

# Surface-Mount Devices | 0603 Size

## PTC Resettable Fuses

### SRF0603 Series

#### Features

- Compact design saves board space
- Fast response to fault currents
- Compatible with high temperature solders
- Low resistance
- Low-profile
- RoHS compliant, lead-free and halogen-free



#### Applications

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



#### Electrical Characteristics

Part Number	I <sub>H</sub> (A)	I <sub>T</sub> (A)	V <sub>max</sub> (V)	I <sub>max</sub> (A)	Time to Trip		P <sub>d typ</sub> (W)	R <sub>min</sub> (Ω)	R <sub>1max</sub> (Ω)
					(A)	(Sec.)			
SRF0603P010	0.10	0.30	15.0	40	0.5	1.00	0.50	0.900	6.000
SRF0603P020	0.20	0.50	9.0	40	1.0	0.60	0.50	0.550	3.500
SRF0603P035	0.35	0.75	6.0	40	8.0	0.10	0.50	0.200	1.400
SRF0603P050	0.50	1.00	6.0	40	8.0	0.10	0.50	0.100	0.800

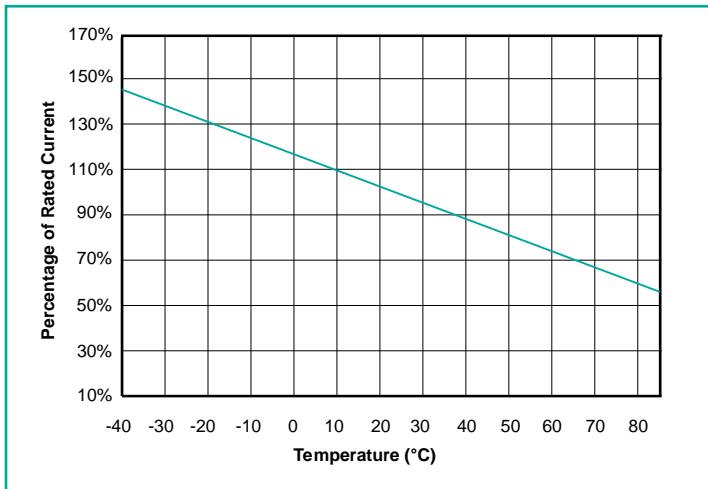
I<sub>hold</sub> = Hold current: maximum current device will pass without tripping in 25°C still air.  
 I<sub>trip</sub> = Trip current: minimum current at which the device will trip in 25°C still air.  
 V<sub>max</sub> = Maximum voltage device can withstand without damage at rated current (I<sub>max</sub>)  
 I<sub>max</sub> = Maximum fault current device can withstand without damage at rated voltage (V<sub>max</sub>)  
 P<sub>d</sub> = Power dissipated from device when in the tripped state at 25°C still air.

R<sub>min</sub> = Minimum resistance of device in initial (un-soldered) state.  
 R<sub>typ</sub> = Typical resistance of device in initial (un-soldered) state.  
 R<sub>1max</sub> = Maximum resistance of device at 25°C measured one hour after tripping or re ow soldering of 260°C for 20 sec.  
 Operating Temperature = -40 °C to +85 °C

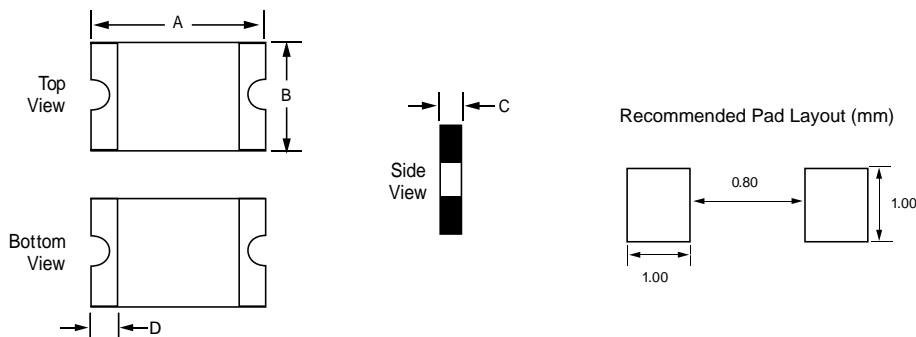
**Thermal Derating Chart** Hold Current (A)

Part Number	Ambient Operating Temperature								
	-40°C	-20°C	0°C	25°C	40°C	50°C	60°C	70°C	85°C
SRF0603P010	0.13	0.12	0.11	0.10	0.08	0.07	0.06	0.05	0.03
SRF0603P020	0.27	0.25	0.23	0.20	0.17	0.14	0.12	0.10	0.07
SRF0603P035	0.47	0.41	0.38	0.35	0.29	0.26	0.24	0.20	0.14
SRF0603P050	0.67	0.60	0.54	0.50	0.41	0.37	0.34	0.29	0.20

**Temperature Derating Curve**



**Dimensions (mm)**



Part Number	Marking	A		B		C		D
		Min.	Max.	Min.	Max.	Min.	Max.	Min.
SRF0603P010	I	1.45	1.85	0.65	1.05	0.35	0.75	0.20
SRF0603P020	—	1.45	1.85	0.65	1.05	0.30	0.65	0.20
SRF0603P035	II	1.45	1.85	0.65	1.05	0.30	0.65	0.20
SRF0603P050	•	1.45	1.85	0.65	1.05	0.60	1.00	0.20

### Packaging Options

$I_{hold(A)}$	Quantity
0.10~0.35	5,000pcs
0.50	4,000pcs

Reel packaging per EIA -481-1 standard

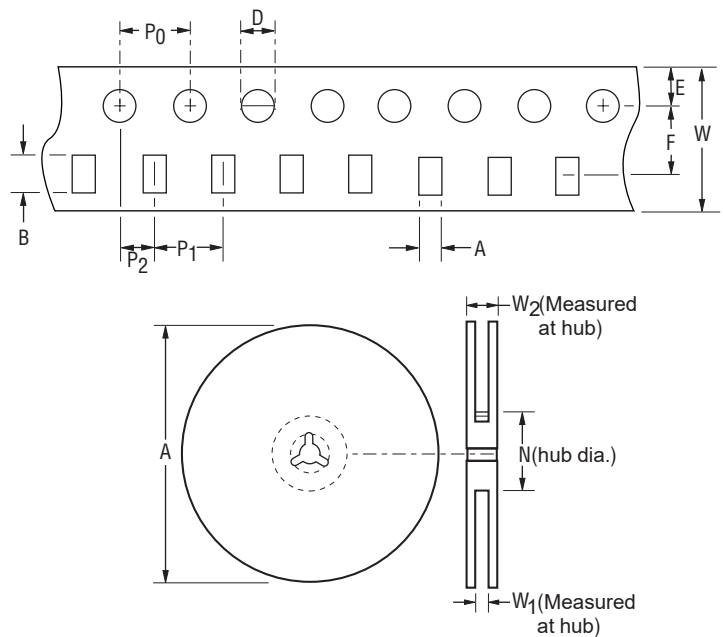
### Tape and Reel Specification

#### Dimensions: mm

W	$8.0 \pm 0.1$
P0	$4.0 \pm 0.1$
P1	$4.0 \pm 0.05$
P2	$2.0 \pm 0.05$
A	$1.25 \pm 0.05$
B	$2.05 \pm 0.05$
D	$1.55 \pm 0.05$
F	$3.5 \pm 0.05$
E	$1.75 \pm 0.1$

#### Reel Dimensions

A max.	185
N min.	50
W1	$8.4 + 1.5 / -0.0$
W2 max.	14.4



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