Surface-Mount Device **SMD1812-050C-30V** RoHS

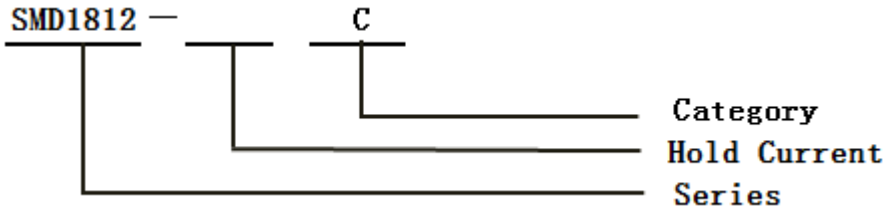
Feature

- Resettable over current and over temperature protection
- Small size of 1812
- Small footprint
- Low resistance
- Fast time-to-trip
- RoHS complaint

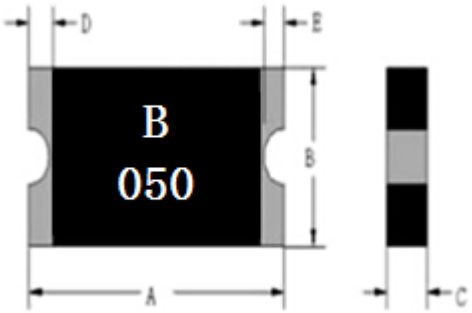
Application

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

Part Numbering



Product Dimensions in Millimeter



Part Number	A		B		C		D		E	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
SMD1812-050C-30V	4.37	4.73	3.07	3.41	0.50	1.40	0.30	--	0.25	--

Electrical Characteristics

Part Number	I(A)		V_{max}	I_{max}	Pd_{typ}	T_{trip}		R_{min}	R_{1max}
	25℃		--	--	--	25℃		25℃	
	Hold	Trip	(V)	(A)	(W)	Current(A)	Time(S)	(Ω)	(Ω)
SMD1812-050C-30V	0.50	1.00	30	40	0.8	8.00	0.15	0.150	1.400

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I_H=Hold current: maximum current at which the device will not trip at 25℃ still air reflow soldering of 260℃ for 20 sec.
I_T=Trip current: minimum current at which the device will always trip at 25℃ still air reflow soldering of 260℃ for 20 sec.
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 reflow soldering of 260℃ for 20 sec.
Pd_{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℃ measured one hour after reflow soldering of 260℃ for 20 sec.
Value specified is determined by using the PWB with 0.030˙*1.5oz copper traces.

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

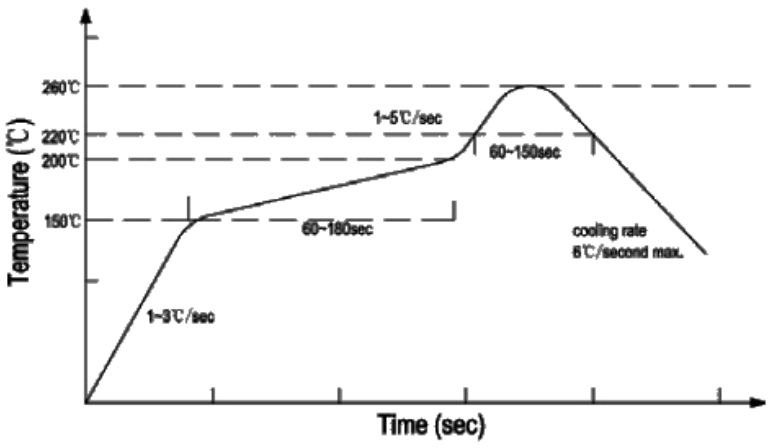
Environmental Specifications

Test	Test Conditions	Accept /Reject Criteria
Recommended storage conditions	40°C max, 70% R.H. max	No change
Passive aging:	85°C, 1000 hours	≤ R_{1max}
Moisture Resistance	85% RH,85℃,1000hrs	≤ R_{1max}
Thermal Shock	MIL-STD-202 Method 107G +85ºC /-40ºC 20 times	≤ R_{1max}
Vibration	MIL-STD-883C, Method 2007.1, Condition A	No change
Solvent Resistance	MIL-STD-202, Method 215	No change
Moisture Level Sensitivity	Level 2, J-STD-020C	No change

Thermal Derating [Hold Current (A) at Ambient Temperature (℃)]

Part Number	Maximum Ambient Operating Temperature (℃)								
	-40	-20	0	25	40	50	60	70	85
SMD1812-050C-30V	0.69	0.59	0.55	0.50	0.45	0.43	0.35	0.30	0.23

Solder Reflow Recommendation



Reflow –curve

Recommended reflow methods:IR,hot air oven ,nitrogen oven
Devices can be cleaned using standard industry methods and solvents.

NOTE:

If reflow temperatures exceed the recommended profile,devices may not meet the performance requirements.

Caution: Operation beyond the rated voltage or current may result in rupture electrical arcing or flame

Packaging Quantity and Marking

Device	Marking	Standard Quantity (pcs)
SMD1812-050C-30V	B 050	1500

NOTE:

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CAUTION:

Operation beyond the maximum ratings or improper use may result in device damage and possible electrical arcing and flame. The devices are intended for protection against occasional over-current or over temperature fault conditions and should not be used when repeated fault conditions or prolonged trip events are anticipated. Device performance can be impacted negatively if devices are handled in a manner inconsistent with recommended electronic, thermal, and mechanical procedures for electronic components.

Contact information

BNSTAR NEW MATERIALS CO., LTD.
130Meilong Road Shanghai, P.R.China
Tel:86-021-64251576 Fax: 86-021-64250020
EMAIL：info@bnstar.net

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