

FEATURES AND BENEFITS*

- Up to 14 year DC life
- 56V DC working voltage
- Resistive cell balancing
- Overvoltage outputs
- High power density
- 4U, half-rack package
- UL registered

TYPICAL APPLICATIONS

- UPS systems

**PRODUCT SPECIFICATIONS****ELECTRICAL****BMOD0130 P056 B03**

Rated Capacitance ¹	130 F
Minimum Capacitance, initial ¹	130 F
Maximum Capacitance, initial ¹	156 F
Maximum ESR _{DC} , initial ¹	8.1 mΩ
Test Current for Capacitance and ESR _{DC} ¹	100 A
Rated Voltage	56 V
Absolute Maximum Voltage ²	62 V
Absolute Maximum Current	1,900 A
Leakage Current at 25°C, maximum ³	120 mA
Maximum Series Voltage	750 V
Capacitance of Individual Cells ⁹	3,000 F
Stored Energy, Individual Cell ⁹	3.0 Wh
Number of Cells	23

TEMPERATURE

Operating Temperature (Cell case temperature)	
Minimum	-40°C
Maximum	40°C
Storage Temperature (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

BMOD0130 P056 B03

Mass, typical	18 kg
Power Terminals	M8/M10
Recommended Torque - Terminal	20/30 Nm
Vibration Specification	Telcordia GR-63-CORE Zone 4
Shock Specification	N/A
Environmental Protection	IP30
Cooling	Natural Convection

MONITORING / CELL VOLTAGE MANAGEMENT

Internal Temperature Sensor	N/A
Temperature Interface	N/A
Cell Voltage Monitoring	Overvoltage Alarm
Connector	Deutsch DTM
Cell Voltage Management	Passive

POWER & ENERGY

Usable Specific Power, P_d^4	2,600 W/kg
Impedance Match Specific Power, P_{max}^5	5,400 W/kg
Specific Energy, E_{max}^6	3.1 Wh/kg
Stored Energy ⁷	57 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, UL810a (750 V)
High-Pot Capability ¹⁰	4,000 V DC

TYPICAL CHARACTERISTICS

THERMAL CHARACTERISTICS

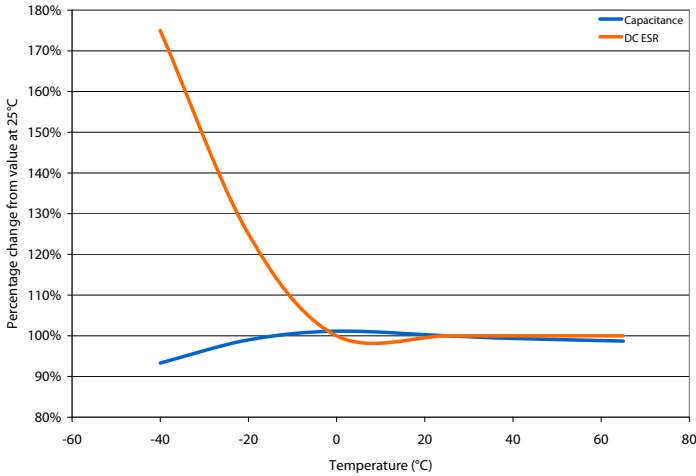
BMOD0130 P056 B03

Thermal Resistance (R_{ca} , All Cell Cases to Ambient), typical ⁸	0.50°C/W
Thermal Capacitance (C_{th}), typical	16,000 J/°C
Maximum Continuous Current ($\Delta T = 15^\circ\text{C}$) ⁸	61 A, RMS
Maximum Continuous Current ($\Delta T = 40^\circ\text{C}$) ⁸	99 A, RMS

LIFE

DC Life at High Temperature ¹ (held continuously at Rated Voltage & Maximum Operating Temperature)	8 years
Capacitance Change (% decrease from minimum initial value)	20%
ESR Change (% increase from maximum initial value)	100%
Projected DC Life at 25°C ¹ (held continuously at Rated Voltage)	14 years
Capacitance Change (% decrease from minimum initial value)	20%
ESR Change (% increase from maximum initial value)	100%
Shelf Life (Stored uncharged at 25°C)	4 years

ESR AND CAPACITANCE VS TEMPERATURE



NOTES

1. Capacitance and ESR_{DC} measured at 25°C using specified test current per waveform below.
2. Absolute maximum voltage, non-repeated. Not to exceed 1 second.
3. After 72 hours at rated voltage. Initial leakage current can be higher.

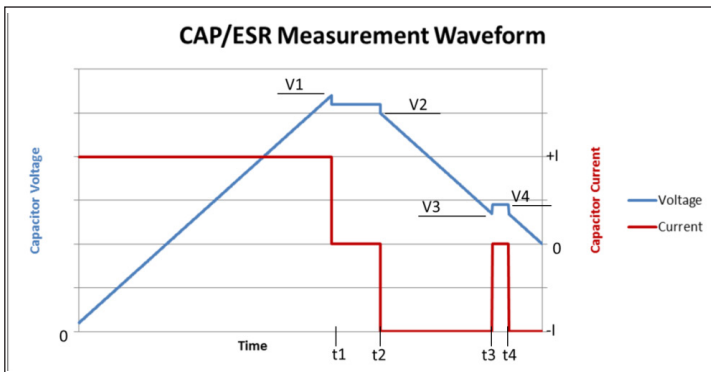
4. Per IEC 62391-2, $P_d = \frac{0.12V^2}{ESR_{DC} \times mass}$

5. $P_{max} = \frac{V^2}{4 \times ESR_{DC} \times mass}$

6. $E_{max} = \frac{1/2 CV^2}{3,600 \times mass}$

7. $E_{stored} = \frac{1/2 CV^2}{3,600}$

8. $\Delta T = I_{RMS}^2 \times ESR \times R_{ca}$
9. 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.
10. Duration = 60 seconds. Not intended as an operating parameter.



$V1 = V_{rated}$ $t2 - t1 = 15 \text{ seconds}$ $Capacitance = I \times (t3 - t2) / (V2 - V3)$
 $V3 = 0.5 \times V_{rated}$ $t4 - t3 = 5 \text{ seconds}$ $ESR = (V4 - V3) / I$

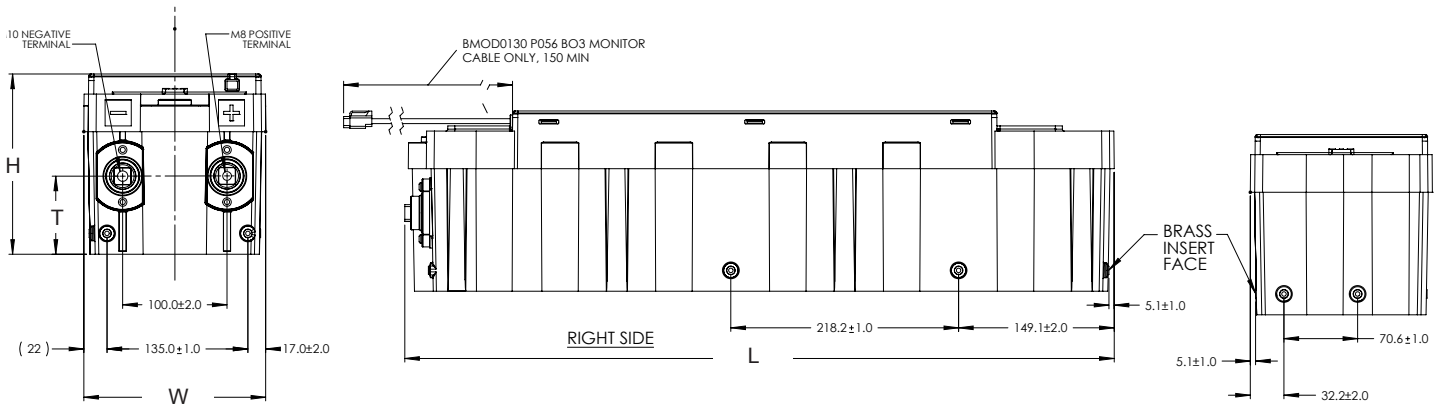
MOUNTING RECOMMENDATIONS

Please refer to the user manual for installation recommendations.

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.

BMOD0130 P056 B03



Part Description	Dimensions (mm)				Package Quantity
	L (max)	W (max)	H (max)	T (±2mm)	
BMOD0130 P056 B03	683	177	175	74.9	1

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, 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, 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 from 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.



X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [Supercapacitors](#) / [Ultracapacitors](#) category:

Click to view products by [Maxwell](#) manufacturer:

Other Similar products are found below :

[C-TEC1225 P](#) [LX055105A](#) [SCCY73B407SLBLE](#) [CDCL3000C0-002R85STB](#) [MDCM0058C0-0016R0TBZ](#) [FE0H473ZF](#) [MAL223551012E3](#)
[MAL223551014E3](#) [MAL223551015E3](#) [MAL223551016E3](#) [MAL223551006E3](#) [MAL223551007E3](#) [MAL223551001E3](#) [MAL223551008E3](#)
[MAL219612474E3](#) [MAL219632473E3](#) [DRE10/2.5](#) [DRL106S0TI25RRDAP](#) [DRL226S0TK25RR](#) [106DCN2R7M](#) [SCCT30B156SRB](#)
[SCMR14C474MSBA0](#) [SCMR22C155MSBA0](#) [FT0H225ZF](#) [GW209F](#) [TV1020-3R0605-R](#) [SCCX50B207VSB](#) [PAS0815LS2R5105](#)
[HVZ0E475NF](#) [SCMR18F105PSBA0](#) [FT0H565ZF](#) [FE0H224ZF](#) [FCS0H473ZFTBR24](#) [SCCT30E156SRB](#) [MAL222090006E3](#)
[SCCY68B407SSBLE](#) [CPH3225A-2K](#) [SCMT22C505PRBA0](#) [207DCN2R7M](#) [DB5U307W35050HA](#) [DB5U407W35060HA](#) [DGH505Q5R5](#)
[DGH505Q2R7](#) [DGH705Q2R7](#) [DGH506Q2R7](#) [DGH357Q2R7](#) [DGH335Q2R7](#) [DGH256Q2R7](#) [DGH255Q5R5](#) [DGH207Q2R7](#)