SCA0300 EVO Weldable Cell



General Specifications*	Value	Unit
Rated voltage V_{R}	2.85	V
Rated capacitance	330	F
Initial capacitance	>350	F
ESR (DC 10ms ESR ≈ AC	0.80	mΩ
100 Hz), rated		
ESR (DC 1s ESR ≈ AC	1.00	mΩ
0.1 Hz), rated		
Maximum peak current, for 1 second ^{1, 9}	0.35	kA
Leakage current (At 2.85 V, 25 $^{\circ}$ C and 72 hours, max)	<1.5	mA

Safety

Short circuit current	3.56	kA
(For informational purposes -		
do not use as operating current.)		

Standards

ISO 16750-3, Table 17; IEC60068-2-27
Shock Test
RoHS; IEC62391-1; UL810A; AEC-Q200

Physical parameters	Value	Unit
Mass, typical (±10g)	0.064	kg
Volume	0.053	L
Diameter (-0,2+0,3mm)	33	mm
Length (±0.3mm)	62	mm

Temperature and Life	Value	Unit
Operating temperature range		
Minimum	-40	°C
Maximum	+65	°C
Storage temperature range (unch	arged)	
Minimum	-40	°C
Maximum	+65	°C
Life		
Lifetime at 2.85V	2500	h
End of life (EoL) ESR	200% of rated	
EoL capacitance	80% of rate	d
Storage life @ RT, uncharged	10	Years

Energy, based on rated capacitance

Stored energy ²	0.37	Wh
Specific energy ³	5.82	Wh/kg
Energy density ⁴	7.02	Wh/L

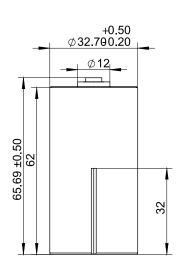
Power

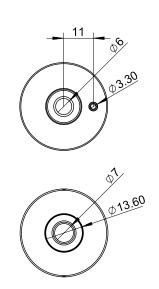
Power (1 s ESR)	2.0	kW
Specific power (1 s ESR)	31.7	kW/kg
Power density (1 s ESR)	38.3	kW/L



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1) Maximum peak current (1 sec) =
$$\frac{\frac{12}{C}CV}{C \times ESR + 1s}$$
 (2) $E_{stored} = \frac{\frac{12}{3}CV^2}{3600}$ (3) $E_{max} = \frac{\frac{12}{3}CV^2}{3600 \times mass}$
(4) $E_{max} = \frac{\frac{12}{3}CV^2}{3600 \times volume}$ (5) $P_{max} = \frac{V^2}{4 \times ESR}$ (6) $P_{max} = \frac{V^2}{4 \times ESR \times mass}$
(7) $P_{max} = \frac{V^2}{4 \times ESR \times volume}$ (8) $I_{max} = \sqrt{\frac{\Delta T}{ESR \times R_{th}}}$





(9) The stated maximum peak current should not be exceeded during (a) The stated maximum peak content 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 COD with an effort during marking and the statement of the state ESR value of production sample.

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.

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