



ECE —
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SURFACE MOUNT PTC SN (1206) MODEL



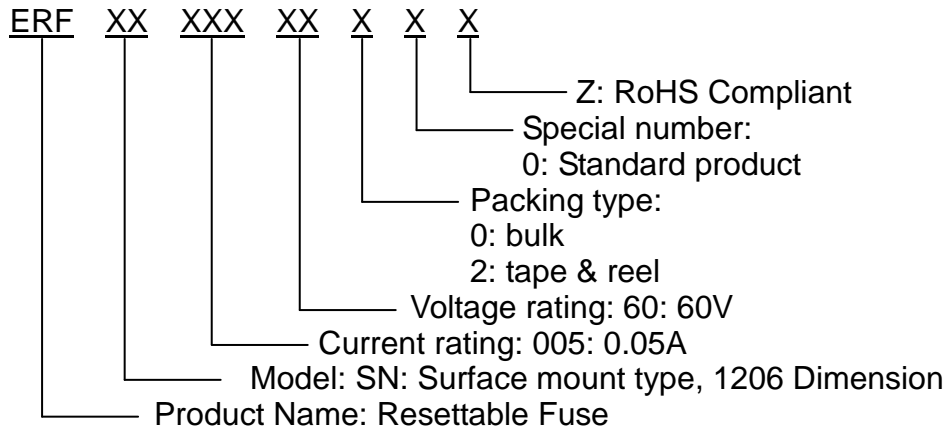
FEATURES

- 1206 Dimension, surface mount, solid state
- Faster time to trip than standard SMD devices
- Lower resistance than standard SMD devices
- Operation current: 50mA~2.0A
- Maximum voltage: 6V~60Vdc
- Temperature range: -40°C to 85°C
- Tape and reel available on most models

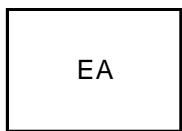
APPLICATIONS

- ◆ Almost anywhere there High-density boards is a low voltage power supply and a load to be protected including:
 - Computers & peripherals
 - General electronics
 - Automotive applications

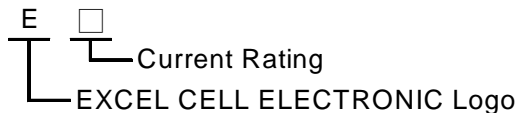
PART NUMBERING SYSTEM



Marking system



Example



EZ=ERFSN005-60	EG=ERFSN110-06
EA=ERFSN010-60	EH=ERFSN150-06
EB=ERFSN020-30	EI =ERFSN200-06
EC=ERFSN035-16	EJ=ERFSN012-48
ED=ERFSN050-08	EK=ERFSN016-48
EE=ERFSN075-06	EL=ERFSN025-16
EF=ERFSN100-06	EO=ERFSN075-16



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■ Electrical characteristics(23°C)

Part Number	Hold Current	Trip Current	Rated Voltage	Maximum Current	Typical Power	Max. Time to trip		Resistance Tolerance	
						Amp	Sec	R _{MIN}	R _{1MAX}
	I _H , A	I _T , A	V _{MAX} , V _{dc}	I _{MAX} , A	P _d , W			Ω	Ω
SN005-60	0.05	0.15	60	10	0.4	0.25	1.50	3.60	50.00
SN010-60	0.10	0.25	60	10	0.4	0.50	1.00	1.60	15.00
SN012-48	0.12	0.39	48	100	0.6	1.00	0.20	1.40	6.50
SN016-48	0.16	0.45	48	10	0.6	100	0.30	1.10	5.00
SN020-30	0.20	0.40	30	10	0.4	8.00	0.05	0.60	2.50
SN025-16	0.25	0.50	16	40	0.6	8.00	0.08	0.55	2.30
SN035-16	0.35	0.75	16	40	0.4	8.00	0.10	0.30	1.20
SN050-08	0.50	1.00	8	40	0.4	8.00	0.10	0.15	0.70
SN075-06	0.75	1.50	6	100	0.6	8.00	0.20	0.09	0.29
SN075-16	0.75	1.50	16	100	0.6	8.00	0.20	0.09	0.29
SN100-06	1.00	1.80	6	100	0.6	8.00	0.30	0.055	0.21
SN110-06	1.10	2.20	6	100	0.8	8.00	0.30	0.040	0.18
SN150-06	1.50	3.00	6	100	0.8	8.00	1.00	0.040	0.12
SN200-06	2.00	3.50	6	100	0.8	8.00	1.50	0.018	0.08

I_H=Hold current-maximum current at which the device will not trip at 23°C still air.

I_T=Trip current-minimum current at which the device will always trip at 23°C still air.

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

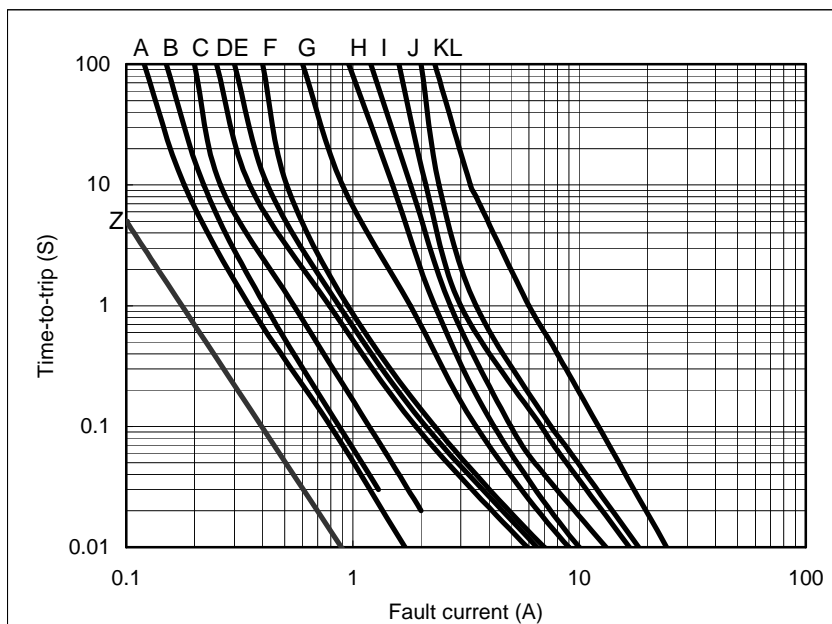
I_{MAX}= Maximum fault current device can withstand without damage at rated voltage (V max).

P_d=Typical power dissipated from device when in the tripped state in 23°C still air environment.

R_{MIN}=Minimum device resistance at 23°C.

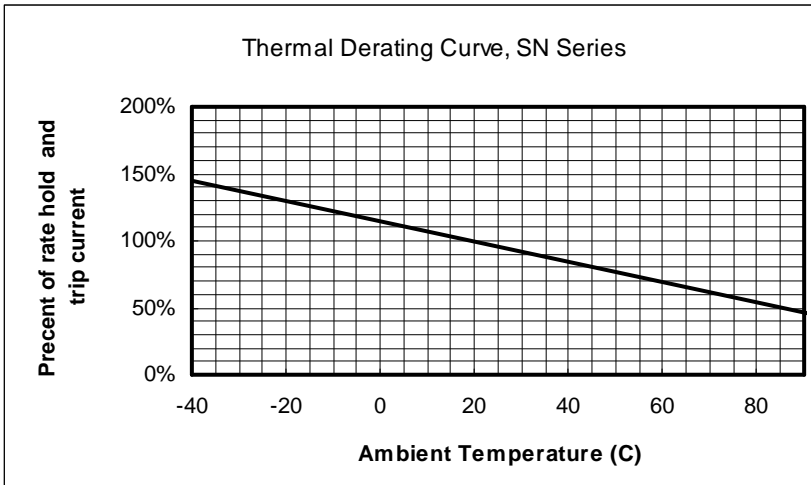
R_{1MAX}=Maximum device resistance at 23°C 1 hour after tripping.

■ Typical time-to-trip-at 23°C



Z=SN005
A=SN010
B=SN012
C=SN016
D=SN020
E=SN025
F=SN035
G=SN050
H=SN075
I=SN100
J=SN110
K=SN150
L=SN200

Thermal Derating Curve



SN Product Dimensions (UNIT: mm)

Part Number	A		B		C		D		E		Figure
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	
SN005	3.00	3.50	1.50	1.80	0.45	0.85	0.10	0.75	-----	-----	1
SN010	3.00	3.50	1.50	1.80	0.45	0.85	0.10	0.75	-----	-----	1
SN012	3.00	3.50	1.50	1.80	0.45	0.85	0.10	0.75	0.10	0.45	2
SN016	3.00	3.50	1.50	1.80	0.45	0.85	0.10	0.75	-----	-----	1
SN020	3.00	3.50	1.50	1.80	0.45	0.75	0.10	0.75	-----	-----	1
SN025	3.00	3.50	1.50	1.80	0.45	0.75	0.10	0.75	-----	-----	1
SN035	3.00	3.50	1.50	1.80	0.45	0.75	0.10	0.75	-----	-----	1
SN050	3.00	3.50	1.50	1.80	0.25	0.55	0.10	0.75	-----	-----	1
SN075	3.00	3.50	1.50	1.80	0.45	1.25	0.25	0.75	0.10	0.45	2
SN100	3.00	3.50	1.50	1.80	0.45	1.00	0.25	0.75	0.10	0.45	2
SN110	3.00	3.50	1.50	1.80	0.45	1.00	0.25	0.75	0.10	0.45	2
SN150	3.00	3.50	1.50	1.80	0.80	1.40	0.25	0.75	0.10	0.45	2
SN200	3.00	3.50	1.50	1.80	0.85	1.60	0.25	0.75	0.10	0.45	2

Figure 1

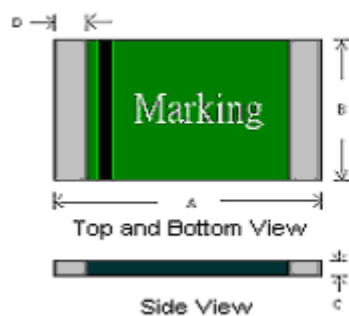
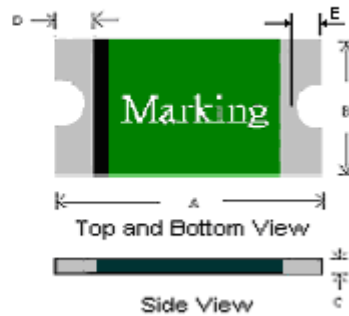


Figure 2

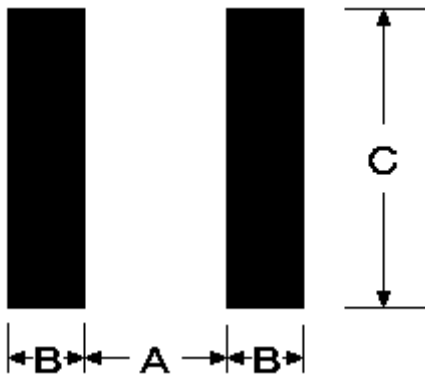


■ Standard Package for Reference

P/N	Reel/Tape	P/N	Reel/Tape	P/N	Reel/Tape	P/N	Reel/Tape
SN005	3.0K	SN020	3.0K	SN075	3.0K	SN200	2.0K
SN010	3.0K	SN025	3.0K	SN100	3.0K		
SN012	3.0K	SN035	4.0K	SN110	3.0K		
SN016	3.0K	SN050	4.0K	SN150	2.0K		

■ Pad Layouts and Soldering Reflow Recommendations

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



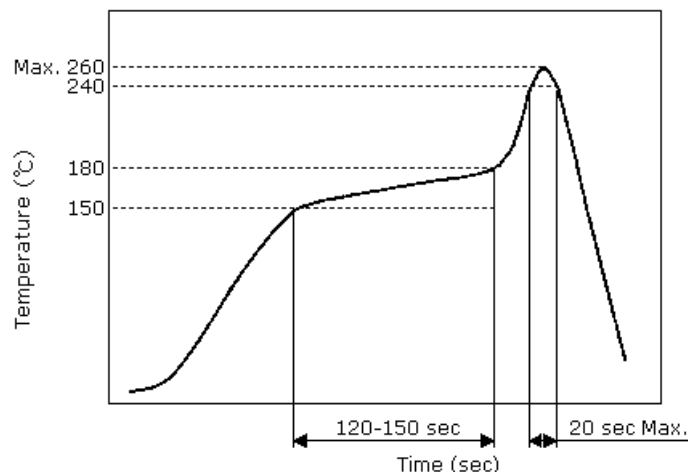
Pad dimensions(millimeters)			
Device	A Nominal	B Nominal	C Nominal
SL MODEL	5.10	2.30	5.60
SD/RSD MODEL	3.45	1.78	3.50
SM/RSM MODEL	2.00	1.00	2.80
SN/RSN MODEL	2.00	1.00	1.90
SR/RSR MODEL	1.20	1.00	1.50
SS/RSS MODEL	0.80	0.60	0.80

■ SOLDERING REFLOW (LEAD FREE)

- 1.Suggested reflow methods: IR, vapor phase oven, hot air oven.
- 2.Recommended maximum paste thickness is 0.25mm.
- 3.Devices are not designed to wave soldered to the bottom side of the board.

■ CAUTION

If reflow temperatures exceed the recommended standard, devices may not be able to meet the performance requirements.



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[F0603G0R03FNTR](#) [SKY87604-12](#) [SKY87604-11](#) [SKY87604-13](#) [0154002.DRL](#) [0154008.DRL](#) [0154.125DRL](#)