DATASHEET 125V HEAVY TRANSPORTATION MODULE

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.

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PRODUCT SPECIFICATIONS (Cont'd)

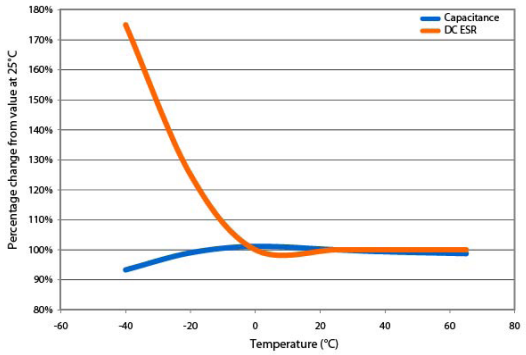
PHYSICAL	BMOD0063 P125 B08
Mass, typical[13]	61 kg
Power Terminals	Radsok®
Recommended Torque - Terminal	N/A
Vibration Specification	ISO16750-3 Table 14
Shock Specification	SAE J2464
Environmental Protection	IP65
Cooling	Forced Air
MONITORING / CELL VOLTAGE MANAGEMENT	
Temperature Interface	Serial Data (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), typical[8]	0.04°C/W
Thermal Capacitance (C_{th}), typical	33,000 J/°C
Maximum Continuous Current (ΔT = 15°C)[8]	140 A_{RMS}
Maximum Continuous Current (ΔT = 40°C)[8]	240 A_{RMS}

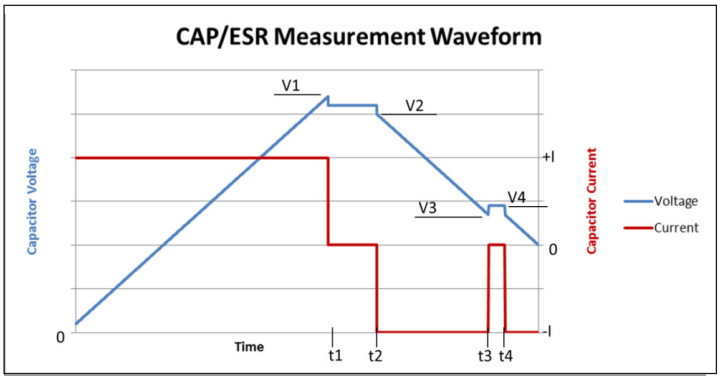
LIFE	
DC Life at High Temperature[1] (at Rated Voltage & Maximum Operating Temperature)	1,500 hours
Capacitance Change (% decrease from minimum initial value)	20%
ESR Change (% increase from maximum initial value)	100%
Projected DC Life at 25°C [1] (held continuously at Rated Voltage)	10 years
Capacitance 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

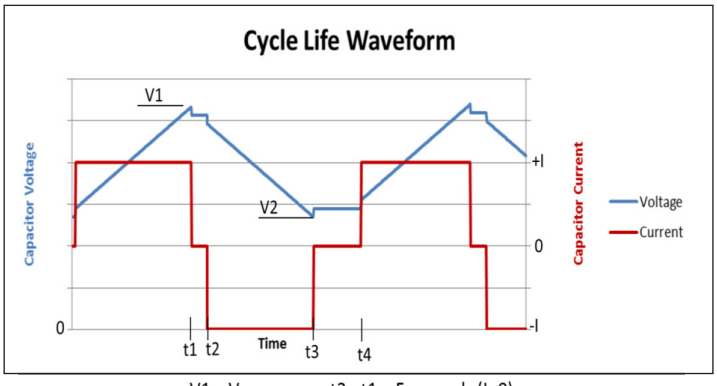


NOTES

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. $E_{max} = \frac{½\ CV^2}{3{,}600 \times mass}$
7. $E_{stored} = \frac{½\ CV^2}{3{,}600}$
8. $\Delta T = I_{RMS}^2 \times ESR \times R_{ca}$
9. Cycle using specified test current per waveform below.
10. Cycle life varies depending upon application-specific characteristics. Actual results will vary.
11. 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.
12. Duration = 60 seconds. Not intended as an operating parameter.
13. Without fan. With fan, mass is 63.4 kg.



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



$V1 = V_{rated}$ t2 - t1 = 5 seconds (I=0)
$V2 = 0.5 \times V_{rated}$ t4 - t3 = 15 seconds (I=0)

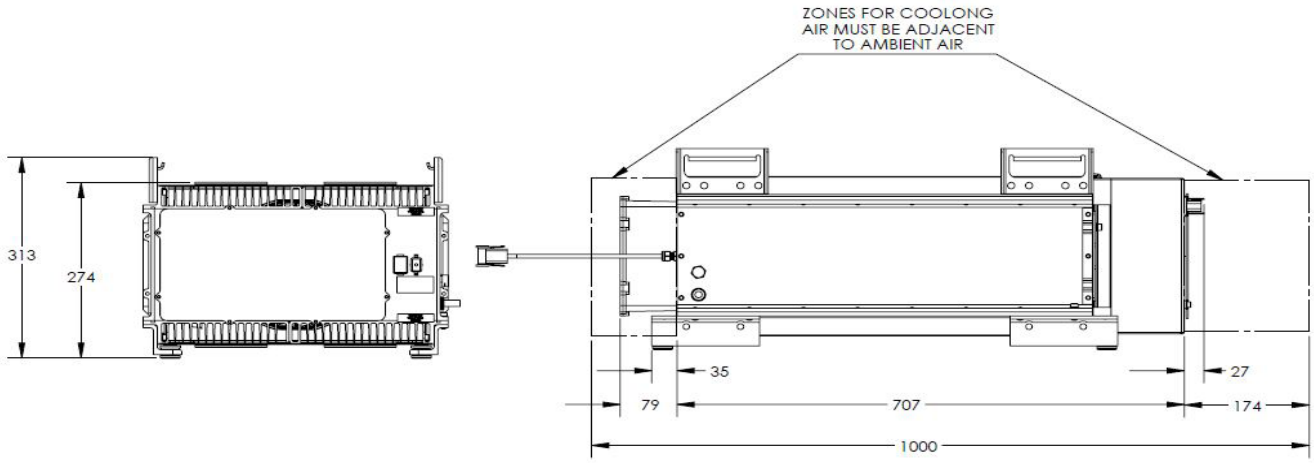
MOUNTING RECOMMENDATIONS

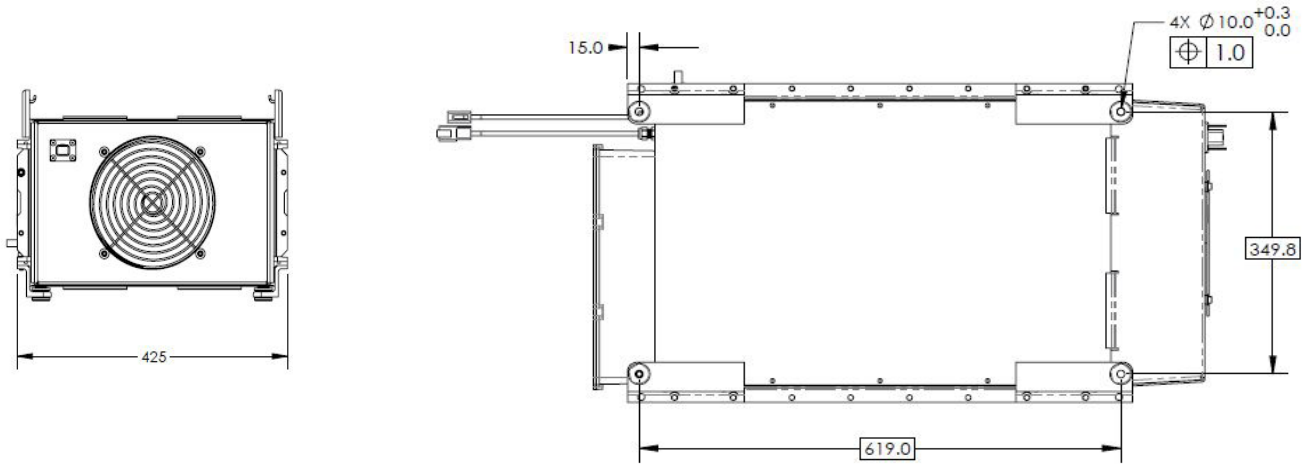
Please refer to the user manual for installation recommendations.

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.

BCAP0063 P125 B08





Part Description	Dimensions (mm) L (± 0.5mm)	D (± 0.2mm)	H(±0.7mm)	Package Quantity
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.

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单击下面可查看定价，库存，交付和生命周期等信息

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