

SC3000-300-ASC



APPLICATIONS

- Wind Turbine Pitch Control
- Industrial Backup Power
- Electric Power Tools
- Renewable Energy Systems
- Energy Harvesting
- AGV
- DVR
- ESS
- Start-Up Power Supply
- Special Equipment



FEATURES & ADVANTAGES

- One Million Cycle Life+
- Ultra Low Temperature Characteristics
- Ultra High Power Density
- Ultra Low Internal Resistance
- 10-15 Years of Life



Specifications

Capacitance	Rated ¹	3000F
	Tolerance	-0/+20%
Voltage	Rated	3.0V DC
	Surge ²	3.1V DC
ESR	ESR (DC) - Maximum Initial	0.29mΩ
Current	Maximum Leakage ³	6.0mA
	Maximum Peak (1s)	2400A
	Maximum Continuous Current (ΔT=15°C) ⁴	130A RMS
	Maximum Continuous Current (ΔT=40°C) ⁴	210A RMS
Energy	Maximum Energy ⁵	3.75Wh
	Usable Energy ⁶	2.81Wh
	Volumetric Energy Density ⁷	9.30Wh/L
	Gravimetric Energy Density ⁸	7.21Wh/kg
Power Density	Usable Power Density ⁹	7100W/kg
	Impedance Match Power Density ¹⁰	14900W/kg

Temperature

Temperature Characteristics	Operating Temperature Range	-40°C to +65°C (+70°C at 2.5V)
	Storage Temperature Range	-40°C to +70°C

Standards, Safety & Environmental

Safety	Short Circuit Current	10300A
	<ul style="list-style-type: none"> • This product may vent or rupture if overcharged, reversed charged, incinerated or heated above 100°C. • Do not crush, mutilate, or disassemble. • Do not dispose of unit in trash. 	

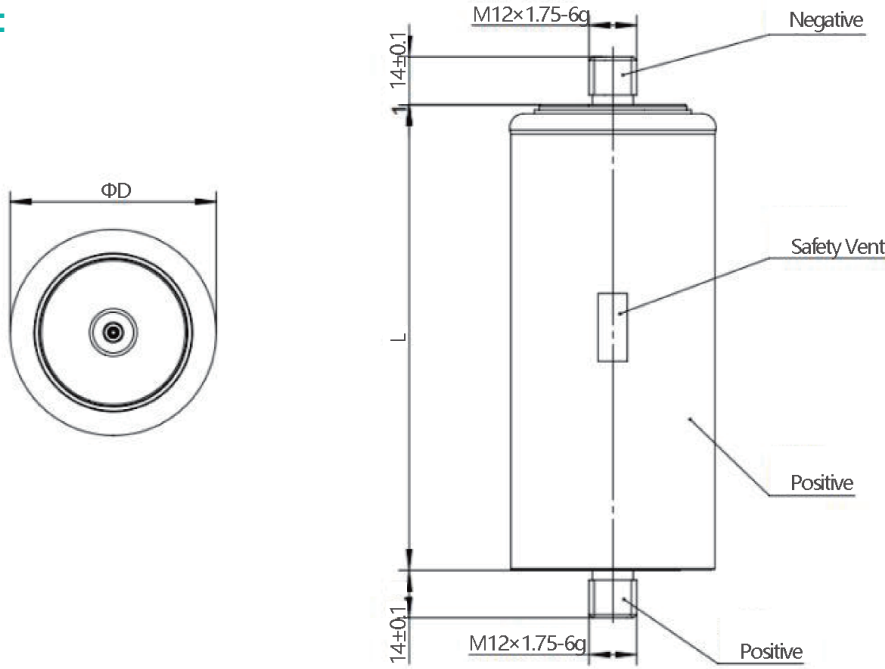
Service Lifetime

Endurance	Product held at rated voltage in 65°C environment for 1500 hours	
	Change in capacitance (% drop from rated)	≤20%
	Change in ESR (% increase from maximum initial)	≤100%
DC Life	Product held at rated voltage in 25°C environment	
	Projected life	10+ Years
	Change in capacitance (% drop from rated)	≤20%
	Change in ESR (% increase from maximum initial)	≤100%
Cycle Life	Cycling from rated voltage to 50% voltage under constant current in 25°C environment	
	Projected life	1,000,000 Cycles
	Change in capacitance (% drop from rated)	≤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	Operation Vibration	IEC60068-2-6, SAE J2380
	Impact	IEC60068-2-27, SAE J2464

Outline Drawings: (For Reference)



Weight and Size

Weight: ≤520.0g | Size : L 137.5±0.5mm, D 61.0±0.2mm, H 165.5±0.5mm

Naming Rules:

Product Series		Rated Capacitance	--	Rated Voltage	--	Terminal Type
SC	Supercapacitor Cell	3000=3000F	--	300=3.0V	--	ASC=Axial Screw

Notes:

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

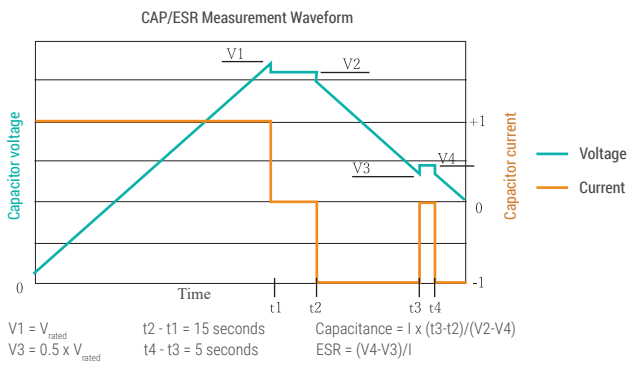


Figure 1

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

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

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

$$5. 0.5CV^2/3600$$

$$6. 0.5C(V_{nom}^2 - V_{min}^2)/3600$$

$$7. Wh_{usable} / \left(\frac{\pi r^2 (\text{mm}) \times L (\text{mm})}{1 \times 10^6} \right)$$

$$8. Wh_{usable} / \text{weight (kg)}$$

$$9. \text{Per IEC62391-2 } P_d = \frac{0.12V^2}{\text{ESR}_{DC} \times \text{weight (kg)}}$$

$$10. \text{Per IEC62391-2 } P_{max} = \frac{0.25V^2}{\text{ESR}_{DC} \times \text{weight (kg)}}$$

11. Test after the sample has been maintained at -40°C for 16 hours and the temperature raised 10°C each time and maintained for 1 hour, then test the sample Figure 2;
Change in capacitance (% drop from rated): ≤20%;
Change in ESR (% increase from rated): ≤100%.

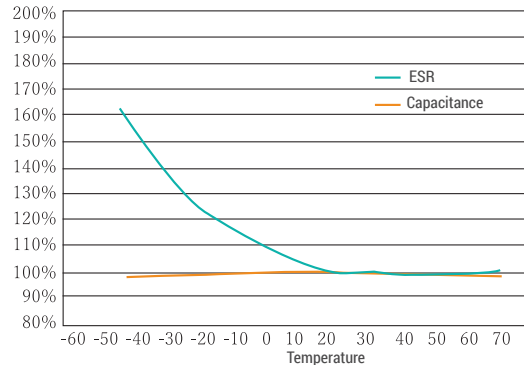


Figure 2

For axial weldable series products, please contact LICAP for details.

Specifications are subject to change without notice.

