

SUPERCAPACITORS

Coin-type 5.5/6.3V Series

1. Scope

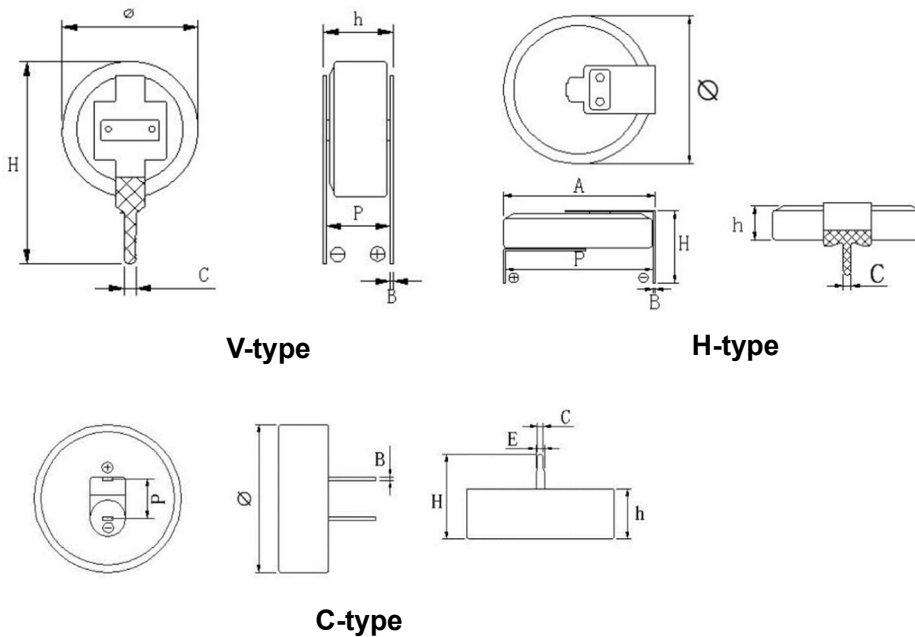
This datasheet describes the characteristics of Coin-type 5.5/6.3V supercapacitors.

- Conventional serie
- Main performance characteristics: high capacity, low internal resistance, good consistency
- Typical applications: RAM, consumer electronics, wind turbines, military industry, backup power supplies, toys, etc.

2. General Characteristics

Parameter		Specification	
1	Rated voltage	5.5 V	6.3V
2	Rated capacitance range	0,1F ~ 4F	0,47F ~ 1F
3	Capacitance tolerance	-20 % ~ + 80 %	-20 % ~ + 80 %
4	Operating temperature range	-40 ~ 70 °C	-40 ~ 70 °C
5	Product life	Standard charge and discharge mode, 200,000 charge and discharge cycles; $ \Delta C/C \leq 30\%$, $ESR \leq 4$ times of specified ESR (25°C). +70°C±2, rated voltage, after 1000h, $ \Delta C/C \leq 30\%$, $ESR \leq 4$ times of specified value.	

3. Product Dimensions



4. Characteristics of Models

Characteristics of V-type, H-type

Supercapacitor Model	Rated voltage, V	Rated capacitance, F	Impedance (@1kHz), Ω	Dimensions (\emptyset ,H,P), mm		
V-5.5V-0.1F	5.5	0.10	≤ 65	9.5	14.1	4.5
V-5.5V-0.22F	5.5	0.22	≤ 65	9.5	14.1	4.5
V-5.5V-0.33F	5.5	0.33	≤ 65	9.5	14.1	4.5
V-5.5V-0.47F	5.5	0.47	≤ 50	11.5	16.5	4.5
V-5.5V-0.68F	5.5	0.68	≤ 30	16.0	20.0	4.5
V-5.5V-1F	5.5	1.00	≤ 20	19.0	23.0	4.5
V-5.5V-1.5F	5.5	1.50	≤ 20	19.0	23.0	4.5
V-5.5V-4F	5.5	4.00	≤ 16	25.0	29.0	6.0
H-5.5V-0.1F	5.5	0.10	≤ 65	9.5	8.6	10.0
H-5.5V-0.22F	5.5	0.22	≤ 65	9.5	8.6	10.0
H-5.5V-0.33F	5.5	0.33	≤ 65	9.5	8.6	10.0
H-5.5V-0.47F	5.5	0.47	≤ 50	11.5	8.6	10.0
H-5.5V-0.68F	5.5	0.68	≤ 30	16.0	9.2	16.0
H-5.5V-1F	5.5	1.00	≤ 20	19.0	9.2	19.0
H-5.5V-1.5F	5.5	1.50	≤ 20	19.0	9.2	19.0
H-5.5V-4F	5.5	4.00	≤ 16	25.0	9.0	25.0

Characteristics of C-type

Supercapacitor Model	Rated voltage, V	Rated capacitance, F	Impedance (@1kHz), Ω	Dimensions (\emptyset ,H,P), mm		
C-5.5V-0.1F	5.5	0.10	≤ 65	13.0	13.0	5
C-5.5V-0.22F	5.5	0.22	≤ 65	13.0	13.0	5
C-5.5V-0.33F	5.5	0.33	≤ 65	13.0	13.0	5
C-5.5V-0.47F	5.5	0.47	≤ 30	20.5	12.5	5
C-5.5V-0.68F	5.5	0.68	≤ 30	20.5	12.5	5
C-5.5V-1F	5.5	1.00	≤ 20	20.5	12.5	5
C-5.5V-1.5F	5.5	1.50	≤ 20	20.5	12.5	5
C-6.3V-0.47F	6.3	0.47	≤ 30	20.5	14.5	5
C-6.3V-0.68F	6.3	0.68	≤ 30	20.5	14.5	5
C-6.3V-1F	6.3	1.00	≤ 20	20.5	14.5	5

5. Precautions

5.1 Polarity and voltage of supercapacitors

(1) Supercapacitors have polarities

Do not apply a reverse or AC voltage. If a reversed voltage is applied to a capacitor for a long period of time, then its life will be reduced and critical failures may occur.

(2) Over-voltage

Do not apply an over-voltage (a voltage exceeding the rated voltage). If voltage exceeding the rating is applied to the capacitor for a long time, then its life will be reduced and critical failures and physical damage may occur.

5.2 Effect of ambient temperature on the supercapacitors

Supercapacitor life is affected by usage temperatures. Lower the usage temperature as much as possible. Using supercapacitors beyond the guaranteed range may cause rapid deterioration of their characteristics and cause them to break down.

5.3 Solder of supercapacitors

When soldering a supercapacitor to a printed circuit board, excessive heat stress could cause the deterioration of the supercapacitor's electrical characteristics.

5.4 Storage of supercapacitors

Do not store supercapacitors in a high-temperature or high-humidity environment. Store supercapacitors at a room temperature of $25\pm 10^{\circ}\text{C}$ and a relative humidity of 80% or less.

Store supercapacitors in their packaging as long as possible.