

## 阅读申明

- 1.本站收集的数据手册和产品资料都来自互联网，版权归原作者所有。如读者和版权方有任何异议请及时告之，我们将妥善解决。
- 2.本站提供的中文数据手册是英文数据手册的中文翻译，其目的是协助用户阅读，该译文无法自动跟随原稿更新，同时也可能存在翻译上的不当。建议读者以英文原稿为参考以便获得更精准的信息。
- 3.本站提供的产品资料，来自厂商的技术支持或者使用者的心得体会等，其内容可能存在描述上的差异，建议读者做出适当判断。
- 4.如需与我们联系，请发邮件到marketing@iczoom.com，主题请标有“数据手册”字样。

## Read Statement

1. The datasheets and other product information on the site are all from network reference or other public materials, and the copyright belongs to the original author and original published source. If readers and copyright owners have any objections, please contact us and we will deal with it in a timely manner.
2. The Chinese datasheets provided on the website is a Chinese translation of the English datasheets. Its purpose is for reader's learning exchange only and do not involve commercial purposes. The translation cannot be automatically updated with the original manuscript, and there may also be improper translations. Readers are advised to use the English manuscript as a reference for more accurate information.
3. All product information provided on the website refer to solutions from manufacturers' technical support or users the contents may have differences in description, and readers are advised to take the original article as the standard.
4. If you have any questions, please contact us at marketing@iczoom.com and mark the subject with "Datasheets" .

## 阅读申明

- 1.本站收集的数据手册和产品资料都来自互联网，版权归原作者所有。如读者和版权方有任何异议请及时告之，我们将妥善解决。
- 2.本站提供的中文数据手册是英文数据手册的中文翻译，其目的是协助用户阅读，该译文无法自动跟随原稿更新，同时也可能存在翻译上的不当。建议读者以英文原稿为参考以便获得更精准的信息。
- 3.本站提供的产品资料，来自厂商的技术支持或者使用者的心得体会等，其内容可能存在描述上的差异，建议读者做出适当判断。
- 4.如需与我们联系，请发邮件到marketing@iczoom.com，主题请标有“数据手册”字样。

## Read Statement

1. The datasheets and other product information on the site are all from network reference or other public materials, and the copyright belongs to the original author and original published source. If readers and copyright owners have any objections, please contact us and we will deal with it in a timely manner.
2. The Chinese datasheets provided on the website is a Chinese translation of the English datasheets. Its purpose is for reader's learning exchange only and do not involve commercial purposes. The translation cannot be automatically updated with the original manuscript, and there may also be improper translations. Readers are advised to use the English manuscript as a reference for more accurate information.
3. All product information provided on the website refer to solutions from manufacturers' technical support or users the contents may have differences in description, and readers are advised to take the original article as the standard.
4. If you have any questions, please contact us at marketing@iczoom.com and mark the subject with "Datasheets" .

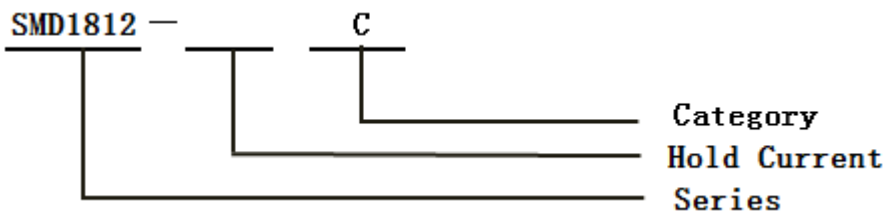
### Feature

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

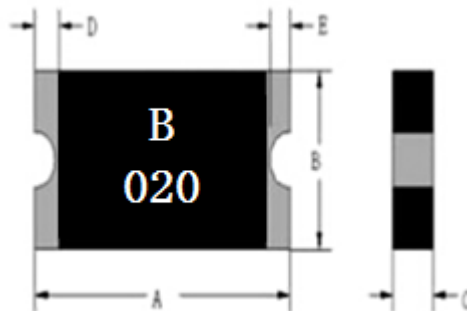
### Application

- 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
SMD1812-020C-60V	4.37	4.73	3.07	3.41	0.50	1.10	0.30	--	0.25	--

### Electrical Characteristics

Part Number	I(A)		V <sub>max</sub>	I <sub>max</sub>	P <sub>dtyp</sub>	T <sub>trip</sub>		R <sub>min</sub>	R <sub>1max</sub>
	25°C		--	--	--	25°C		25°C	
	Hold	Trip	(V)	(A)	(W)	Current(A)	Time(S)	(Ω)	(Ω)
SMD1812-020C-60V	0.20	0.40	60.0	40	0.8	8.00	0.04	0.350	5.00

$I_H$ =Hold current: maximum current at which the device will not trip at 25°C still air reflow soldering of 260°C for 20 sec.  
 $I_T$ =Trip current: minimum current at which the device will always trip at 25°C still air reflow soldering of 260°C 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°C for 20 sec.  
 $P_{dtyp}$ =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.  
 $R_{I_{max}}$ =Maximum resistance of device at 25°C measured one hour after reflow soldering of 260°C 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.

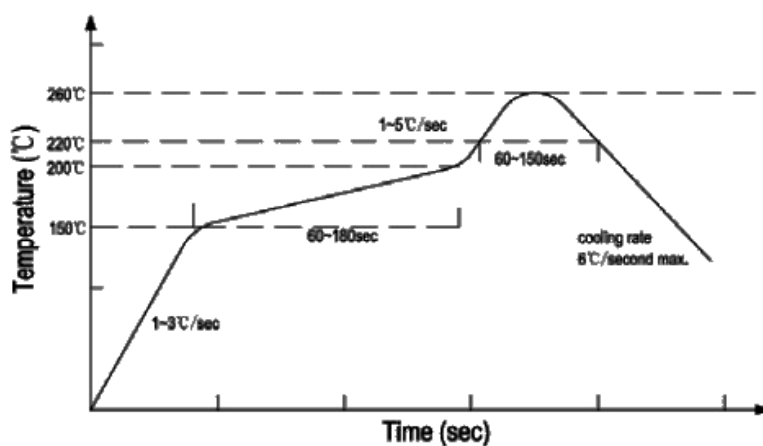
### Environmental Specifications

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

### Thermal Derating [ Hold Current (A) at Ambient Temperature (°C)]

Part Number	Maximum Ambient Operating Temperature (°C)								
	-40	-20	0	25	40	50	60	70	85
SMD1812-020C-60V	0.29	0.26	0.23	0.20	0.17	0.15	0.14	0.12	0.10

### 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)
SMD1812-020C-60V	B 020	1500

**NOTE:**

BNstar Co.,Ltd. makes no representations or warranties with respect to the accuracy or completeness of the contents of this publication and reserves the right to make changes to specifications and product descriptions at any time without notice. The products described in this document are not designed, intended, authorized or warranted for use as components in systems intended for surgical implant into the body, or in other applications intended to support or sustain life, or where malfunction of

BNstar's product may result in direct physical harm, injury, or death to a person or severe property or environmental damage. BNstar Co.,Ltd., reserves the right to discontinue or make changes to its products at any time without notice.

**Website:** <http://www.bnstar.net>

For additional information, please contact your local Sales Representative.

©Copyright 2006, BNstar Co.,Ltd.



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

Rev. letter		Date	
Design	Check	Audit	Approve