功得電子工業股份有限公司
CONQUER ELECTRONICS CO.,LTD.

規格書

Spec. No. SFA097

Specification For Approval

型號：BMC 系列 半導體設備保護保險絲

Model：BMC *Series*

Semiconductor Protection Fuse

Safety for your life

www.conquer.com.tw

五股廠：新北市五股區五權五路26號(新北產業園區)
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History of Change

REV.	Description	Date	Drawn	Designed	Checked	Approved
1	(1)發出Issue	2015.6.10	黃琦芳	邱俊傑	蔡進義 趙家葉	蔡其湖
2	修訂過載能力實驗（Overload test）測試條件	2015.12.02	黃琦芳	邱俊傑	蔡進義 趙家葉	蔡其湖
3	(1)新增50A 60A 70A 100A 125A 150A 180A規格	2017.11.20	黃琦芳	邱俊傑	蔡進義 趙家葉	蕭順益

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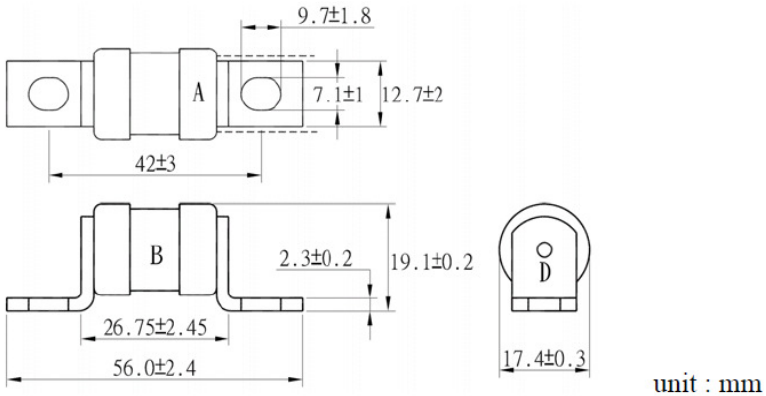
～ 螺栓連接保險絲 ～
Fuse-links with bolted connections

1 **適用範圍**:本標準適用於半導體設備保護保險絲(aR type)。
Available Range: For protecting semiconductor equipment (aR type)

2 **形狀及尺寸如下圖** 單位: mm
Shape & Size as following illustrations.



unit : mm

2.1 構造形狀 Structure & Shape : 如上圖 As shown in figure above
2.2 額定電壓 Rated Voltage: 240V(AC)/150V(DC)
2.3 額定電流 Rated Current: 50~180A

3 **材料** Material:
3.1 筒管本體: 不透明瓷管不可破裂或變形。
Tube (Body): Non-transparent ceramic tube. Breaking or deformation is not allowed.
3.2 兩端銅蓋: 需以導電率良好之銅為材料。
Two copper end caps: Made of copper of good conductivity.
3.3 銅蓋處理: 銅蓋部份鍍錫，標示最後若加 "S" 者，表示須鍍銀。
Coating of caps: Plating the surface with Tin . If the indication is added with "S", it needs to be plated with silver.

NO.	Part Name 部 品 名 稱	Volume 數量
A	Copper Cap - Tin Plated 銅帽 - 鍍錫	2
B	Ceramic Tube - Non-Transparent Ceramic Tube 瓷管 - 不透明瓷管	1
D	Terminal - Copper (Tin Plated Copper) 附腳 - 銅鍍錫	2

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4 **電氣特性** Electrical Characteristics:

4.1 負載容量: 通過額定電流值 100 % (亦即1.0 x In A)，能繼續通電至少 4小時無任何熔化現象。
Loading Capacity: Loading 100% of rated current (i.e.1.0 x In A) the fuse shall not operate during 4 hours.

4.2 溫度特性:通過額定電流值100%(亦即 1.0 x In A)1.5小時，繼續維持原加之電流，每隔十分鐘測試一次，連續測三次，溫度不得升高，若使用熱偶式測量方法。(Thermocouple method) 則本體溫升在 130K 以下.
Temperature: Loading the 100 % (1.0 x In A) for 1.5 hours, keep testing it with the original current every 10 minutes. Continue to test it for 3 times. The temperature is not allowed to be higher. The main temperature rise is below 130K by way of Thermocouple Method.

4.3 耗散功率: 通過額定電流值 100 % (亦即1.0 x In A)1.5小時，其耗散功率不得超過規定值。 請參照表一：
Watts Loss : After loading 100% of rated current (i.e.1.0 x In A) for 1.5 hours, the power dissipation should not exceed the value shown in Table I.
表一 (Table I)

Rated Current	Watts Loss 100% In(W)
50A	8.80
60A	11.00
70A	12.50
80A	13.70
100A	16.20
125A	22.00
150A	25.00
180A	25.00

5 **過載能力實驗 Overload test**:
本實驗乃保證產品之壽命與可靠度，施加110%額定電流之脈波，10秒ON，120秒OFF，100次以後，本品不熔斷且內阻變化10%以下
This test is designed to assure a reliable fuse. Loading 110% rated current 10 seconds ON / 120 seconds OFF per cycle. After subjecting 100 cycles, and the internal resistance change will be below 10%.

6 **機械特性** Mechanical Properties:
拉力強度:當施加軸拉力4 kg於兩端附腳(或銅帽)，無鬆動或損壞現象發生。
Terminal Strength : Terminals and/or caps are soldered (adhered) to withstand axial pulling force of 4 kg without loosening or any appearance defect.

7 **遮斷能力** Interrupting rating:
160000 amperes at 240V AC
50000amperes at 150V DC

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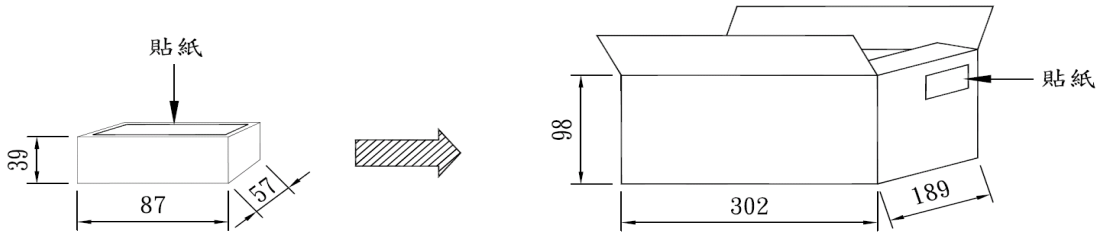
8 **包裝** Packing :

BMC 內盒:10PCS/盒 外箱: 20盒/箱 內盒印明下列標示:料號、額定(電壓、電流、遮斷能力)安規名稱，包裝材料均符合RoHS或者HF的環保要求,且包裝材料不會和零件發生化學反應造成不良。

BMC 10 pcs in an inner box. 20 box in an outside box. The following items are indicated on the box: Catalog number, rated voltage, rated current, interrupting rating and safety mark.The packing material complied with RoHS or HF environmental protection request and shall not have the chemical reaction with the parts of fuse.



9 **其他** Other:

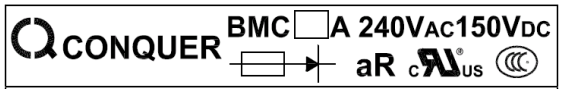
9.1 除非另有指定，上述機械、電器特性，係於常溫，標準狀況下測試之。
Unless otherwise specified, all tests were performed at 25±5℃ and 35-75% RH.

9.2 於標準狀況下儲放一年，本品乃確保上述機械與電氣之特性。
After one year of storage at the atmosphere (25±5℃ and 35-75% RH.), the fuse shall comply with electrical and mechanical requirements in clause 4, 5 and 6.

10 **標記** :Marking

於瓷管表面刻印安培數、電壓、品名及安規標示。

The rated current, rated voltage, series model, company name and safty mark are marked on the surface of ceramic tube.



11 **安規認證** Safety certification:

BMC Series

Mark / Approvals			Nominal Resistance Cold Ohms	Clearing at 240V I^2t (A^2Sec)	Watts Loss 100% In (W)
50 A	＊＊	＊＊	0.00183	2463.00	8.80
60 A	＊＊		0.00156	3574.30	11.00
70 A	＊＊		0.00117	4047.00	12.50
80 A	＊＊	＊＊	0.00098	5447.00	13.70
100 A	＊＊		0.00072	8352.00	16.20
125 A	＊＊		0.0006	10077.00	22.00
150 A	＊＊		0.00049	15100.00	25.00
180 A	＊＊	＊＊	0.00038	17268.00	25.00

＊＊: 有安規認證及瓷管上有安規印字標記 Have safety certify and safety mark on the Body

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12 產品描述 Product Description

描述 Description	安培數 Ampere Rating
BMC___A___V___	50A~180A

例: **BMC** **A** **240V** **(PF)**
1 **2** **3** **4**

1 系列品名 Series Model :BMC
2 安培數 Rated current :50A~180A
3 伏特數 Rated voltage : 240Vac/150Vdc
4 無鉛標示 Pb free : (PF)

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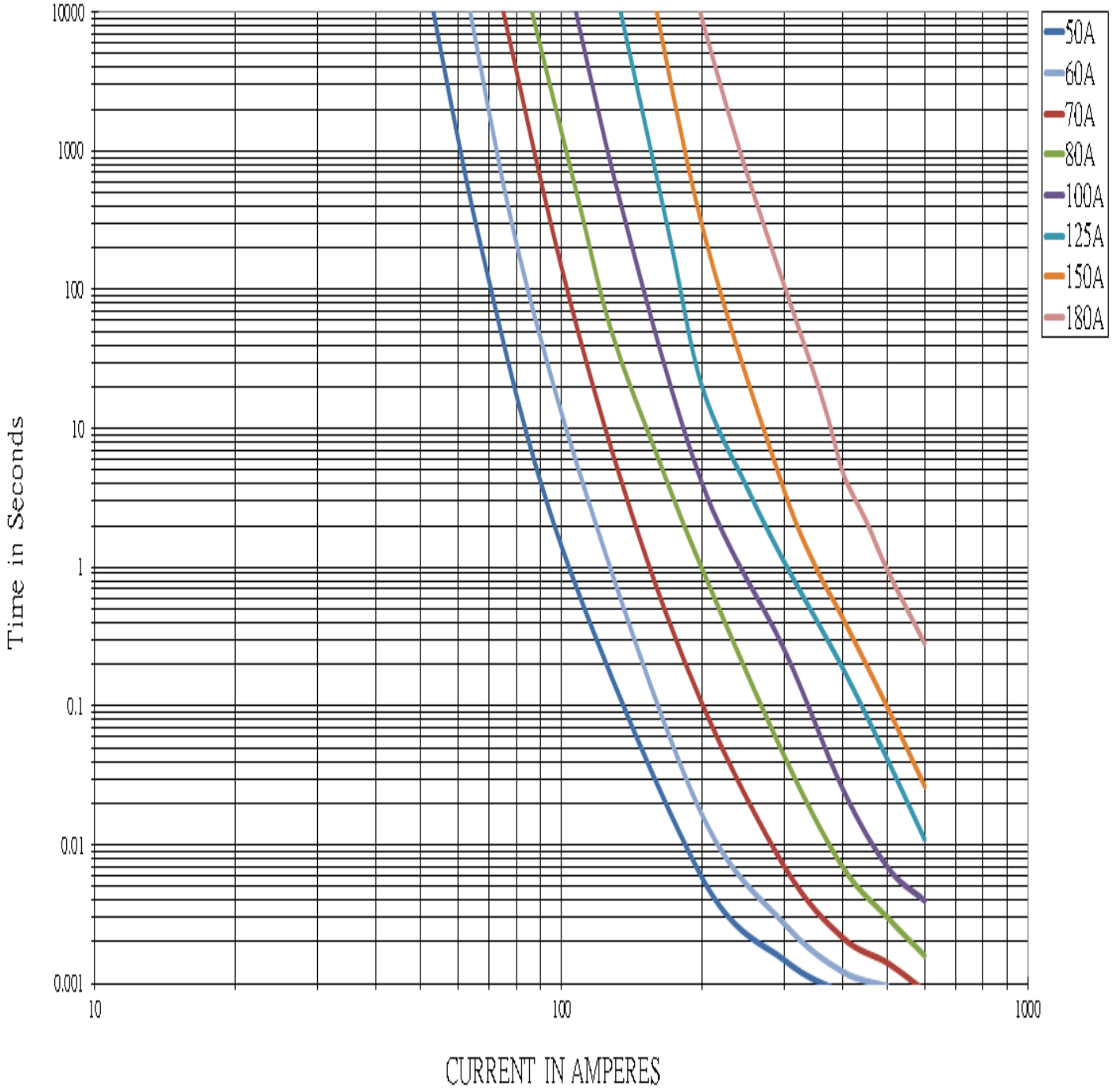
Average Melting IT Curves



MODEL	ENGINEER	DEPT.	APPROVE
BMC Series 240V	Ivan Huang	Jay Chiu	Arthur Tsai

Product Characteristics & Reliability Tests

Test item	Test Description & Reference
Humidity unload test	**MIL-STD-202G，Method 103B，Test Condition A** **Heat (40±0.5°C) & High Humidity (95±1% RH),** **240 hours , ΔR<15%**
Thermal shock test	**MIL-STD-202G, Method 107g，Test Condition B** **Temperature setup：25℃ ～ -65℃ ～ 25℃ ～ 125℃** **Time setup：-65℃(30min)～25℃(5min)～125℃(30min)~ 25℃(5min)** **5 cycles , ΔR<15%**
Vibration test	**MIL-STD-202G，Method 201A** **Frequency setup：10 ～ 55 ～ 10 Hz** **Time setup：1 Minutes/cycle (X-Y-Z,120 Cycles)** **6hrs, ΔR<15%**
Salt spray Test	**MIL-STD-202G，Method 101E，Test Condition A** **Salt spray concentration：5 ± 1%** **Test liquid temperature ：35 ± 0.5℃** **96hrs, ΔR<15%**