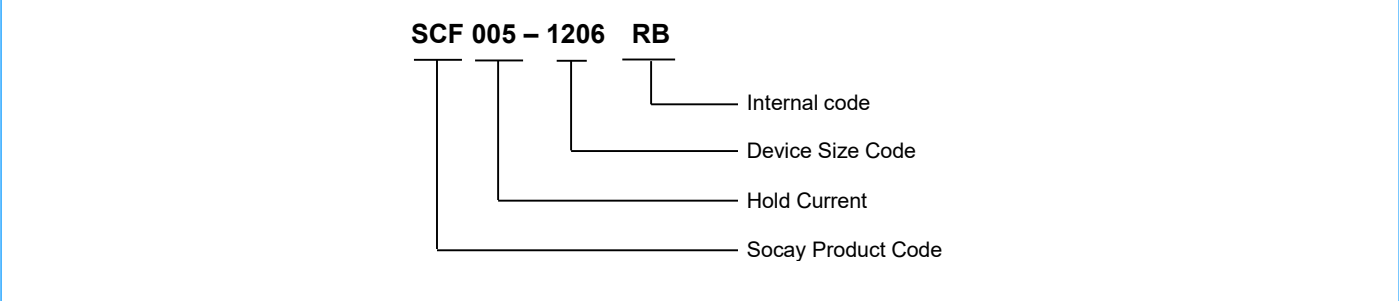
Note 1: All temperature refer to topside of the package, measured on the package body surface.

Note 2: If reflow temperature exceed the recommended profile, devices may not meet the performance requirements.

Surface Mount Resettable PTCs

SCF005-1206RB

Part Numbering

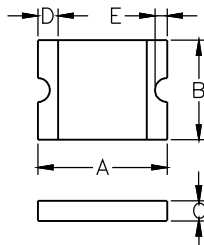


Recommended Solder Pad Layout Dimensions (Unit: mm)

The dimension in the table below provide the recommended pad layout for each SCF005-1206RB device

Device	A	B	C
1206 Series	2.0±0.1	1.0±0.1	1.9±0.1

Product Dimensions (Unit: mm)



Part Number	A		B		C		D	E
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Min.
SCF005-1206RB	3.00	3.50	1.50	1.80	0.60	1.10	0.15	0.10

Packaging Quantity

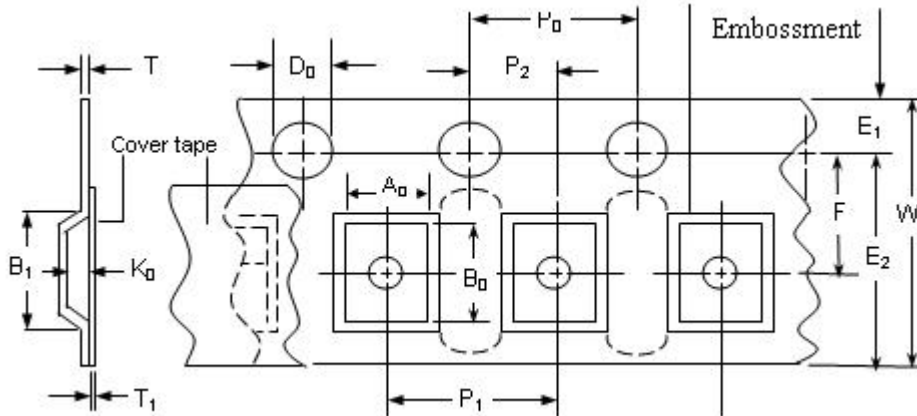
Part Number	Packaging Option	Quantity
SCF005-1206RB	Tape & Reel	3500 PCS

Surface Mount Resettable PTCs

SCF005-1206RB

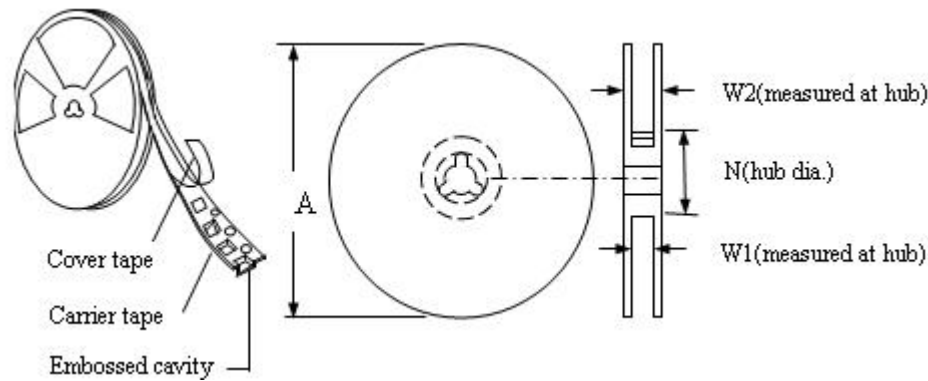
Tape Specifications and Reel Specifications (Unit: mm)

Tape Component Dimensions



Symbol	Dimensions
W	8.15+0.15/-0.3
P₀	4.0±0.10
P₁	4.0±0.10
P₂	2.0±0.05
A₀	1.95±0.10
B₀	3.65±0.10
D₀	1.55±0.05
F	3.50±0.05
E₁	1.75±0.10
T	0.20±0.10
Leader min.	390
Trailer min.	160

Reel Dimensions



Symbol	Dimensions
A	178±1.0
N	59±1.0
W1	8.5+1.0/-0.2
W2	12.0±1.0

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.