

Surface-Mount Devices | 0603 Size

SRF0603 Series

PTC Resettable Fuses

Features

- Resettable over current and over temperature protection
- Standard 0603mils footprint
- Fast time-to-trip
- RoHS compliant



Applications

- Automotive electronics
- PC motherboards, Hard disk driver, and PC peripherals
- POS Equipment
- LCD / LED HDTV
- USB port protection
- HDMI source protection



Electrical Characteristics

Part Number	I _H (A)	I _T (A)	V _{max} (V)	I _{max} (A)	Time to Trip		P _{d typ} (W)	R _{min} (Ω)	R _{1max} (Ω)	Agency Approval UL/CSA
					(A)	(Sec)				
SRF0603P001	0.01	0.03	60	40	0.20	1.00	0.50	15.00	120.00	×
SRF0603P002	0.02	0.06	60	40	0.20	1.00	0.50	12.00	70.00	×
SRF0603P003	0.03	0.09	30	40	0.20	1.00	0.50	6.00	50.00	×
SRF0603P004	0.04	0.12	24	20	0.20	1.00	0.50	3.50	40.00	×
SRF0603P005	0.05	0.15	15	40	0.50	0.10	0.50	3.50	35.00	×
SRF0603P005/24	0.05	0.15	24	20	0.50	0.10	0.50	3.50	35.00	×
SRF0603P008	0.08	0.24	15	40	0.50	0.10	0.50	3.50	40.00	×
SRF0603P010	0.10	0.30	15	40	0.50	1.00	0.50	0.90	6.00	√
SRF0603P020	0.20	0.50	9	40	1.00	0.60	0.50	0.55	3.50	√
SRF0603P035	0.35	0.75	6	40	8.00	0.10	0.50	0.20	1.40	√
SRF0603P050	0.50	1.00	6	40	8.00	0.10	0.50	0.10	0.80	√
SRF0603P100	1.00	2.00	6	40	5.00	1.00	0.50	0.035	0.40	×

I_H = Hold current: maximum current at which the device will not trip at 25°C still air.
 I_T = Trip current: minimum current at which the device will always trip at 25°C still air.
 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.
 P_{d typ} = 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°C measured one hour after reflow.

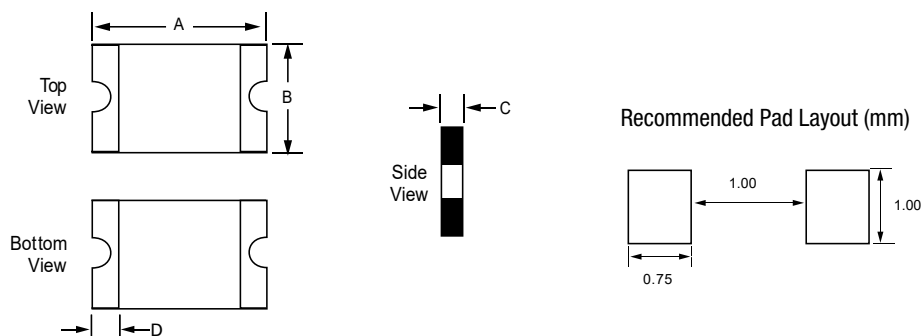
Noted: All electrical function test is conducted after PCB mounted.

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
SRF0603P001	0.013	0.012	0.011	0.01	0.008	0.007	0.006	0.005	0.0035
SRF0603P002	0.026	0.024	0.022	0.02	0.018	0.016	0.014	0.012	0.010
SRF0603P003	0.039	0.036	0.033	0.03	0.027	0.024	0.02	0.017	0.014
SRF0603P004	0.052	0.048	0.044	0.04	0.032	0.028	0.024	0.02	0.012
SRF0603P005	0.065	0.06	0.055	0.05	0.045	0.04	0.035	0.03	0.025
SRF0603P005/24	0.065	0.06	0.055	0.05	0.045	0.04	0.035	0.03	0.025
SRF0603P008	0.105	0.096	0.088	0.08	0.072	0.064	0.056	0.048	0.04
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	0.59	0.54	0.50	0.41	0.37	0.34	0.29	0.20
SRF0603P100	1.30	1.20	1.10	1.00	0.90	0.80	0.70	0.60	0.50

Notes: The temperature derating data is for reference only. Please contact PROSEMI technical support for detail temperature derating information.

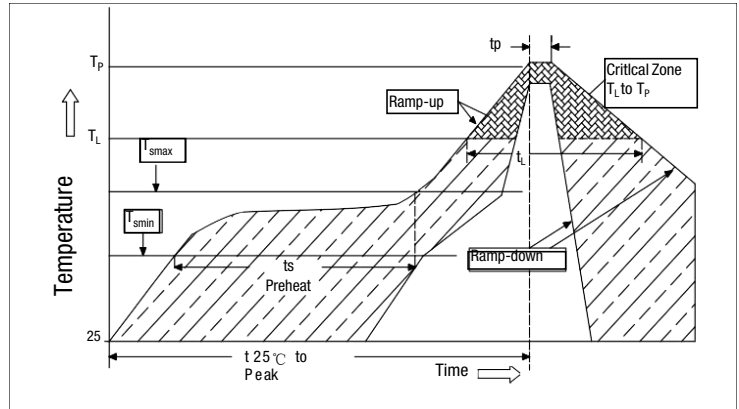
Dimensions (mm)



Part Number	Marking	A		B		C		D
		Min.	Max.	Min.	Max.	Min.	Max.	Min.
SRF0603P001	T	1.45	1.85	0.65	1.05	0.35	0.85	0.20
SRF0603P002	Y	1.45	1.85	0.65	1.05	0.30	0.75	0.20
SRF0603P003	E	1.45	1.85	0.65	1.05	0.30	0.75	0.20
SRF0603P004	K	1.45	1.85	0.65	1.05	0.60	1.00	0.20
SRF0603P005	K	1.45	1.85	0.65	1.05	0.70	1.20	0.20
SRF0603P005/24	K	1.45	1.85	0.65	1.05	0.35	0.85	0.20
SRF0603P008	N	1.45	1.85	0.65	1.05	0.30	0.75	0.20
SRF0603P010	I	1.45	1.85	0.65	1.05	0.35	0.85	0.20
SRF0603P020	-	1.45	1.85	0.65	1.05	0.30	0.75	0.20
SRF0603P035	II	1.45	1.85	0.65	1.05	0.30	0.75	0.20
SRF0603P050		1.45	1.85	0.65	1.05	0.60	1.00	0.20
SRF0603P100	1	1.45	1.85	0.65	1.05	0.70	1.20	0.20

Solder Reflow Conditions

Reflow Profile	Lead free
Heating rate from T_{smax} to T_p	Max.3°C/second
Pre-heat: T_{smin} T_{smax} T_{smin} to T_{smax}	150°C 200°C 60~180seconds
Soldering time: Temperature (T_L) Time (t_L)	>217°C 60~150seconds
Peak temperature (T_p)	260°C
Time at Peak temperature ±5°C (t_p)	20~40seconds
Cooling rate	Max.6°C/second
Time from 25°C to Peak Temperature	8 minutes max



Cautions for Reflow:

1. The printed solder thickness is not over 0.25mm. Excess solder may cause a short circuit, especially during hand soldering;
2. If reflow temperatures exceed the recommended profile, devices may not meet the performance requirements;
3. Device can not be wave soldered. Please contact Prosemi for hand soldering and dip soldering recommendations;
4. Device can't contact solvent;

Note: All temperature in top chart is measured on the surface of devices.

Packaging Options

I hold(A)	Quantity
0.01A~0.35A	5,000pcs
0.50A~1.00A	4,000pcs

Reel packaging per EIA-481-1 standard

单击下面可查看定价，库存，交付和生命周期等信息

[>>Prosemi \(普森美\)](#)