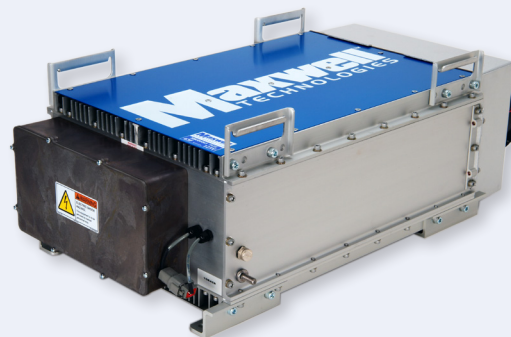


FEATURES AND BENEFITS*

- Up to 1,000,000 duty cycles or 10 year DC life
- 125V DC working voltage
- Active cell balancing
- Temperature and voltage monitoring
- CAN bus digital monitoring and communications
- High power density

TYPICAL APPLICATIONS

- Buses
- Electric trains and trolleys
- Heavy duty transportation
- Cranes, RTGS
- Utility vehicles
- Mining equipment



PRODUCT SPECIFICATIONS

ELECTRICAL

BMOD0063 P125 B08

Rated Capacitance ¹	63 F
Minimum Capacitance, initial ¹	63 F
Maximum Capacitance, initial ¹	76 F
Maximum ESR _{DC} , initial ¹	18 mΩ
Test Current for Capacitance and ESR _{DC} ¹	100 A
Rated Voltage	125 V
Absolute Maximum Voltage ²	136 V
Absolute Maximum Current	1900 A
Leakage Current at 25°C, maximum ³	10 mA
Maximum Series Voltage	1500 V
Capacitance of Individual Cells ¹¹	3000 F
Maximum Stored Energy, Individual Cell ¹¹	3.0 Wh
Number of Cells	48

TEMPERATURE

Operating temperature range (Cell case temperature)	
Minimum	-40°C
Maximum	65°C
Storage temperature range (Stored uncharged)	
Minimum	-40°C
Maximum	70°C

*Results may vary. Additional terms and conditions, including the limited warranty, apply at the time of purchase. See the warranty details and enclosed information for applicable operating and use requirements.

PRODUCT SPECIFICATIONS (Cont'd)

PHYSICAL

BMOD0063 P125 B08

Mass, typical ¹³	61 kg
Power Terminals	Radsok®
Recommended Torque - Terminal	N/A
Vibration Specification	ISO16750-3 Table 14
Shock Specification	SAE J2464
Environmental Protection	IP65
Cooling	Forced Air

MONITORING / CELL VOLTAGE MANAGEMENT

Temperature Interface	Serial Data (CAN)
Cell Voltage Monitoring	Group Voltage (CAN)
Connector	Deutsch DTM
Cell Voltage Management	VMS 2.0

POWER & ENERGY

Usable Specific Power, P_d ⁴	1,700 W/kg
Impedance Match Specific Power, P_{max} ⁵	3,600 W/kg
Specific Energy, E_{max} ⁶	2.3 Wh/kg
Stored Energy, E_{stored} ⁷	140 Wh

SAFETY

Short Circuit Current, typical (Current possible with short circuit from rated voltage. Do not use as an operating current.)	6,900 A
Certifications	RoHS, eMark
High-Pot Capability ¹²	4,000 VAC

TYPICAL CHARACTERISTICS

THERMAL CHARACTERISTICS

BMOD0063 P125 B08

Thermal Resistance (R_{ca} , Case to Ambient), typical⁸

0.04°C/W

Thermal Capacitance (C_{th}), typical

33,000 J/°C

Maximum Continuous Current ($\Delta T = 15^\circ\text{C}$)⁸140 A_{RMS}Maximum Continuous Current ($\Delta T = 40^\circ\text{C}$)⁸240 A_{RMS}

LIFE

DC Life at High Temperature¹

(at Rated Voltage & Maximum Operating Temperature)

1,500 hours

Capacitance Change

(% decrease from minimum initial value)

20%

ESR Change

(% increase from maximum initial value)

100%

Projected DC Life at 25°C¹

(held continuously at Rated Voltage)

10 years

Capacitance Change

(% decrease from minimum initial value)

20%

ESR Change

(% increase from maximum initial value)

100%

Projected Cycle Life at 25°C^{1,9,10}

1,000,000 cycles

Capacitance Change

(% decrease from minimum initial value)

20%

ESR Change

(% increase from maximum initial value)

100%

Test Current

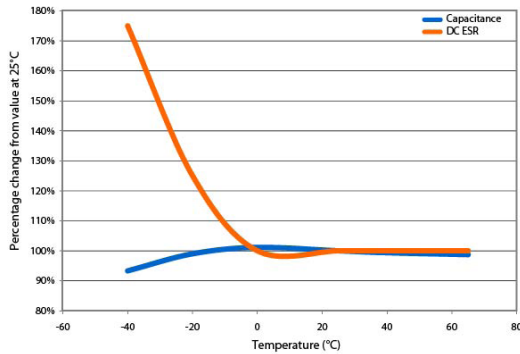
100 A

Shelf Life

(Stored uncharged at 25°C)

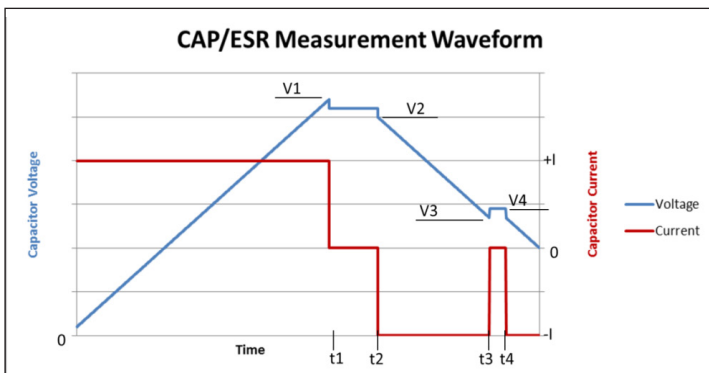
4 years

ESR AND CAPACITANCE VS TEMPERATURE



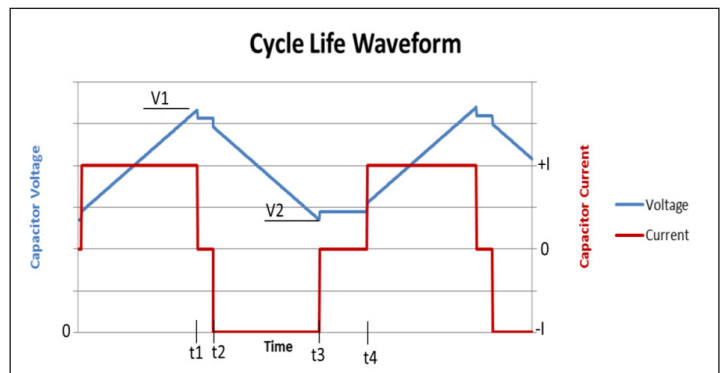
NOTES

- Capacitance and ESR_{DC} measured at 25°C using specified test current per waveform below.
- Absolute maximum voltage, non-repeated. Not to exceed 1 second.
- After 72 hours at rated voltage. Initial leakage current can be higher.
- Per IEC 62391-2, $P_d = \frac{0.12V^2}{ESR_{DC} \times \text{mass}}$
- $P_{max} = \frac{V^2}{4 \times ESR_{DC} \times \text{mass}}$
- $E_{max} = \frac{\frac{1}{2} CV^2}{3,600 \times \text{mass}}$
- $E_{stored} = \frac{\frac{1}{2} CV^2}{3,600}$
- $\Delta T = I_{RMS}^2 \times ESR \times R_{ca}$
- Cycle using specified test current per waveform below.
- Cycle life varies depending upon application-specific characteristics. Actual results will vary.
- Per United Nations material classification UN3499, all Maxwell ultracapacitors have less than 10 Wh capacity to meet the requirements of Special Provisions 361. Both individual ultracapacitors and modules composed of those ultracapacitors shipped by Maxwell can be transported without being treated as dangerous goods (hazardous materials) under transportation regulations.
- Duration = 60 seconds. Not intended as an operating parameter.
- Without fan. With fan, mass is 63.4 kg.



$$V1 = V_{rated} \quad t2 - t1 = 15 \text{ seconds} \quad \text{Capacitance} = I \times (t3 - t2) / (V2 - V3)$$

$$V3 = 0.5 \times V_{rated} \quad t4 - t3 = 5 \text{ seconds} \quad ESR = (V4 - V3) / I$$



$$V1 = V_{rated} \quad t2 - t1 = 5 \text{ seconds (I=0)}$$

$$V2 = 0.5 \times V_{rated} \quad t4 - t3 = 15 \text{ seconds (I=0)}$$

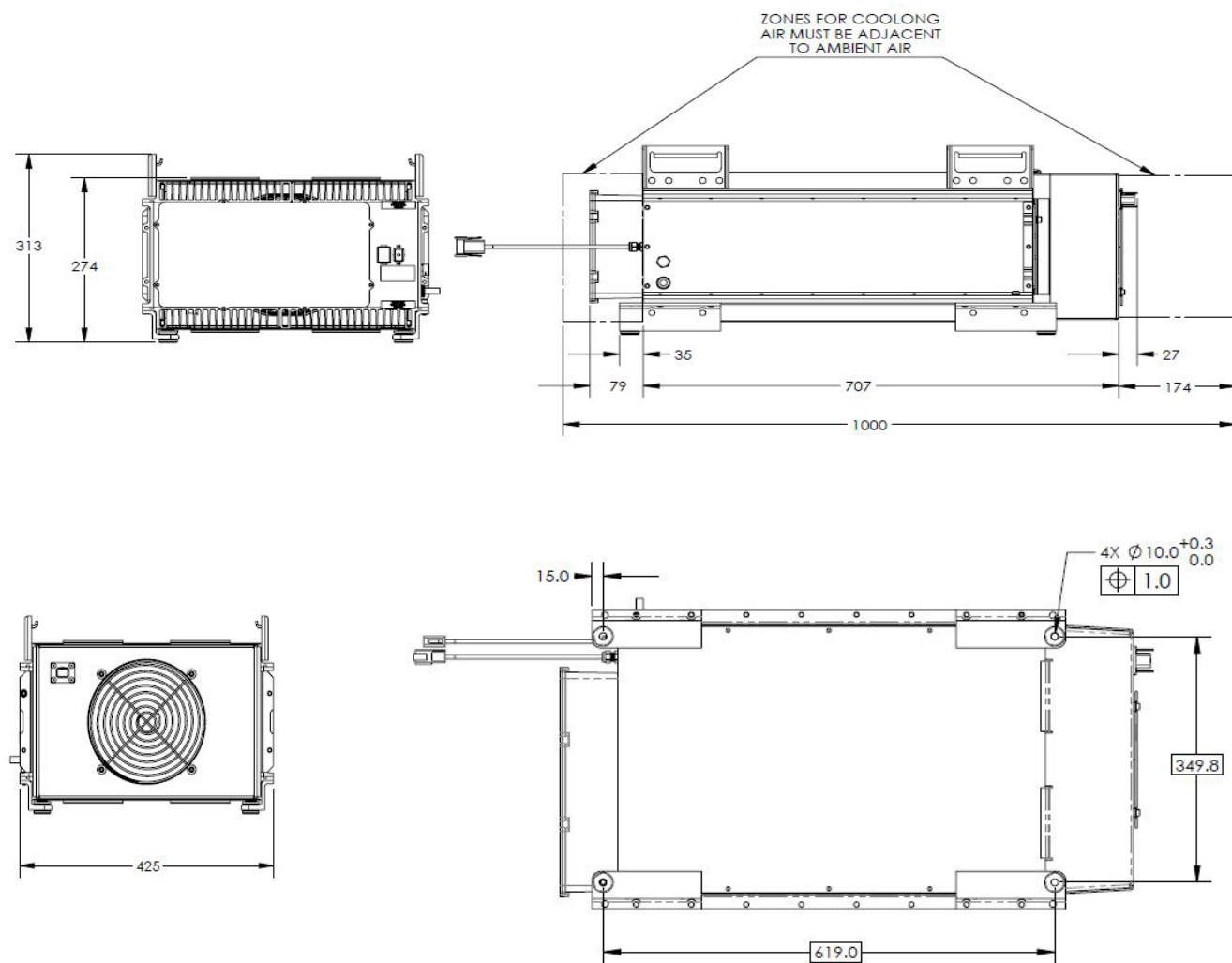
MOUNTING RECOMMENDATIONS

Please refer to the user manual for installation recommendations.

BCAP0063 P125 B08

MARKINGS

Products are marked with the following information: Rated capacitance, rated voltage, product number, name of manufacturer, positive and negative terminal, warning marking, serial number.



Part Description	Dimensions (mm)		H(±0.7mm)	Package Quantity
	L (± 0.5mm)	D (± 0.2mm)		
BCAP0063 P125 B08*	619	33.3	265	1

*Refer to user manual for product variant details

ORDERING INFORMATION

Base Module

109024B BMOD0063 P125 B08 63F/125V eMark Module with CAN Communication

Power Connection Kit

109131 Power Connection Kit, 90 DEG
109132 Power Connection Kit, STRAIGHT

Communication Kit

109133 CAN SIGNAL, Deutsch

Fan Kit

129036 FAN KIT, 24V, eMark

Product dimensions are for reference only unless otherwise identified. Product dimensions and specifications may change without notice.

Please contact Maxwell Technologies directly for any technical specifications critical to application. All products featured on this datasheet are covered by the following U.S. patents and their respective foreign counterparts: 6643119, 7295423, 7342770, 7352558, 7384433, 7440258, 7492571, 7508651, 7791860, 7791861, 7816891, 7859826, 7883553, 7935155, 8072734, 8098481, 8279580, and patents pending.



Maxwell Technologies, Inc.

Global Headquarters

3888 Calle Fortunada
San Diego, CA 92123
USA
Tel: +1 858 503 3300
Fax: +1 858 503 3301



Maxwell Technologies SA

Route de Montena 65
CH-1728 Rossens
Switzerland
Tel: +41 (0)26 411 85 00
Fax: +41 (0)26 411 85 05



Maxwell Technologies, GmbH

Leopoldstrasse 244
80807 München
Germany
Tel: +49 (0)89 / 4161403 0
Fax: +49 (0)89 / 4161403 99

Maxwell Technologies
Shanghai Trading Co. Ltd.

Unit A2,C 12th Floor
Huarun Times Square
500 Zhangyang Road,
Pudong New Area
Shanghai 200122,
P.R. China
Phone: +86 21 3852 4000
Fax: +86 21 3852 4099



Maxwell Technologies Korea Co., Ltd.

Room 1524, D-Cube City
Office Tower, 15F #662
Gyeongin-Ro, Guro-Gu,
Seoul, 152-706
South Korea
Phone: +82 10 4518 9829

MAXWELL TECHNOLOGIES, MAXWELL, MAXWELL CERTIFIED INTEGRATOR, ENABLING ENERGY'S FUTURE, BOOSTCAP, C CELL, D CELL and their respective designs and/or logos are either trademarks or registered trademarks of Maxwell Technologies, Inc. and may not be copied, imitated or used, in whole or in part, without the prior written permission Maxwell Technologies, Inc. All contents copyright © 2013 Maxwell Technologies, Inc. All rights reserved. No portion of these materials may be reproduced in any form, or by any means, without prior written permission from Maxwell Technologies, Inc.



Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

Телефон: 8 (812) 309 58 32 (многоканальный)

Факс: 8 (812) 320-02-42

Электронная почта: org@eplast1.ru

Адрес: 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.