

BCAP0650 P270
BCAP1200 P270
BCAP1500 P270
BCAP2000 P270
BCAP3000 P270



PRODUCT SPECIFICATIONS

| CAPACITANCE | BCAP0650 | BCAP1200 | BCAP1500 | BCAP2000 | BCAP3000 |
|--|----------------|-------------|-------------|-------------|-------------|
| Nominal capacitance | 650 F | 1,200 F | 1,500 F | 2,000 F | 3,000 F |
| Tolerance capacitance | +20% / -0% | | | | |
| VOLTAGE | | | | | |
| Rated voltage | 2.7 V | | | | |
| Surge voltage | 2.8 V | | | | |
| Maximum operating voltage | N/A | | | | |
| Isolation voltage | N/A | | | | |
| RESISTANCE | | | | | |
| ESR, DC | 0.8 mΩ | 0.58 mΩ | 0.47 mΩ | 0.35 mΩ | 0.29 mΩ |
| Resistance tolerance | Max. | | | | |
| Thermal resistance (Rth) | 6.5°C/W | 5.3°C/W | 4.5°C/W | 3.8°C/W | 3.2°C/W |
| TEMPERATURE | | | | | |
| Operating temperature range | -40°C to +65°C | | | | |
| Max. ambient operating temp. | | | | | |
| Storage temperature range | -40°C to +70°C | | | | |
| TEMPERATURE CHARACTERISTICS¹ | | | | | |
| Capacitance change | ± 5% at 25°C | | | | |
| Internal resistance change | 150% at 25°C | | | | |
| POWER | | | | | |
| Pd | 5,400 W/kg | 5,000 W/kg | 5,800 W/kg | 6,200 W/kg | 5,400 W/kg |
| Pmax | 15,100 W/kg | 13,800 W/kg | 16,200 W/kg | 17,500 W/kg | 13,800 W/kg |
| ENERGY | | | | | |
| E _{max} | 3.29 Wh/kg | 4.05 Wh/kg | 4.75 Wh/kg | 5.06 Wh/kg | 5.52 Wh/kg |
| LIFESPAN | | | | | |
| Endurance² | | | | | |
| Capacitance change | 20% | | | | |
| Internal resistance change | 60% | | | | |
| Life test³ | | | | | |
| Capacitance change | 30% | | | | |
| Internal resistance | 150% | | | | |
| CYCLES | | | | | |
| Capacitance change ⁴ | 30% | | | | |
| Internal resistance ⁴ | 150% | | | | |

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PRODUCT SPECIFICATIONS (cont.)

| CURRENT | BCAP0650 | BCAP1200 | BCAP1500 | BCAP2000 | BCAP3000 |
|--|----------------------|----------|----------|----------|----------|
| Leakage current ⁵ | 1.5 mA | 2.7 mA | 3.0 mA | 4.2 mA | 5.2 mA |
| Short circuit current (Isc) ⁶ | 3,500 A | 3,750 A | 3,900 A | 4,300 A | 4,800 A |
| Maximum continuous current | 105 A | 110 A | 115 A | 125 A | 150 A |
| Maximum peak current, 1 sec | 875 A | 1,600 A | 2,000 A | 2,700 A | 4,000 A |
| CONNECTION | | | | | |
| Terminal | Threaded or Weldable | | | | |
| MONITORING (IN-BUILT) | | | | | |
| Balancing | N/A | | | | |
| Fan voltage | N/A | | | | |
| Thermal monitoring | N/A | | | | |
| SIZE | | | | | |
| Dimensions (L x W x H) (mm) | See drawings | | | | |
| Weight | 0.2kg | 0.3kg | 0.32kg | 0.4kg | 0.55kg |
| RATINGS | | | | | |
| Vibration resistance | SAE J2380 | | | | |

¹ Within ± % of initial measured value at #°C.
² After 1,500 hours application of rated voltage at 65°C. Within % of initial specified value.
³ After 10 years at rated voltage and 25°C. Within % of initial specified value.
⁴ Within % of initial specified value.
⁵ After 72 hours at 25°C. Initial leakage current can be higher.
⁶ **CAUTION:** C current possible with short circuit from UR. Do not use as an operating current.

MOUNTING RECOMMENDATIONS

Do not reverse polarity.
 Maximum torque for M12 screw terminals is 10Nm.
 Cells are designed to be connected into series or parallel strings.
 Clean terminals before mounting.

MARKINGS

Capacitors are marked with the following information - Rated capacitance and rated voltage as well as energy/ power type indication in the product naming. Serial number, name of manufacturer, positive and negative terminal, warning marking.

FEATURES AND BENEFITS

- Ultra-low internal resistance
- Highest power performance available
- Lowest RC time constant
- 2.7 V operating voltage
- Over 1,000,000 duty cycles
- Proprietary material science and packaging technology
- Threded terminal or weldable post versions

APPLICATIONS

- Automotive subsystems
- Hybrid drive trains
- Rail system power
- Transportation
- Utility vehicles

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BCAP1200 P270

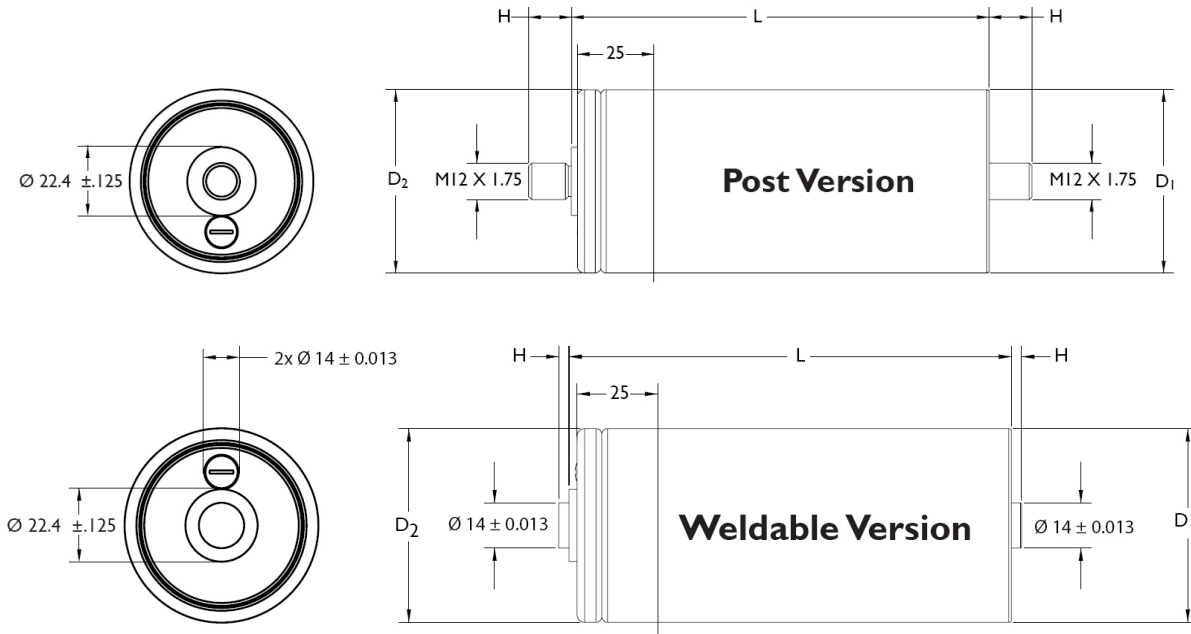
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DIMENSIONS (mm)



| Part Number | Volume | L (±0.3mm) | H (±0.5mm) | D ₁ (±0.2mm) | D ₂ (±0.7mm) |
|-------------------|---------|------------------|------------|-------------------------|-------------------------|
| BCAP0650 P270 T04 | 0.211 L | 51.5 mm (±0.5mm) | 14mm | 60.4mm | 60.7mm |
| BCAP0650 P270 T05 | 0.15 L | 51.5 mm (±0.5mm) | 3.18 mm | 60.4mm | 60.7mm |
| BCAP1200 P270 T04 | 0.294 L | 74 mm | 14mm | 60.4mm | 60.7mm |
| BCAP1200 P270 T05 | 0.233 L | 74 mm | 3.18 mm | 60.4mm | 60.7mm |
| BCAP1500 P270 T04 | 0.325 L | 85 mm | 14mm | 60.4mm | 60.7mm |
| BCAP1500 P270 T05 | 0.264 L | 85 mm | 3.18 mm | 60.4mm | 60.7mm |
| BCAP2000 P270 T04 | 0.373 L | 102 mm | 14mm | 60.4mm | 60.7mm |
| BCAP2000 P270 T05 | 0.312 L | 102 mm | 3.18 mm | 60.4mm | 60.7mm |
| BCAP3000 P270 T04 | 0.475 L | 138 mm | 14mm | 60.4mm | 60.7mm |
| BCAP3000 P270 T05 | 0.141 L | 138 mm | 3.18 mm | 60.4mm | 60.7mm |

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.

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