

SCA0300 EVO

PCB-Mountable Cell

Note: Polarity of the cell is stated as following:
center terminal for “-”, can and 3-pillar PCB frame for “+”.

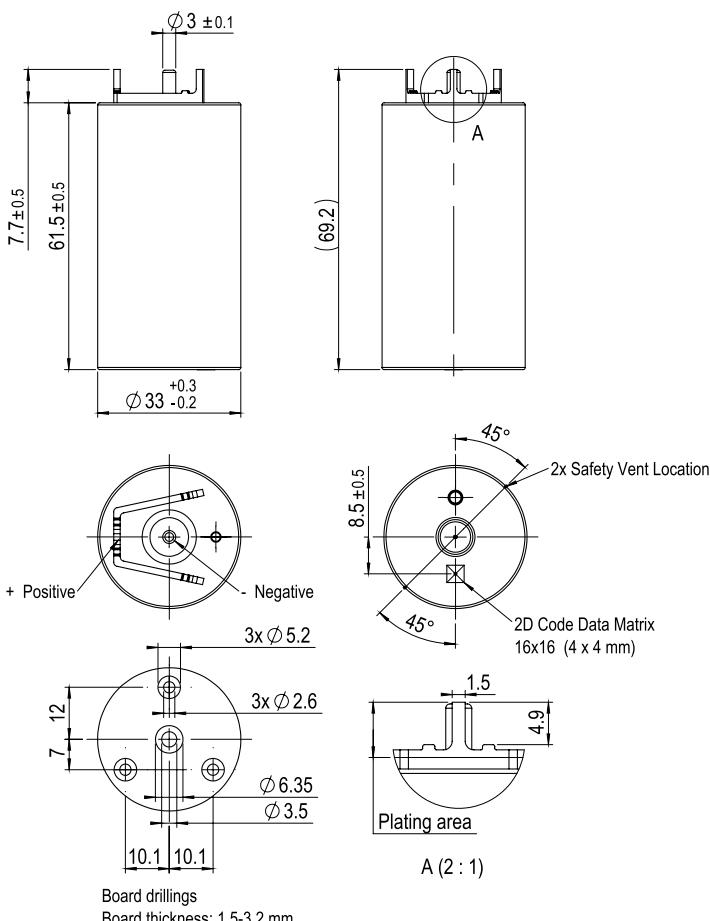


General Specifications*			Temperature and Life		
	Value	Unit		Value	Unit
Rated voltage V_R	2.85	V	Operating temperature range		
Rated capacitance	330	F	Minimum	-40	°C
Initial capacitance	>350	F	Maximum	+65	°C
ESR (DC 10ms ESR ≈ AC 100 Hz), rated	0.80	mΩ	Storage temperature range (uncharged)		
ESR (DC 1s ESR ≈ AC 0.1 Hz), rated	1.00	mΩ	Minimum	-40	°C
Maximum peak current, for 1 second ^{1,9}	0.35	kA	Maximum	+65	°C
Leakage current (At 2.85 V, 25 °C and 72 hours, max)	<1.5	mA	Life		
Safety			Lifetime at 2.85V	2500	h
Short circuit current (For informational purposes - do not use as operating current.)	3.56	kA	End of life (EoL) ESR	200% of rated	
Standards			EoL capacitance	80% of rated	
ISO 16750-3, Table 17; IEC60068-2-27 Shock Test			Storage life @ RT, uncharged	10	Years
RoHS; IEC62391-1; UL810A; AEC-Q200			Energy, based on rated capacitance		
Physical parameters			Stored energy ²	0.37	Wh
Mass, typical ($\pm 10\text{g}$)	0.064	kg	Specific energy ³	5.82	Wh/kg
Volume	0.053	L	Energy density ⁴	7.02	Wh/L
Diameter (-0,2...+0,3mm)	33	mm	Power		
Length ($\pm 0.3\text{mm}$)	61.5	mm	Power (1 s ESR)	2.0	kW
			Specific power (1 s ESR)	31.7	kW/kg
			Power density (1 s ESR)	38.3	kW/L

$$(1) \text{ Maximum peak current (1 sec)} = \frac{\frac{1}{2} CV}{C \times ESR + 1s} \quad (2) E_{\text{stored}} = \frac{\frac{1}{2} CV^2}{3600} \quad (3) E_{\text{max}} = \frac{\frac{1}{2} CV^2}{3600 \times \text{mass}}$$

$$(4) E_{\text{max}} = \frac{\frac{1}{2} CV^2}{3600 \times \text{volume}} \quad (5) P_{\text{max}} = \frac{V^2}{4 \times ESR} \quad (6) P_{\text{max}} = \frac{V^2}{4 \times ESR \times \text{mass}}$$

$$(7) P_{\text{max}} = \frac{V^2}{4 \times ESR \times \text{volume}} \quad (8) I_{\text{max}} = \sqrt{\frac{\Delta T}{ESR \times R_{\text{th}}}}$$



(9) The stated maximum peak current should not be exceeded during use. If the limit is to be exceeded by the customer, Skeleton must be consulted beforehand and give approval for the exceeded power load. Typical value represents the mean production sample value. Rated value represents the absolute minimum capacitance or maximum ESR value of production sample.

Standard markings

- + Name of manufacturer, part number, serial number, rated voltage
- + Rated capacitance, negative and positive terminals, warning marking
- + Total energy in watt-hours
- + Electrolyte material used

Notes

- + Testing instructions available on www.skeletontech.com
- + All information provided on this data sheet and all subsequent ultracapacitors sales and testing are subject to Standard Terms of Service (ToS) available on www.skeletontech.com, document General Terms of Sale for Skeleton Technologies GmbH.