

NAWACAP POWER PRODUCT OVERVIEW

THE FASTEST ULTRACAPACITOR

NAWATECHNOLOGIES' ULTRACAPACITORS ADDRESS EXTREME HIGH-POWER-PULSE APPLICATIONS, OFFERING THE LOWEST ESR, OVER A WIDE TEMPERATURE RANGE.

MAIN CHARACTERISTICS ARE LISTED IN THE TABLE BELOW FOR THREE TYPICAL CELLS SIZES. FOR OTHER REQUIREMENTS JUST CONTACT NAWA.



		1F	25F	100F
Capacitance tolerance	%	±10%	±10%	±10%
Power density	kW/kg	54	141	171
Maximum ESR at DC ¹	mΩ	28	0.9	0.28
Maximum ESR at 1 kHz ²	mΩ	14	0.5	0.14
Rated Voltage	V	2.7	2.7	2.7
Maximum Voltage	V	2.85	2.85	2.85
Maximum Peak current ³	A	50	500	1500
Peak current ³ for 100ms	A	12	405	1350
Peak current ³ for 1.0s	A	1.3	40	135
Peak current ³ for 0.5s	A	2.6	77	256
Maximum Leakage Current ⁴	μA	3-6	45-70	220-270
Maximum power ⁵	W	126	3931	13365
Useable energy ⁶	J	2.7	82	273
Nominal cell size, W x L x H	mm	30x40x0.5	30x40x11	100x120x5
Mass	g	1.2	14.4	38
Tab spacing	mm	30	100	100
Type of case	-	Pouch		
Tab orientation	-	Opposite sides		
Operating temperature range	°C	-40 / +65 °C		
Life, charge/discharge cycles, typical ⁷	cycles	1,000,000		
Life, at 20 °C and 90% of rated voltage, typical ⁷	years	15		

Notes

- Resistance measured through voltage drop at constant current discharge
- Resistance measured through voltammetry (CV-plot) at 1kHz
- Current required at rated voltage to reach $\frac{1}{2}$ its value
- Leakage current after 72h at 25°C
- Calculated value, using $P_{max} = \frac{V^2}{4 ESR_{1kHz}}$
- Calculated value, using $E_{useful} = 0.75 \cdot \frac{1}{2} CV^2$
- Typical values refer to the mean value of delivered cells

Safety recommendations

- Do not exceed maximum voltage, do not reverse polarity, do not use at over 70 °C
- Do not short circuit, touch case with soldering iron, disassemble, burn or damage
- Store preferably at < 40 °C; do not store outside operating temperature range
- In case of leak, do not ingest, do not allow contact with skin or eyes; electrolyte is acetonitrile
- Free of US DOT, IATA or UN3499 restrictions; declare as electronics product: capacitor

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