

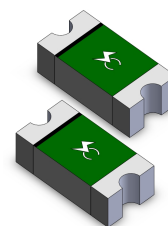
Surface Mount Resettable PTCs

Description

The SCF0603 Series PTC provides surface mount over-current protection for applications where space is at a premium and resettable protection is desired.

Features

- u RoHS compliant, Lead-Free and Halogen-Free
- u Fast time-to-trip
- u Compact design saves board space
- u Low resistance
- u Low-profile



Applicable

- u PC motherboard - plug and play protection
- u Mobile phones - battery and port protection
- u Game console port protection
- u USB peripherals
- u Disk drive
- u PDAS / digital cameras
- u Power ports
- u General electronics

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)
SCF001-0603-R	0.01	0.03	60	40	0.5	0.20	1.00	15.00	100.00
SCF002-0603-R	0.02	0.06	60	40	0.5	0.20	1.00	12.00	70.00
SCF003-0603-R	0.03	0.09	30	40	0.5	0.20	1.00	6.00	50.00
SCF004-0603-R	0.04	0.12	24	40	0.5	0.20	1.00	4.00	40.00
SCF005-0603-R	0.05	0.15	15	40	0.5	0.50	0.10	3.80	30.00
SCF010-0603-R	0.10	0.25	15	40	0.5	0.70	0.10	0.90	8.00
SCF012-0603-R	0.12	0.30	9	40	0.5	0.80	0.10	1.10	5.80
SCF016-0603-R	0.16	0.40	9	40	0.5	1.00	0.10	1.00	4.20
SCF020-0603-R	0.20	0.45	9	40	0.5	2.00	0.10	0.55	3.50

I_{hold} = Hold current: maximum current device will pass without tripping in 23°C still air.

I_{trip} = Trip current: minimum current at which the device will trip in 23°C still air.

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

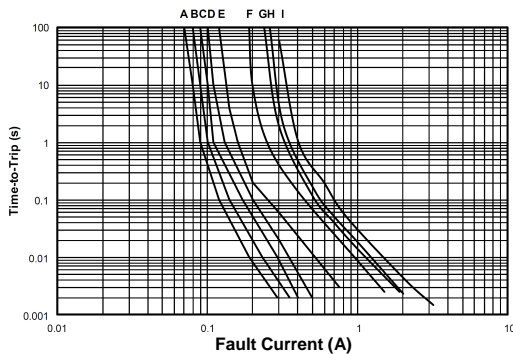
I_{max} = Maximum fault current device can withstand without damage at rated voltage (V_{max})

$P_{dtyp.}$ = Power dissipated from device when in the tripped state at 23°C still air.

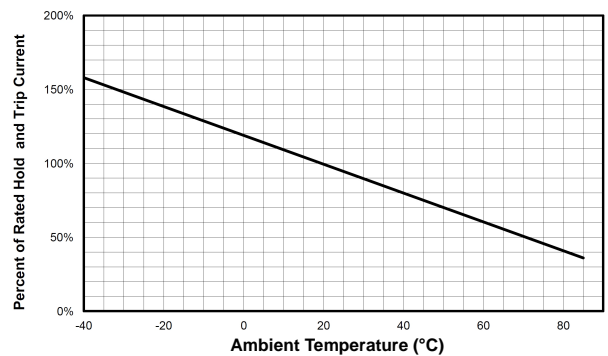
R_{min} = Minimum resistance of device in initial (un-soldered) state.

R_{1max} = Maximum resistance of device at 23°C measured one hour after tripping.

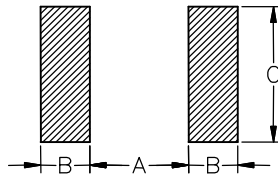
Caution: Operation beyond the specified rating may result in damage and possible arcing and flame.

Temperature Derating Chart – I_{hold} (A)
Average Time Current Curves


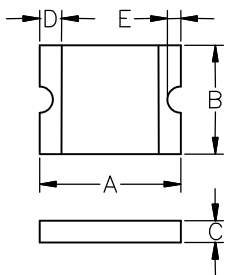
A= SCF001-0603-R F= SCF010-0603-R
 B= SCF002-0603-R G= SCF012-0603-R
 C= SCF003-0603-R H= SCF016-0603-R
 D= SCF004-0603-R I= SCF020-0603-R
 E= SCF005-0603-R

Temperature Derating Curve

Pad Layouts Unit: mm

The dimension in the table below provide the recommended pad layout for each SCF0603 device



Device	A	B	C
	Nominal	Nominal	Nominal
0603 Series	0.80	0.60	0.80

Dimensions Unit: mm


Part Number	A		B		C		D		E	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
SCF001-0603-R	1.40	1.80	0.45	1.00	0.35	0.85	0.10	0.50	0.08	0.40
SCF002-0603-R	1.40	1.80	0.45	1.00	0.35	0.85	0.10	0.50	0.08	0.40
SCF003-0603-R	1.40	1.80	0.45	1.00	0.35	0.75	0.10	0.50	0.08	0.40
SCF004-0603-R	1.40	1.80	0.45	1.00	0.35	0.75	0.10	0.50	0.08	0.40
SCF005-0603-R	1.40	1.80	0.45	1.00	0.35	0.75	0.10	0.50	0.08	0.40
SCF010-0603-R	1.40	1.80	0.45	1.00	0.35	0.75	0.10	0.50	0.08	0.40
SCF012-0603-R	1.40	1.80	0.45	1.00	0.35	0.75	0.10	0.50	0.08	0.40
SCF016-0603-R	1.40	1.80	0.45	1.00	0.35	0.75	0.10	0.50	0.08	0.40
SCF020-0603-R	1.40	1.80	0.45	1.00	0.35	0.75	0.10	0.50	0.08	0.40

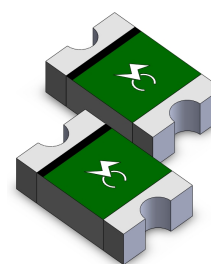
Surface Mount Resettable PTCs

Description

The SCF0805 Series PTC provides surface mount over-current protection for applications where space is at a premium and resettable protection is desired.

Features

- u RoHS compliant, Lead-Free and Halogen-Free
- u Fast time-to-trip
- u Compact design saves board space
- u Low resistance
- u Low-profile



Applicable

- u PC motherboard - plug and play protection
- u Mobile phones - battery and port protection
- u Game console port protection
- u USB peripherals
- u Disk drive
- u PDAS / digital cameras
- u Power ports
- u General electronics

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)
SCF010-0805-R	0.10	0.30	15	100	0.5	0.50	1.50	0.700	6.000
SCF020-0805-R	0.20	0.50	9	100	0.5	8.00	0.02	0.400	3.500
SCF035-0805-R	0.35	0.75	6	100	0.5	8.00	0.10	0.250	1.200
SCF050-0805R	0.50	1.00	6	100	0.5	8.00	0.10	0.150	0.850
SCF050-9-0805R	0.50	1.00	9	100	0.5	8.00	0.10	0.150	0.850
SCF075-0805R	0.75	1.50	6	40	0.6	8.00	0.20	0.090	0.350
SCF100-0805R	1.00	1.95	6	40	0.6	8.00	0.30	0.060	0.210

I_{hold} = Hold current: maximum current device will pass without tripping in 23°C still air.

I_{trip} = Trip current: minimum current at which the device will trip in 23°C still air.

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

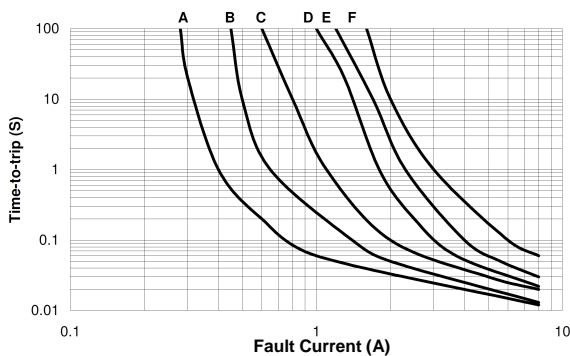
I_{max} = Maximum fault current device can withstand without damage at rated voltage (V_{max})

$P_{dtyp.}$ = Power dissipated from device when in the tripped state at 23°C still air.

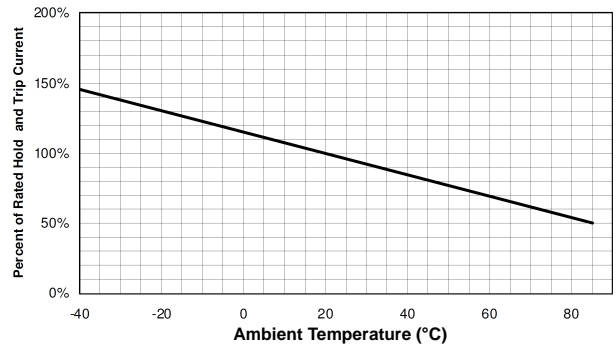
R_{min} = Minimum resistance of device in initial (un-soldered) state.

R_{1max} = Maximum resistance of device at 23°C measured one hour after tripping.

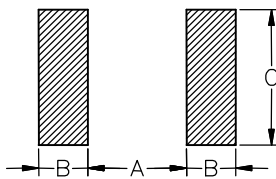
Caution: Operation beyond the specified rating may result in damage and possible arcing and flame.

Temperature Derating Chart – I_{hold} (A)
Average Time Current Curves


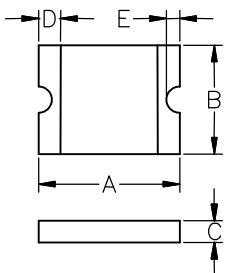
A= SCF010-0805-R D= SCF050-0805R/
 B= SCF020-0805-R SCF050-9-0805R
 C= SCF035-0805-R E= SCF075-0805R
 F= SCF100-0805R

Temperature Derating Curve

Pad Layouts Unit: mm

The dimension in the table below provide the recommended pad layout for each SCF0805 device



Device	A	B	C
	Nominal	Nominal	Nominal
0805 Series	1.20	1.00	1.50

Dimensions Unit: mm


Part Number	A		B		C		D		E	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
SCF010-0805-R	2.00	2.30	1.20	1.50	0.30	1.00	0.20	0.60	0.10	0.45
SCF020-0805-R	2.00	2.30	1.20	1.50	0.30	1.00	0.20	0.60	0.10	0.45
SCF035-0805-R	2.00	2.30	1.20	1.50	0.25	0.75	0.20	0.60	0.10	0.45
SCF050-0805R	2.00	2.30	1.20	1.50	0.55	1.25	0.20	0.60	0.10	0.45
SCF050-9-0805R	2.00	2.30	1.20	1.50	0.55	1.25	0.20	0.60	0.10	0.45
SCF075-0805R	2.00	2.30	1.20	1.50	0.55	1.25	0.20	0.60	0.10	0.45
SCF100-0805R	2.00	2.30	1.20	1.50	0.75	1.80	0.20	0.60	0.10	0.45

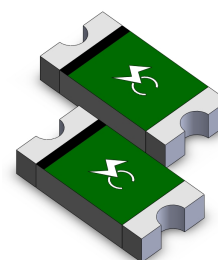
Surface Mount Resettable PTCs

Description

The SCF1206 Series PTC provides surface mount over-current protection for applications where space is at a premium and resettable protection is desired.

Features

- u RoHS compliant, Lead-Free and Halogen-Free
- u Fast time-to-trip
- u Compact design saves board space
- u Low resistance
- u Low-profile



Applicable

- u PC motherboard - plug and play protection
- u Mobile phones - battery and port protection
- u Game console port protection
- u USB peripherals
- u Disk drive
- u PDAS / digital cameras
- u Power ports
- u General electronics

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)
SCF005-1206-R	0.05	0.15	60	10	0.4	0.25	1.50	3.600	50.000
SCF010-1206-R	0.10	0.25	60	10	0.4	0.50	1.00	1.600	15.000
SCF012-1206-R	0.12	0.39	48	100	0.6	1.00	0.20	1.400	6.500
SCF016-1206-R	0.16	0.45	48	100	0.6	1.00	0.30	1.100	5.000
SCF020-1206-R	0.20	0.40	30	100	0.4	8.00	0.10	0.600	2.500
SCF025-1206-R	0.25	0.50	16	100	0.6	8.00	0.08	0.550	2.300
SCF025-24-1206-R	0.25	0.50	24	40	0.6	8.00	0.08	0.550	2.300
SCF035-1206-R	0.35	0.75	16	100	0.4	8.00	0.10	0.300	1.200
SCF035-30-1206R	0.35	0.75	30	40	0.6	8.00	0.10	0.300	1.200
SCF050-1206-R	0.50	1.00	8	100	0.4	8.00	0.10	0.150	0.700
SCF050-24-1206R	0.50	1.00	24	100	0.6	8.00	0.10	0.150	0.750
SCF075-1206R	0.75	1.50	6	100	0.6	8.00	0.20	0.090	0.290
SCF075-16-1206R	0.75	1.50	16	100	0.6	8.00	0.20	0.090	0.290
SCF100-1206R	1.00	1.80	6	100	0.6	8.00	0.30	0.055	0.210
SCF110-1206R	1.10	2.20	6	100	0.8	8.00	0.30	0.040	0.180
SCF150-1206R	1.50	3.00	6	100	0.8	8.00	1.00	0.040	0.120
SCF200-1206R	2.00	3.50	6	100	0.8	8.00	1.50	0.018	0.080

I_{hold} = Hold current: maximum current device will pass without tripping in 23°C still air.

I_{trip} = Trip current: minimum current at which the device will trip in 23°C still air.

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

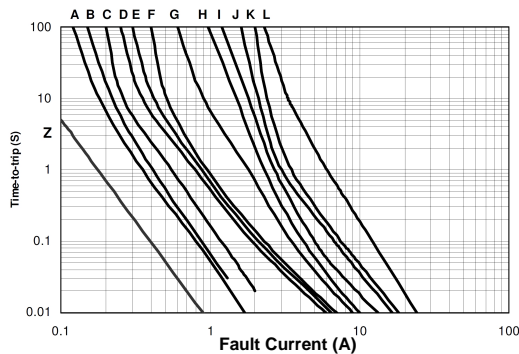
I_{max} = Maximum fault current device can withstand without damage at rated voltage (V_{max})

$P_{dtyp.}$ = Power dissipated from device when in the tripped state at 23°C still air.

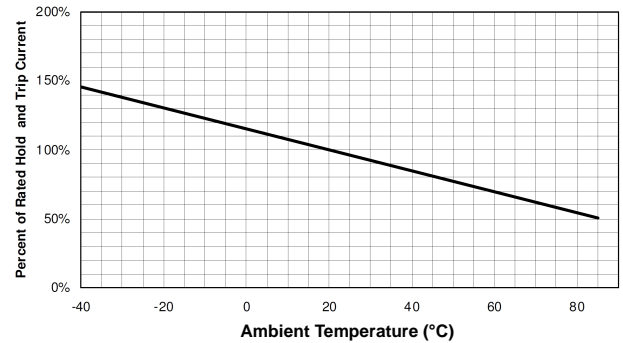
R_{min} = Minimum resistance of device in initial (un-soldered) state.

R_{1max} = Maximum resistance of device at 23°C measured one hour after tripping.

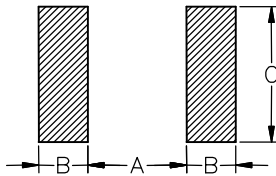
Caution: Operation beyond the specified rating may result in damage and possible arcing and flame.

Temperature Derating Chart – I_{hold} (A)
Average Time Current Curves


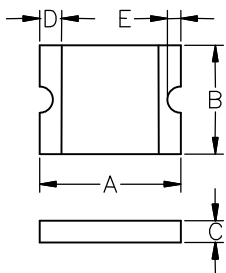
Z= SCF005-1206-R F= SCF035-1206-R/ J= SCF110-1206R
 A= SCF010-1206-R SCF035-60-1206R K= SCF150-1206R
 B= SCF012-1206-R G= SCF050-1206-R/ L= SCF200-1206R
 SCF050-24-1206R
 C= SCF020-1206-R
 D= SCF025-1206-R H= SCF075-1206R/
 E= SCF025-1206-R/ SCF075-16-1206R
 SCF025-24-1206-R I= SCF100-1206R

Temperature Derating Curve

Pad Layouts Unit: mm

The dimension in the table below provide the recommended pad layout for each SCF1206 device



Device	A	B	C
	Nominal	Nominal	Nominal
1206 Series	2.00	1.00	1.90

Dimensions Unit: mm


Part Number	A		B		C		D		E	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
SCF005-1206-R	3.00	3.50	1.50	1.80	0.45	0.85	0.10	0.75	0.10	0.45
SCF010-1206-R	3.00	3.50	1.50	1.80	0.45	0.85	0.10	0.75	0.10	0.45
SCF012-1206-R	3.00	3.50	1.50	1.80	0.45	0.85	0.10	0.75	0.10	0.45
SCF016-1206-R	3.00	3.50	1.50	1.80	0.45	0.75	0.10	0.75	0.10	0.45
SCF020-1206-R	3.00	3.50	1.50	1.80	0.45	0.75	0.10	0.75	0.10	0.45
SCF025-1206-R	3.00	3.50	1.50	1.80	0.45	0.75	0.10	0.75	0.10	0.45
SCF025-24-1206-R	3.00	3.50	1.50	1.80	0.45	0.75	0.10	0.75	0.10	0.45
SCF035-1206-R	3.00	3.50	1.50	1.80	0.45	0.75	0.10	0.75	0.10	0.45
SCF035-30-1206R	3.00	3.50	1.50	1.80	0.90	1.30	0.10	0.75	0.10	0.45
SCF050-1206-R	3.00	3.50	1.50	1.80	0.25	0.55	0.10	0.75	0.10	0.45
SCF050-24-1206R	3.00	3.50	1.50	1.80	0.90	1.30	0.10	0.75	0.10	0.45
SCF075-1206R	3.00	3.50	1.50	1.80	0.45	1.25	0.10	0.75	0.10	0.45
SCF075-16-1206R	3.00	3.50	1.50	1.80	0.45	1.25	0.10	0.75	0.10	0.45
SCF100-1206R	3.00	3.50	1.50	1.80	0.45	1.00	0.10	0.75	0.10	0.45
SCF110-1206R	3.00	3.50	1.50	1.80	0.45	1.00	0.10	0.75	0.10	0.45
SCF150-1206R	3.00	3.50	1.50	1.80	0.80	1.40	0.10	0.75	0.10	0.45
SCF200-1206R	3.00	3.50	1.50	1.80	0.85	1.60	0.10	0.75	0.10	0.45

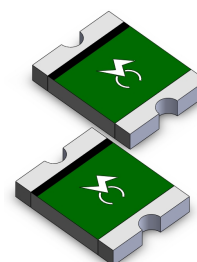
Surface Mount Resettable PTCs

Description

The SCF1210 Series PTC provides surface mount over-current protection for applications where space is at a premium and resettable protection is desired.

Features

- u RoHS compliant, Lead-Free and Halogen-Free
- u Fast time-to-trip
- u Compact design saves board space
- u Low resistance
- u Low-profile



Applicable

- u PC motherboard - plug and play protection
- u Mobile phones - battery and port protection
- u Game console port protection
- u USB peripherals
- u Disk drive
- u PDAS / digital cameras
- u Power ports
- u General electronics

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)
SCF005-1210-R	0.05	0.15	60	100	0.60	0.25	1.50	3.600	50.000
SCF010-1210-R	0.10	0.25	60	100	0.60	0.50	1.50	1.600	15.000
SCF020-1210-R	0.20	0.40	30	100	0.60	8.00	0.02	0.800	5.000
SCF035-1210-R	0.35	0.70	16	100	0.60	8.00	0.20	0.320	1.3000
SCF050-1210-R	0.50	1.00	16	100	0.60	8.00	0.10	0.250	0.900
SCF075-1210-R	0.75	1.50	8	100	0.60	8.00	0.10	0.130	0.400
SCF075-24-1210R	0.75	1.50	24	100	0.60	8.00	0.10	0.130	0.400
SCF110-1210R	1.10	2.20	6	100	0.80	8.00	0.30	0.060	0.210
SCF150-1210R	1.50	3.00	6	100	0.80	8.00	0.50	0.040	0.110
SCF175-1210R	1.75	4.00	6	100	0.80	8.00	0.60	0.020	0.080
SCF200-1210R	2.00	4.00	6	100	0.80	8.00	1.00	0.015	0.070

I_{hold} = Hold current: maximum current device will pass without tripping in 23°C still air.

I_{trip} = Trip current: minimum current at which the device will trip in 23°C still air.

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

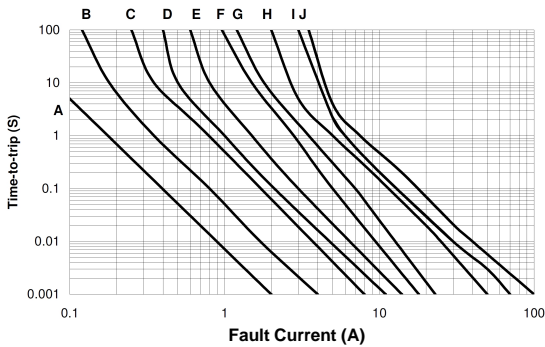
I_{max} = Maximum fault current device can withstand without damage at rated voltage (V_{max})

$P_{dtyp.}$ = Power dissipated from device when in the tripped state at 23°C still air.

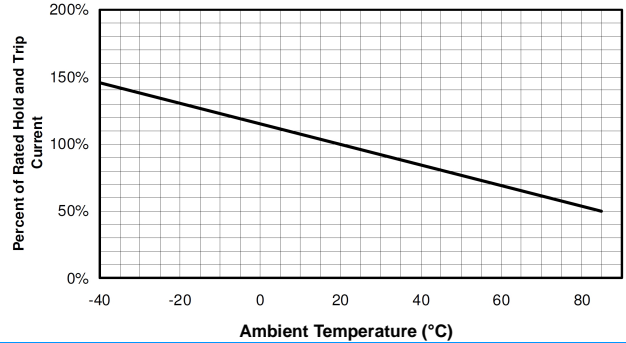
R_{min} = Minimum resistance of device in initial (un-soldered) state.

R_{1max} = Maximum resistance of device at 23°C measured one hour after tripping.

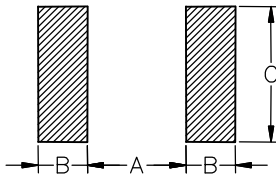
Caution: Operation beyond the specified rating may result in damage and possible arcing and flame.

Temperature Derating Chart – I_{hold} (A)
Average Time Current Curves


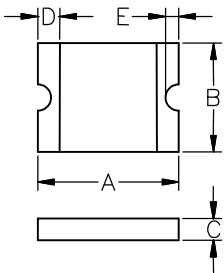
A= SCF005-1210-R F= SCF075-1210-R/
 B= SCF010-1210-R SCF075-24-1210R
 C= SCF020-1210-R G= SCF110-1210R
 D= SCF035-1210-R H= SCF150-1210R
 E= SCF050-1210-R I= SCF175-1210R
 J= SCF200-1210R

Temperature Derating Curve

Pad Layouts Unit: mm

The dimension in the table below provide the recommended pad layout for each SCF1206 device



Device	A	B	C
	Nominal	Nominal	Nominal
1210 Series	2.00	1.00	2.80

Dimensions Unit: mm


Part Number	A		B		C		D		E	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
SCF005-1210-R	3.00	3.43	2.35	2.80	0.60	1.15	0.25	0.75	0.10	0.45
SCF010-1210-R	3.00	3.43	2.35	2.80	0.60	1.15	0.25	0.75	0.10	0.45
SCF020-1210-R	3.00	3.43	2.35	2.80	0.40	0.85	0.25	0.75	0.10	0.45
SCF035-1210-R	3.00	3.43	2.35	2.80	0.40	0.80	0.25	0.75	0.10	0.45
SCF050-1210-R	3.00	3.43	2.35	2.80	0.30	0.75	0.25	0.75	0.10	0.45
SCF075-1210-R	3.00	3.43	2.35	2.80	0.30	0.70	0.25	0.75	0.10	0.45
SCF075-24-1210R	3.00	3.43	2.35	2.80	0.90	1.30	0.25	0.75	0.10	0.45
SCF110-1210R	3.00	3.43	2.35	2.80	0.60	1.00	0.25	0.75	0.10	0.45
SCF150-1210R	3.00	3.43	2.35	2.80	0.50	0.90	0.25	0.75	0.10	0.45
SCF175-1210R	3.00	3.43	2.35	2.80	0.80	1.40	0.25	0.75	0.10	0.45
SCF200-1210R	3.00	3.43	2.35	2.80	0.80	1.40	0.25	0.75	0.10	0.45

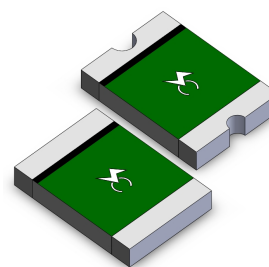
Surface Mount Resettable PTCs

Description

The SCF1812 Series PTC provides surface mount over-current protection for applications where space is at a premium and resettable protection is desired.

Features

- u RoHS compliant, Lead-Free and Halogen-Free
- u Fast time-to-trip
- u Compact design saves board space
- u Low resistance
- u Low-profile



Applicable

- u PC motherboard - plug and play protection
- u Mobile phones - battery and port protection
- u Game console port protection
- u USB peripherals
- u Disk drive
- u PDAS / digital cameras
- u Power ports
- u General electronics

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)
SCF010-1812	0.10	0.30	60	10	0.8	8.0	0.020	1.600	15.00
SCF010-R-1812	0.10	0.30	60	10	0.8	8.0	0.020	1.600	15.00
SCF014-1812	0.14	0.30	60	10	0.8	8.0	0.008	1.200	6.500
SCF014-R-1812	0.14	0.30	60	10	0.8	8.0	0.008	1.200	6.500
SCF020-1812	0.20	0.40	30	10	0.8	8.0	0.020	0.800	5.000
SCF020-R-1812	0.20	0.40	30	10	0.8	8.0	0.020	0.800	5.000
SCF035-1812	0.35	0.70	16	40	0.8	8.0	0.100	0.320	1.500
SCF035-R-1812	0.35	0.70	16	40	0.8	8.0	0.100	0.320	1.500
SCF050-1812	0.50	1.00	16	40	0.8	8.0	0.150	0.150	1.000
SCF050-R-1812	0.50	1.00	16	40	0.8	8.0	0.150	0.150	1.000
SCF075-1812	0.75	1.50	16	40	0.8	8.0	0.200	0.110	0.450
SCF075-R-1812	0.75	1.50	16	40	0.8	8.0	0.200	0.110	0.450
SCF075-24R-1812	0.75	1.50	24	40	1.0	8.0	0.200	0.110	0.290
SCF075-33R-1812	0.75	1.50	33	40	1.0	8.0	0.200	0.110	0.400
SCF110-1812	1.10	2.20	8	100	0.8	8.0	0.300	0.040	0.210
SCF110-R-1812	1.10	2.20	8	100	0.8	8.0	0.300	0.040	0.210
SCF110-16-1812	1.10	1.95	16	40	0.8	8.0	0.500	0.040	0.180
SCF110-16-R-1812	1.10	1.95	16	40	0.8	8.0	0.500	0.040	0.180
SCF110-24R-1812	1.10	2.20	24	100	1.0	8.0	0.500	0.060	0.200
SCF125-1812	1.25	2.50	6	40	0.8	8.0	0.400	0.050	0.140
SCF125-R-1812	1.25	2.50	6	40	0.8	8.0	0.400	0.050	0.140

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)
SCF150-1812	1.50	3.00	6	40	0.8	8.0	0.500	0.040	0.110
SCF150-R-1812	1.50	3.00	6	40	0.8	8.0	0.500	0.040	0.110
SCF150-12R-1812	1.50	3.00	12	100	1.0	8.0	0.500	0.040	0.110
SCF150-24R-1812	1.50	3.00	24	100	1.0	8.0	1.500	0.040	0.120
SCF160-1812	1.60	3.20	6	40	0.8	8.0	0.500	0.030	0.100
SCF160-R-1812	1.60	3.20	6	40	0.8	8.0	0.500	0.030	0.100
SCF160-12R-1812	1.60	3.20	12	100	1.0	8.0	1.000	0.030	0.100
SCF160-16R-1812	1.60	3.20	16	100	1.0	8.0	1.000	0.030	0.100
SCF190R-1812	1.90	4.90	6	100	1.0	8.0	5.000	0.003	0.025
SCF200R-1812	2.00	3.50	8	100	1.0	8.0	2.000	0.020	0.070
SCF260R-1812	2.60	5.00	6	100	1.0	8.0	2.500	0.015	0.047
SCF260-13R-1812	2.60	5.00	13.2	100	1.3	8.0	5.000	0.015	0.050
SCF260-16R-1812	2.60	5.00	16	100	1.3	8.0	5.000	0.015	0.050
SCF300R-1812	3.00	5.00	6	100	1.0	8.0	4.000	0.012	0.04

I_{hold} = Hold current: maximum current device will pass without tripping in 23°C still air.

I_{trip} = Trip current: minimum current at which the device will trip in 23°C still air.

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

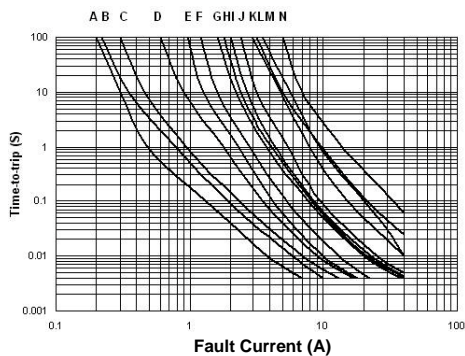
I_{max} = Maximum fault current device can withstand without damage at rated voltage (V_{max})

$P_{dtyp.}$ = Power dissipated from device when in the tripped state at 23°C still air.

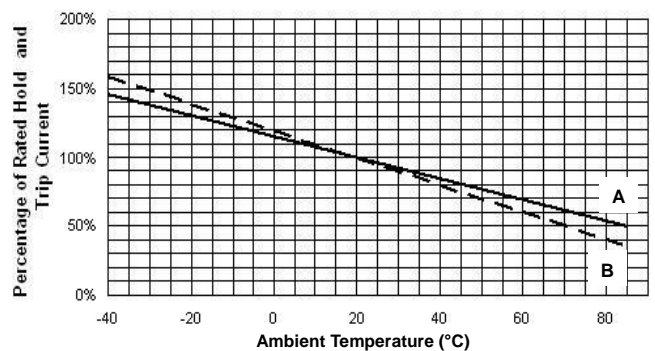
R_{min} = Minimum resistance of device in initial (un-soldered) state.

R_{1max} = Maximum resistance of device at 23°C measured one hour after tripping.

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

Temperature Derating Chart – I_{hold} (A)
Average Time Current Curves


- | | |
|---|---|
| A = SCF010/010-R-1812 | H = SCF125/125-R-1812 |
| B = SCF014/014-R-1812 | I = SCF150/150-R/
150-12R/150-24R-1812 |
| C = SCF020/020-R-1812 | J = SCF160/160-R/
160-12R/160-16R-1812 |
| D = SCF035/035-R-1812 | K = SCF200R-1812 |
| E = SCF050/050-R-1812 | L = SCF260R/260-13R/
260-16R-1812 |
| F = SCF075/075-R/
075-24R/075-33R-1812 | M = SCF190R-1812 |
| G = SCF110/110-R/110-16/
110-16-R/110-24R-1812 | N = SCF300R-812 |

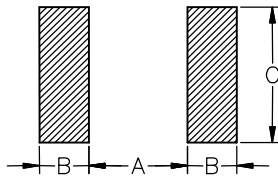
Temperature Derating Curve


- | | |
|--|--------------------------------------|
| A=SCF075, 075-24R,
075-33R, 110, 110-R,
110-16-R, 110-24R, 125,
150, 150-12R, 150-24R,
160, 160-12R, 160-16R,
190R, 200R, 260R,
260-13R, 260-16R,
300R-1812 | B=SCF010, 014, 020, 035,
050-1812 |
|--|--------------------------------------|

Surface Mount Resettable PTCs

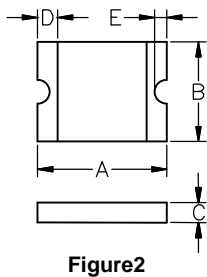
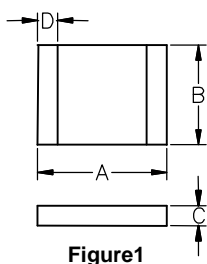
Pad Layouts Unit: mm

The dimension in the table below provide the recommended pad layout for each SCF1812 device



Device	A	B	C
	Nominal	Nominal	Nominal
1812 Series	3.45	1.78	3.50

Dimensions Unit: mm



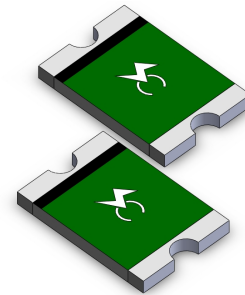
Part Number	Figure	A		B		C		D		E	
		Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
SCF010-1812	Figure1	4.37	4.73	3.07	3.41	0.60	0.90	0.30	0.95	-	-
SCF010-R-1812	Figure2	4.37	4.73	3.07	3.41	0.60	0.90	0.30	0.95	0.25	0.65
SCF014-1812	Figure1	4.37	4.73	3.07	3.41	0.60	0.90	0.30	0.95	-	-
SCF014-R-1812	Figure2	4.37	4.73	3.07	3.41	0.60	0.90	0.30	0.95	0.25	0.65
SCF020-1812	Figure1	4.37	4.73	3.07	3.41	0.60	0.90	0.30	0.95	-	-
SCF020-R-1812	Figure2	4.37	4.73	3.07	3.41	0.60	0.90	0.30	0.95	0.25	0.65
SCF035-1812	Figure1	4.37	4.73	3.07	3.41	0.40	0.70	0.30	0.95	-	-
SCF035-R-1812	Figure2	4.37	4.73	3.07	3.41	0.40	0.70	0.30	0.95	0.25	0.65
SCF050-1812	Figure1	4.37	4.73	3.07	3.41	0.35	0.65	0.30	0.95	-	-
SCF050-R-1812	Figure2	4.37	4.73	3.07	3.41	0.35	0.65	0.30	0.95	0.25	0.65
SCF075-1812	Figure1	4.37	4.73	3.07	3.41	0.35	0.65	0.30	0.95	-	-
SCF075-R-1812	Figure2	4.37	4.73	3.07	3.41	0.35	0.65	0.30	0.95	0.25	0.65
SCF075-24R-1812	Figure2	4.37	4.73	3.07	3.41	0.80	1.55	0.25	0.95	0.25	0.65
SCF075-33R-1812	Figure2	4.37	4.73	3.07	3.41	0.80	1.55	0.25	0.95	0.25	0.65
SCF110-1812	Figure1	4.37	4.73	3.07	3.41	0.25	0.55	0.30	0.95	-	-
SCF110-R-1812	Figure2	4.37	4.73	3.07	3.41	0.25	0.55	0.30	0.95	0.25	0.65
SCF110-16-1812	Figure1	4.37	4.73	3.07	3.41	0.25	0.90	0.30	0.95	-	-
SCF110-16-R-1812	Figure2	4.37	4.73	3.07	3.41	0.25	0.90	0.30	0.95	0.25	0.65
SCF110-24R-1812	Figure2	4.37	4.73	3.07	3.41	0.80	1.30	0.25	0.95	0.25	0.65
SCF125-1812	Figure1	4.37	4.73	3.07	3.41	0.25	0.55	0.30	0.95	-	-
SCF125-R-1812	Figure2	4.37	4.73	3.07	3.41	0.25	0.55	0.30	0.95	0.25	0.65
SCF150-1812	Figure1	4.37	4.73	3.07	3.41	0.25	0.55	0.30	0.95	-	-
SCF150-R-1812	Figure2	4.37	4.73	3.07	3.41	0.25	0.55	0.30	0.95	0.25	0.65
SCF150-12R-1812	Figure2	4.37	4.73	3.07	3.41	0.60	1.10	0.25	0.95	0.25	0.65
SCF150-24R-1812	Figure2	4.37	4.73	3.07	3.41	0.60	1.55	0.25	0.95	0.25	0.65
SCF160-1812	Figure1	4.37	4.73	3.07	3.41	0.25	0.90	0.30	0.95	-	-
SCF160-R-1812	Figure2	4.37	4.73	3.07	3.41	0.25	0.90	0.30	0.95	0.25	0.65
SCF160-12R-1812	Figure2	4.37	4.73	3.07	3.41	0.60	1.35	0.25	0.95	0.25	0.65
SCF160-16R-1812	Figure2	4.37	4.73	3.07	3.41	0.60	1.35	0.25	0.95	0.25	0.65
SCF190R-1812	Figure2	4.37	4.73	3.07	3.41	0.30	0.70	0.25	0.95	0.25	0.65
SCF200R-1812	Figure2	4.37	4.73	3.07	3.41	0.55	1.20	0.25	0.95	0.25	0.65
SCF260R-1812	Figure2	4.37	4.73	3.07	3.41	0.55	1.20	0.25	0.95	0.25	0.65
SCF260-13R-1812	Figure2	4.37	4.73	3.07	3.41	0.80	1.55	0.25	0.95	0.25	0.65
SCF260-16R-1812	Figure2	4.37	4.73	3.07	3.41	0.80	1.55	0.25	0.95	0.25	0.65
SCF300R-1812	Figure2	4.37	4.73	3.07	3.41	0.80	1.55	0.25	0.95	0.25	0.65

Description

The SCF2920 Series PTC provides surface mount over-current protection for applications where space is at a premium and resettable protection is desired.

Features

- u RoHS compliant, Lead-Free and Halogen-Free
- u Fast time-to-trip
- u Compact design saves board space
- u Low resistance
- u Low-profile


Applicable

- u PC motherboard - plug and play protection
- u Mobile phones - battery and port protection
- u Game console port protection
- u USB peripherals
- u Disk drive
- u PDAS / digital cameras
- u Power ports
- u General electronics

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)
SCF030-2920-R	0.30	0.60	60	100	1.5	1.5	3.0	1.000	4.800
SCF050-2920-R	0.50	1.00	60	100	1.5	2.5	4.0	0.300	1.400
SCF075-2920-R	0.75	1.50	33	100	1.5	8.0	0.3	0.180	1.000
SCF075-60-2920-R	0.75	1.50	60	10	1.5	8.0	0.3	0.180	1.000
SCF100-2920-R	1.10	2.20	33	100	1.5	8.0	0.5	0.090	0.410
SCF125-2920-R	1.25	2.50	33	100	1.5	8.0	2.0	0.050	0.250
SCF150-2920-R	1.50	3.00	33	40	1.5	8.0	2.0	0.050	0.230
SCF185-2920-R	1.85	3.70	33	40	1.5	8.0	2.5	0.040	0.150
SCF200-2920-R	2.00	4.00	16	100	1.5	8.0	4.5	0.035	0.120
SCF200-24-2920-R	2.00	4.00	24	40	1.5	8.0	5.0	0.035	0.120
SCF250-2920-R	2.50	5.00	16	100	1.5	8.0	16.0	0.025	0.085
SCF260-2920-R	2.60	5.20	6	100	1.5	8.0	20.0	0.020	0.075
SCF300-2920-R	3.00	5.20	6	100	1.5	8.0	25.0	0.010	0.048
SCF300-15-2920R	3.00	5.20	15	40	1.5	8.0	25.0	0.010	0.048

I_{hold} = Hold current: maximum current device will pass without tripping in 23°C still air.

I_{trip} = Trip current: minimum current at which the device will trip in 23°C still air.

V_{max} = Maximum 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})

$P_{dtyp.}$ = Power dissipated from device when in the tripped state at 23°C still air.

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

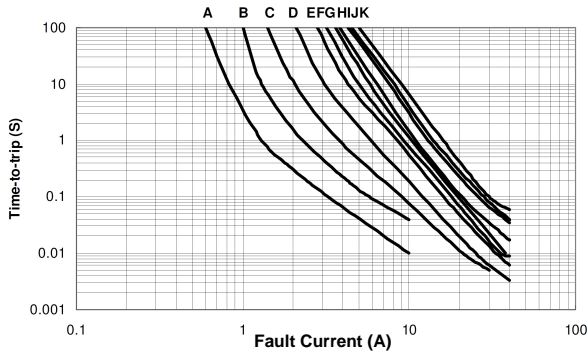
R_{1max} = Maximum resistance of device at 23°C measured one hour after tripping.

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

Surface Mount Resettable PTCs

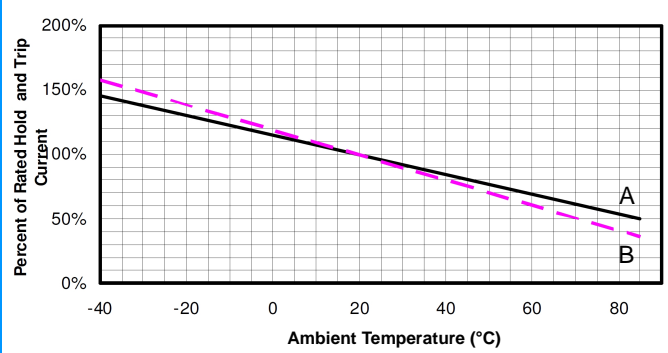
Temperature Derating Chart – I_{hold} (A)

Average Time Current Curves



- | | |
|---------------------------------------|---------------------------------------|
| A= SCF030-2920-R | G= SCF185-2920-R |
| B= SCF050-2920-R | H= SCF200-2920-R/
SCF200-24-2920-R |
| C= SCF075-2920-R/
SCF075-60-2920-R | I= SCF250-2920-R |
| D= SCF100-2920-R | J= SCF260-2920-R |
| E= SCF125-2920-R | K= SCF300-2920-R/
SCF300-15-2920R |
| F= SCF150-2920-R | |

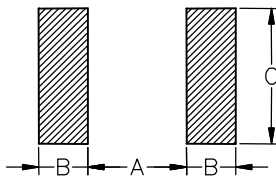
Temperature Derating Curve



- A=SCF125-2920-R ~ SCF300-2920-R
 A=SCF030-2920-R ~ SCF100-2920-R

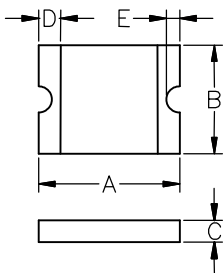
Pad Layouts Unit: mm

The dimension in the table below provide the recommended pad layout for each SCF2920 device



Device	A	B	C
	Nominal	Nominal	Nominal
2920 Series	5.10	2.30	5.60

Dimensions Unit: mm



Part Number	A		B		C		D		E	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
SCF030-2920-R	6.73	7.98	4.80	5.44	0.60	1.15	0.50	1.20	0.50	0.90
SCF050-2920-R	6.73	7.98	4.80	5.44	0.60	1.15	0.50	1.20	0.50	0.90
SCF075-2920-R	6.73	7.98	4.80	5.44	0.40	1.15	0.50	1.20	0.50	0.90
SCF075-60-2920-R	6.73	7.98	4.80	5.44	0.60	1.15	0.50	1.20	0.50	0.90
SCF100-2920-R	6.73	7.98	4.80	5.44	0.40	1.00	0.50	1.20	0.50	0.90
SCF125-2920-R	6.73	7.98	4.80	5.44	0.40	0.90	0.50	1.20	0.50	0.90
SCF150-2920-R	6.73	7.98	4.80	5.44	0.40	0.90	0.50	1.20	0.50	0.90
SCF185-2920-R	6.73	7.98	4.80	5.44	0.30	0.90	0.50	1.20	0.50	0.90
SCF200-2920-R	6.73	7.98	4.80	5.44	0.30	0.90	0.50	1.20	0.50	0.90
SCF200-24-2920-R	6.73	7.98	4.80	5.44	0.20	0.80	0.50	1.20	0.50	0.90
SCF250-2920-R	6.73	7.98	4.80	5.44	0.30	0.90	0.50	1.20	0.50	0.90
SCF260-2920-R	6.73	7.98	4.80	5.44	0.30	0.90	0.50	1.20	0.50	0.90
SCF300-2920-R	6.73	7.98	4.80	5.44	0.40	0.90	0.50	1.20	0.50	0.90
SCF300-15-2920R	6.73	7.98	4.80	5.44	0.65	1.15	0.50	1.20	0.50	0.90