

SM0062-017-NB-1



APPLICATIONS

- Wind Turbine Pitch Control System
- UPS system
- Industrial Peak Load Shaving
- Small Engine Start
- AGV



FEATURES & ADVANTAGES

- One Million Cycle Life
- Wide Operating Temperature
Range: -40°C to +65°C
- High Power Density
- Compact Size, Light Weight

Specifications

| | | |
|----------------|---|----------|
| Capacitance | Nominal Capacitance ¹ | 62F |
| | Tolerance | 0%~+20% |
| Voltage | Nominal Voltage | 17V DC |
| | Recommended Operating Voltage | 16V DC |
| | Maximum Voltage ² | 18.6V DC |
| ESR | ESR(DC)-Maximum Initial | 22mΩ |
| Current | Maximum Leakage ³ | 0.7mA |
| | Maximum Peak | 200A |
| | Maximum Continuous Current (ΔT=15°C) ⁴ | 19A |
| | Maximum Continuous Current (ΔT=40°C) ⁴ | 34A |
| Energy Storage | Maximum Stored Energy ⁵ | 2.5Wh |
| | Gravimetric Specific Energy ⁶ | 3.8Wh/kg |
| Power Density | Impedance Match Specific Power ⁷ | 5052W/kg |
| | Usable Specific Power ⁸ | 2425W/kg |

Temperature

| | | |
|-----------------------------|-----------------------------|----------------|
| Temperature Characteristics | Operating Temperature Range | -40°C to +65°C |
| | Storage Temperature Range | -40°C to +70°C |

Monitoring and Control

| | | |
|------------------------|------------------------------|--------------|
| Monitoring and Control | Capacitor Voltage Management | No Balancing |
|------------------------|------------------------------|--------------|

Safety

| | | |
|--------|----------------------------------|--------|
| Safety | Short Circuit Current | 770A |
| | 1000V DC Insulation Resistance | ≥200MΩ |
| | 2500V DC Leakage Current | ≤10mA |
| | Environmental Ingress Protection | IP20 |

Service Lifetime

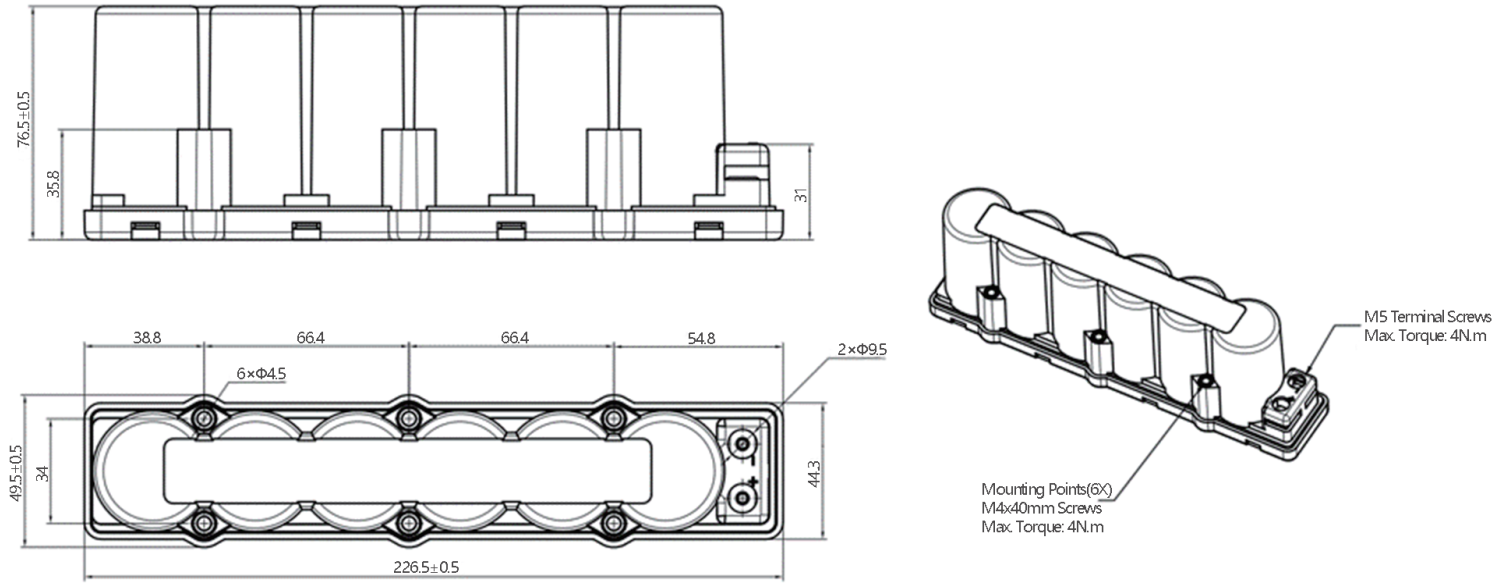
| | | |
|--------------|---|------------------|
| Endurance | Product held at rated voltage in 65°C environment for 1500 hours | |
| | Change in capacitance (% drop from nominal) | ≤20% |
| | Change in ESR (% increase from maximum initial) | ≤100% |
| DC Life | Product held at rated voltage in 25°C environment | |
| | Life (projected) | 10 Years |
| | Change in capacitance (% drop from nominal) | ≤20% |
| | Change in ESR (% increase from maximum initial) | ≤100% |
| Cycle Life | Cycling from rated to 50% rated voltage under constant current in 25°C environment | |
| | Cycle life (projected) | 1,000,000 Cycles |
| | Change in capacitance (% drop from nominal) | ≤20% |
| | Change in ESR (% increase from maximum initial) | ≤100% |
| Storage Life | Stored uncharged in original packaging in 25°C environment | |
| | Life | 4 Years |

Physical Characteristics

| | | |
|----------------------------|--------------------------|-----------------------------------|
| Mechanical Characteristics | Operation Vibration | GB/T 11287-2000 IEC 255-21-1 |
| | Transportation Vibration | GB/T 4798.2-2008 IEC 60721-3-2 |
| | Shock | GB/T 14537-1993 IEC 255-21-2 |



Outline Drawing:



Weight and Size

Weight: ≤0.65kg | Size : 226.5±0.5mm*49.5±0.5mm*76.5±0.5mm (L*D*H)

Naming Rules:

| Product Series | | Rated Capacitance | -- | Rated Voltage | -- | CMS-Capacitor Management/Monitoring |
|----------------|-----------------------|-------------------|----|---------------|----|-------------------------------------|
| SM | Supercapacitor Module | 0062=62F | -- | 017=17V | -- | NB=No balancing |

Notes:

1. Measure capacitance and DC internal resistance at 25°C under specified test current per Figure 1.

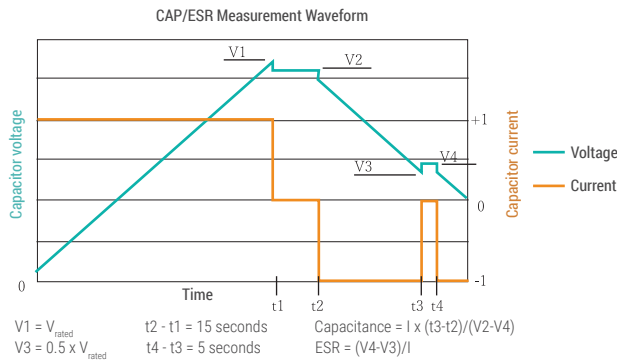


Figure 1

2. Surge voltage is non-repeatable and duration cannot exceed 1s.

3. Corresponding current value after 72 hours of rated voltage at 25°C.

$$4. \Delta T = I_{rms}^2 \times ESR \times R_{ca}$$

$$5. E_{stored} = 0.5 C V_{nom}^2 / 3600$$

$$6. E_{max} = E_{stored} / \text{weight(kg)}$$

$$7. P_{max} = \frac{0.25V^2}{ESR_{DC} \times \text{weight(kg)}}$$

$$8. P_d = \frac{0.12V^2}{ESR_{DC} \times \text{weight(kg)}}$$

9. Hold at -40°C for 16 hours, then measure capacitance and ESR. Increase temperature by 10°C, hold for hours, then measure capacitance and ESR. Continue the same process at 10°C intervals until temperature reaches 65°C.

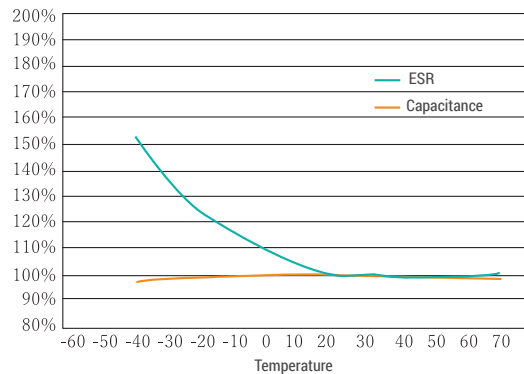


Figure 2

Specifications are subject to change without notice.

