

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
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Safety

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

Service Lifetime

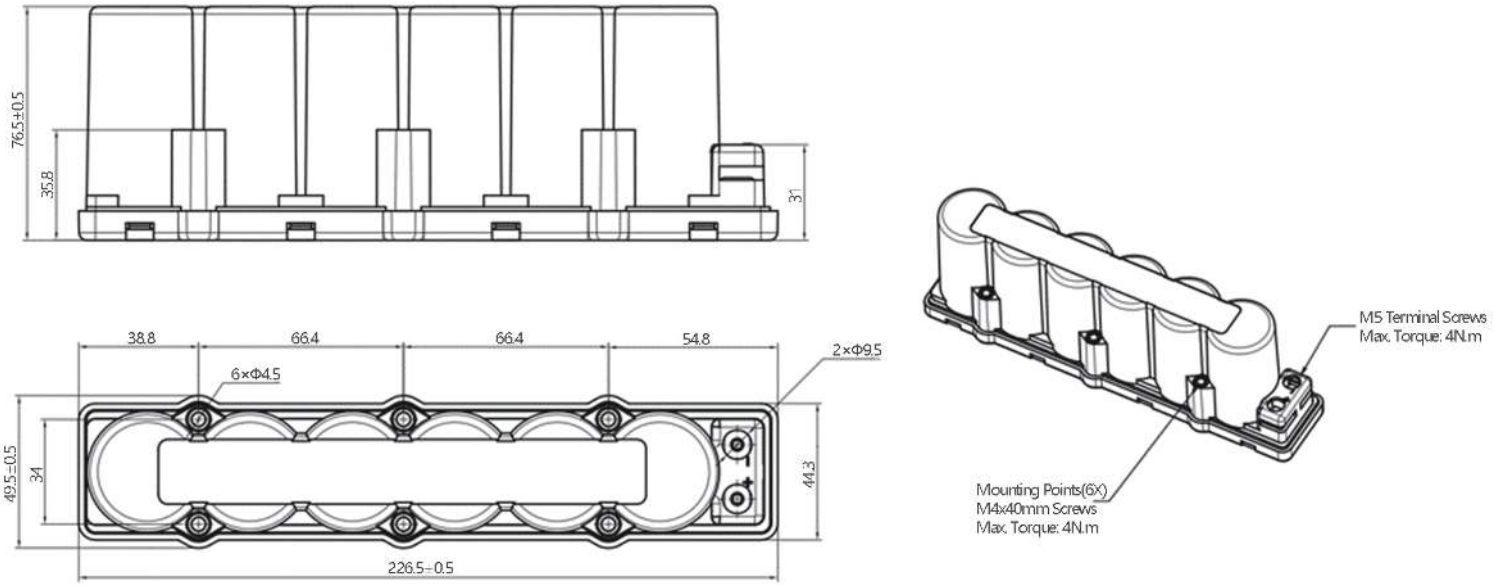
Endurance	Product held at rated voltage in 65°C environment for 1500 hours	
	Change in capacitance (% drop from nominal)	≤20%
	Change in ESR (% increase from maximum initial)	≤100%
DC Life	Product held at rated voltage in 25°C environment	
	Life (projected)	10 Years
	Change in capacitance (% drop from 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.

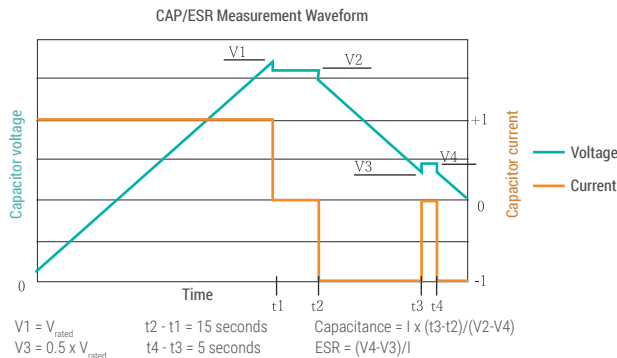


Figure 1

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

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

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

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

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

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

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

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.

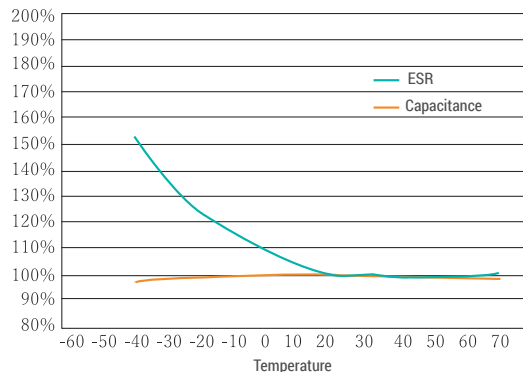


Figure 2

Specifications are subject to change without notice.

