SURFACE MOUNT PTC
SB (2016) MODEL

c UL us E175689

■ FEATURES

- Mini surface mount, solid state
- Faster time to trip than standard SMD devices
- Lower resistance than standard SMD devices
- Operation current: 100mA~2.0A
- Maximum voltage: 6V~60Vdc
- Temperature range: -40℃ to 85℃
- 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

ERF SB 030 60 2 R Z

- Z: RoHS Compliant
- Special number: R : Standard product
- Packing type: 2: tape & reel
- Voltage rating: 60: 60V
- Current rating: 030: 0.30A
- Model: SB: Surface mount type, 2012 Dimension.
- Product Name: Resettable Fuse

■ Marking system

Example

E □□□

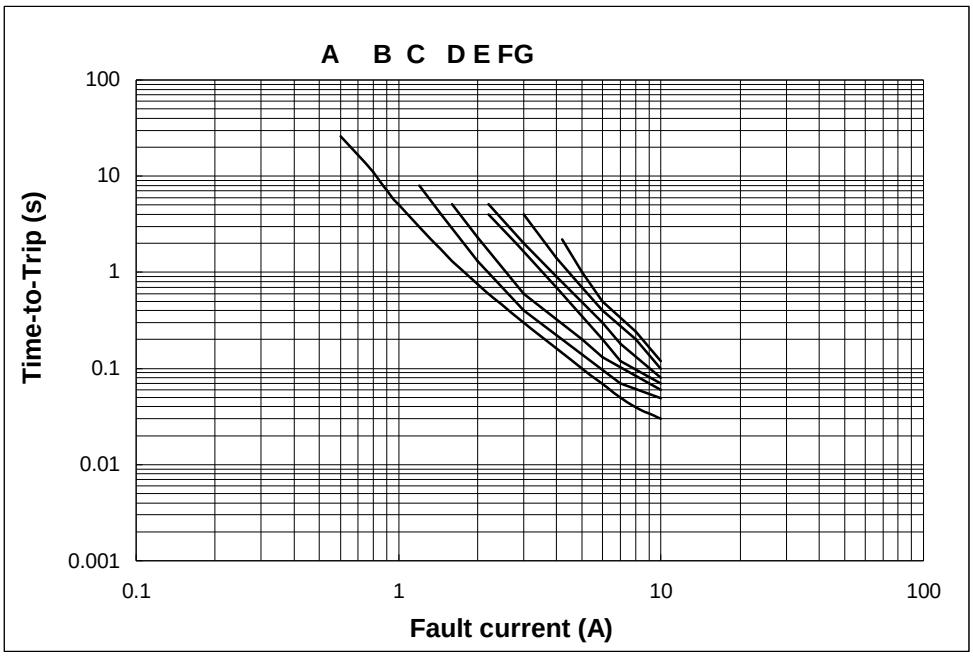
- Current Rating
- EXCEL CELL ELECTRONIC LOGO

■ Electrical characteristics(23℃)

Part Number	Hold Current	Trip Current	Rated Voltage	Maximum Current	Typical Power	Max. Time to trip		Resistance Tolerance	
								R_{MIN}	$R1_{MAX}$
	I_H, A	I_T, A	V_{MAX}, Vdc	I_{MAX}, A	Pd, W	Amp	Sec	Ω	Ω
SB030-60	0.30	0.60	60	100	1.4	1.5	3.0	0.04	2.30
SB050-60	0.50	1.10	60	100	1.4	2.5	5.0	0.20	1.00
SB075-60	0.75	1.50	60	100	1.4	8.0	0.5	0.13	0.90
SB110-15	1.10	2.20	15	100	1.4	8.0	0.5	0.07	0.40
SB110-33	1.10	2.20	33	100	1.4	8.0	0.5	0.07	0.40
SB150-15	1.50	3.00	15	100	1.4	8.0	0.8	0.05	0.18
SB200-06	2.00	4.20	6	100	1.4	8.0	3.0	0.03	0.10

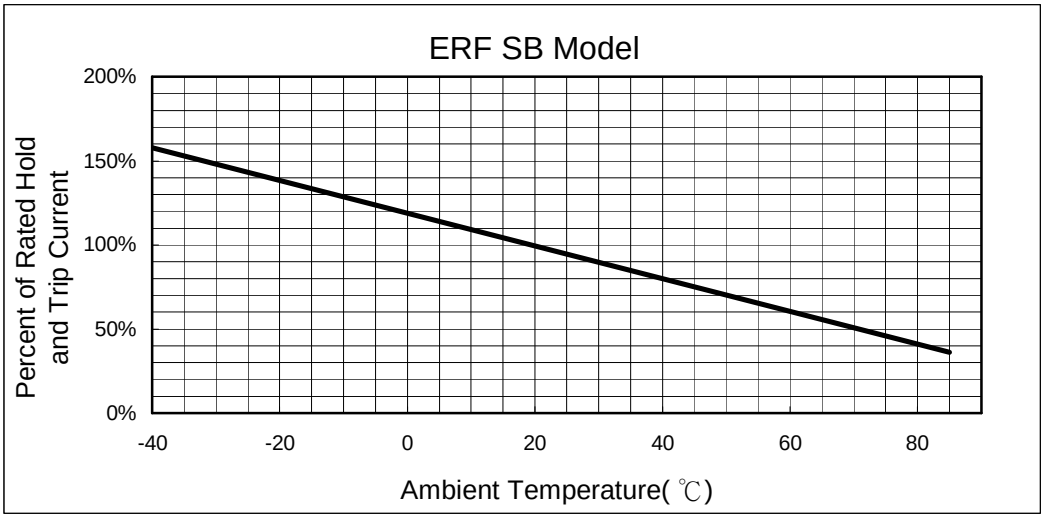
I_H=Hold current-maximum current at which the device will not trip at 23℃ still air.
I_T=Trip current-minimum current at which the device will always trip at 23℃ still air.
V_{MAX}=Maximum voltage device can withstand without damage at rated current.
I_{MAX}= Maximum fault current device can withstand without damage at rated voltage (V max).
Pd=Typical power dissipated from device when in the tripped state in 23℃ still air environment.
R_{MIN}=Minimum device resistance at 23℃.
$R1_{MAX}$=Maximum device resistance at 23℃ 1 hour after tripping .

■ Typical time-to-trip-at 23℃



A =SB030-60
B =SB050-60
C =SB075-60
D =SB110-15
E =SB110-33
F =SB150-15
G =SB120-06

Thermal Derating Curve

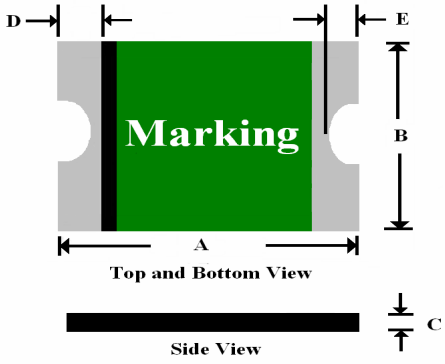


Standard Package for Reference

P/N	Reel/Tape	P/N	Reel/Tape	P/N	Reel/Tape	P/N	Reel/Tape
SB030-60	2.0K	SB110-15	2.0K	SB200-06	2.0K		
SB050-60	1.0K	SB110-33	2.0K				
SB075-60	1.0K	SB150-15	2.0K				

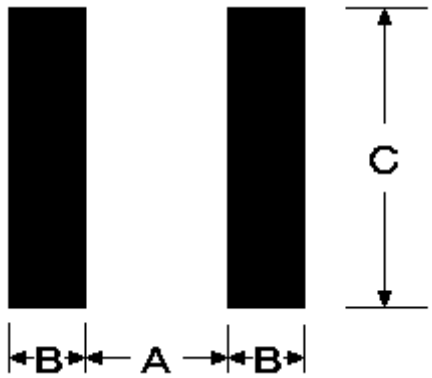
SB Product Dimensions (UNIT: mm)

PART NUMBER	A		B		C		D		E	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
SB030-60	4.72	5.44	3.70	4.33	0.40	1.15	0.30	1.50	0.25	0.65
SB050-60	4.72	5.44	3.70	4.33	0.40	1.70	0.30	1.50	0.25	0.65
SB075-60	4.72	5.44	3.70	4.33	0.40	1.70	0.30	1.50	0.25	0.65
SB110-15	4.72	5.44	3.70	4.33	0.30	0.70	0.30	1.50	0.25	0.65
SB110-33	4.72	5.44	3.70	4.33	0.30	0.70	0.30	1.50	0.25	0.65
SB150-15	4.72	5.44	3.70	4.33	0.25	0.65	0.30	1.50	0.25	0.65
SB200-06	4.72	5.44	3.70	4.33	0.25	0.65	0.30	1.50	0.25	0.65



■ 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
SB MODEL	3.40	1.50	4.60
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.