SC0370-300-RSS

APPLICATIONS

- Wind Turbine Pitch Control
- Industrial Backup Power
- Electric Power Tools
- Renewable Energy Systems
- Energy Harvesting
- AGV's

FEATURES & ADVANTAGES

- One Million Cycle Life
- Good Low Temperature Characteristics
- Ultra High Power Density
- Ultra Low Internal Resistance
- 10-15 year calendar life

Specifications

Capacitance	Rated[1]	370F
	Tolerance	-0/+20%
Voltage	Rated	3.0V DC
	Surge[2]	3.1V DC
ESR	ESR (DC) - typical	1.8mΩ
	ESR (DC) - maximum initial	2.4mΩ
Current	Maximum leakage[3]	0.3mA
	Maximum peak	220A
	Maximum continuous current (ΔT = 15°C)[4]	21A RMS
	Maximum continuous current (ΔT = 40°C)[4]	34A RMS
Energy Storage	Maximum energy[5]	0.46Wh
	Usable energy[6]	0.35Wh
	Volumetric energy density[7]	8.86Wh/L
	Gravametric energy density[8]	7.12Wh/kg
Power Density	Power density[9]	6923W/kg

Temperature

Temperature Characteristics	Operating Temperature Range[10]	-50°C to +65°C
	Storage Temperature Range	-50°C to +70°C

Standards, Safety & Environmental

Safety	Short Circuit Current	1200A
	• This product may vent or rupture if overcharged, reverse charged incinerated or heated above 100°C • Do not crush, mutilate, or disassemble • Do not dispose of unit in trash	

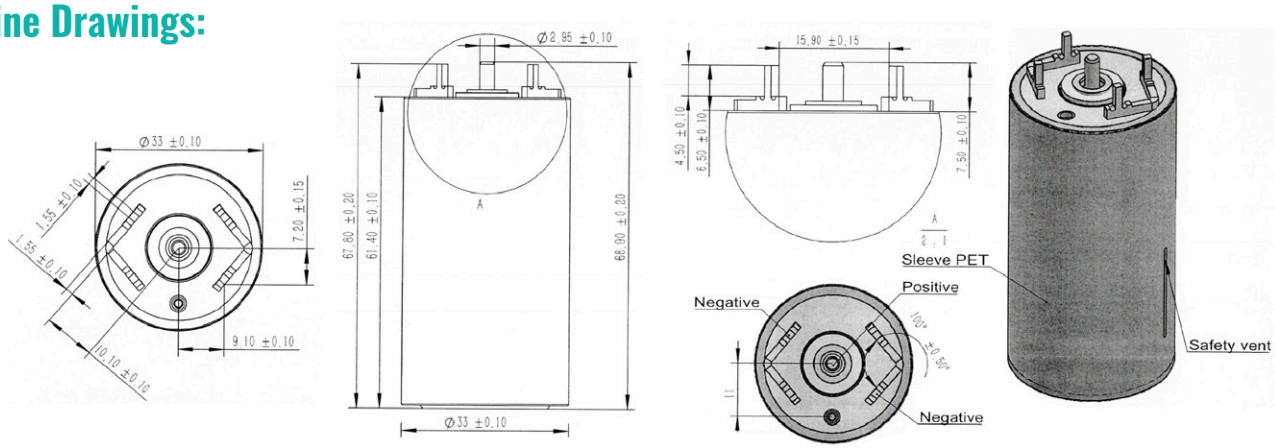
Service Lifetime

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 J380
	Impact	IEC60068-2-27, SAE J2464

Outline Drawings:



Weight and Size:

Weight: 65g | Size: L (Max.) 61mm, D (Max.) 33mm

Naming Rules:

Type		Capacitance	Dash	Rated Voltage	Dash	Termination
SC	Supercapacitor Cell	0370 = 370F	-	300 = 3.0V	-	RSS = Radial Square Solder

Notes:

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

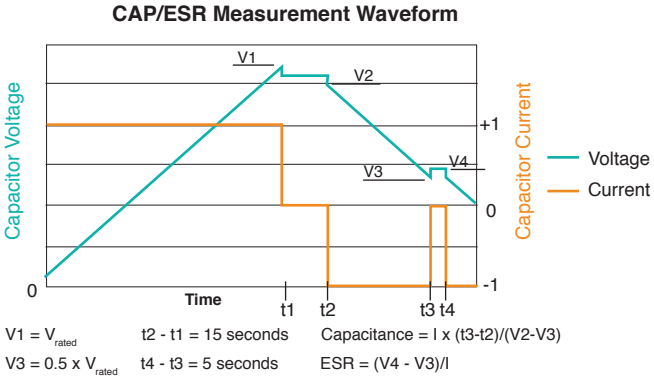


Figure 1

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. $0.5CV^2/3600$
6. $0.5C(V_{nom}^2 - V_{min}^2)/3600$
7. $Wh_{usable} / \left(\frac{\pi r^2(mm) \times L(mm)}{1x10^6}\right)$
8. Wh_{usable}/weight(kg)
9. Per IEC62391-2 $P_d = \frac{0.12V^2}{ESR_{DC} \times weight(kg)}$
10. Test after the sample has been maintained at -50°C for 16 hours and the temperature raised 10°C each time and maintained for 1 hour, then test the sample Figure 2

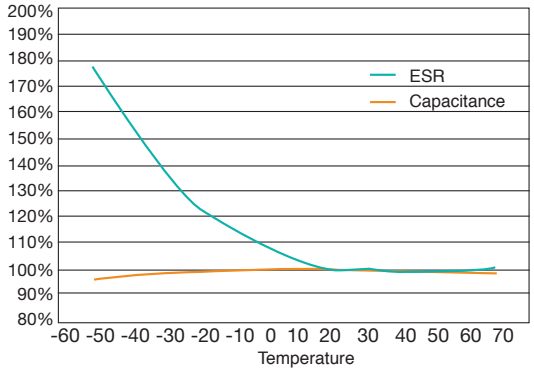


Figure 2

Specifications are subject to change without notice.

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