

# 3.0V High Voltage Snap-In Supercapacitors

ADCN-S03R0S

Request Samples



Check Inventory



Various Sizes

RoHS/RoHS II Compliant

MSL Level = 1

## Features

- High Energy density of over 5.0Wh/Kg
- Extreme ambient operating temperature range as cold as -40°C and as hot as +65°C.
- Excellent cycle life of >500K cycles

## Applications

- Smart Meter Applications
- Power Assist Circuits
- Power Backup
- Micro Energy Storage
- IoT Energy Harvesting

## Electrical Specifications

Part Number	Nominal Voltage (U <sub>R</sub> )	Capacitance	Tolerance Code	DC ESR (Max)	Continuous Current (Max)	Peak Current (Max)	Leakage Current (72hrs)	Stored Energy (Max)	Gravimetric Energy Density
ADCN-S03R0S	DC(V)	Farads		mΩ	A	A	μA	Wh	Wh/kg
ADCN-S03R0SA107	3.0V	100	M, Q	11.2	6.84	70.75	276	0.1250	5.48
ADCN-S03R0SA127	3.0V	120	M, Q	10.5	7.40	79.65	345	0.1500	5.24
ADCN-S03R0SA157	3.0V	150	M, Q	9.8	8.22	91.09	460	0.1875	5.36
ADCN-S03R0SA227	3.0V	220	M, Q	8.4	9.83	115.87	598	0.2750	5.83
ADCN-S03R0SA257	3.0V	250	M, Q	7.7	10.71	128.21	667	0.3125	6.41
ADCN-S03R0SA367	3.0V	360	M, Q	5.4	14.49	183.42	978	0.4500	5.98
ADCN-S03R0SA407	3.0V	400	M, Q	4.7	16.15	207.61	1150	0.5000	5.55

**Operating Temperature:** -40°C to +65°C (U<sub>R</sub> = 2.3V)

**Storage Temperature:** 10°C to +50°C, RH < 60%,

**Test Conditions:** +25°C

All parameters are measured according to the IEC 62391-1 standard.

Capacitance is measured with I(mA) = 4(C\*U<sub>R</sub>) and DC ESR is measured with I(mA) = 40(C\*U<sub>R</sub>).

**Continuous Current (Δ15°C):**  $\sqrt{15 \times \text{SurfaceArea} / \text{ESR}}$

**Peak Current (Max.):**  $0.5U_R / (\text{ESR} + 1/C)$



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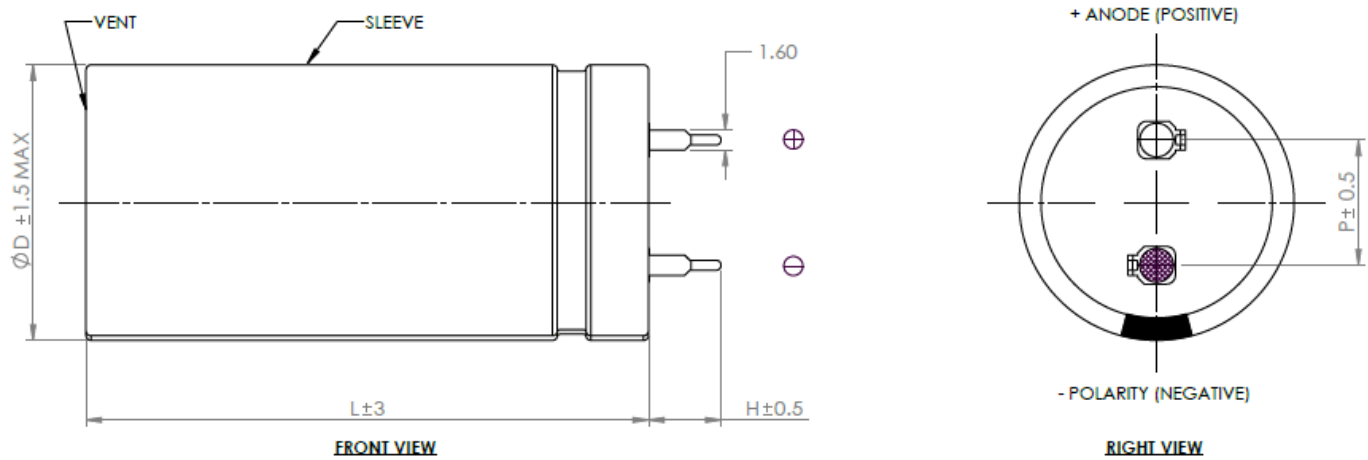


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## Mechanical Specifications



Part Number	D	L	P	H
ADCN-S03R0SA107	22	45	10	5.8
ADCN-S03R0SA127	22	50	10	5.8
ADCN-S03R0SA157	25	50	10	5.8
ADCN-S03R0SA227	30	50	10	5.8
ADCN-S03R0SA257	30	55	10	5.8
ADCN-S03R0SA367	35	60	10	5.8
ADCN-S03R0SA407	35	66	10	5.8

Dimensions: mm

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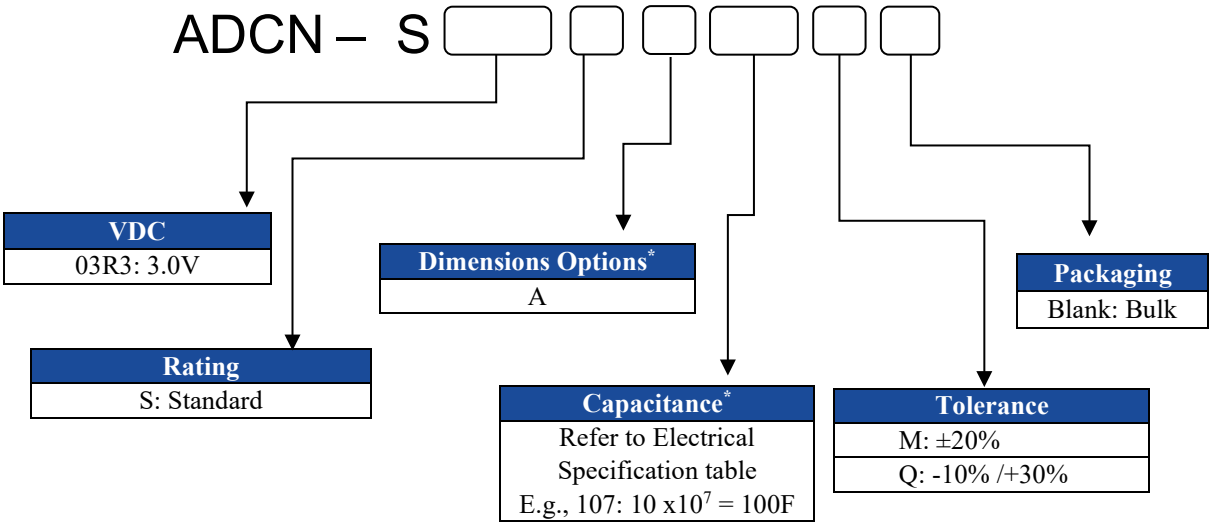


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## Part Number Identification



\*Only part numbers listed in the Electrical Specs table are available. For custom builds, please contact us.

## Part Marking



Example of the Markings of a 100F 3.0V capacitor

Capacitance (F)  
Rated Voltage (V)  
Polarity (negative bar on the sleeve to indicate the cathode)

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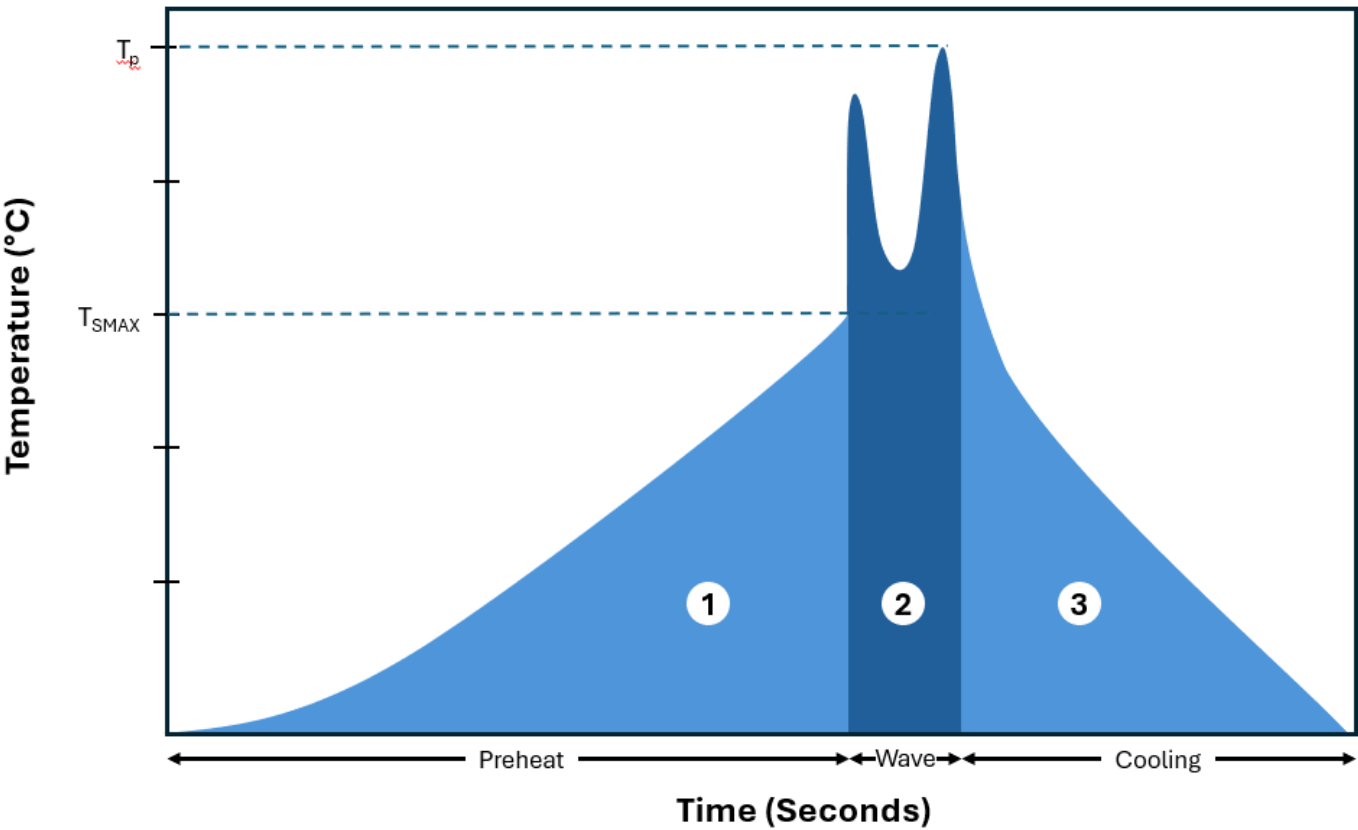


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## Wave Profile



Zone	Description	Temperature	Times
1	Preheat	$T_{SMIN} \sim T_{SMAX}$ 25°C ~ 130°C	80 sec. MAX
	Preheat Rate	$T_{PREHEAT}$ +4°C/Sec MAX	
2	Wave Temperature	$T_w$ 245°C ~ 260°C	10 sec. MAX Dual wave
	Wave Peak Temperature	$T_p$ 260°C	5 sec. MAX/wave
3	Cooling Rate	$T_{COOLING}$	-5°C/Sec MAX



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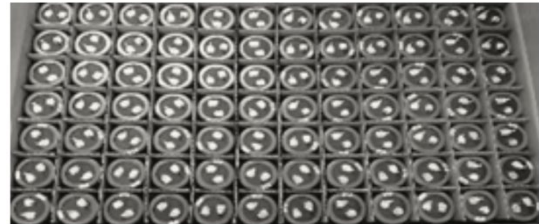
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## Packaging

Product is packaged in a carton containing multiple inner boxes, each containing several trays, boxes, etc.

Part Number	SPQ	Format
ADCN-S03R0SA107	84	Box, Individual
ADCN-S03R0SA127	84	Box, Individual
ADCN-S03R0SA157	84	Box, Individual
ADCN-S03R0SA227	45	Box, Individual
ADCN-S03R0SA257	45	Box, Individual
ADCN-S03R0SA367	45	Box, Individual
ADCN-S03R0SA407	45	Box, Individual



## Transport of Product

This product is not subject to US DOT or IATA regulations UN3499 since maximum stored energy is below 10Wh and can be considered Non-Hazardous Goods.

**ATTENTION:** Abracon LLC's products are Commercial-Off-The-Shelf (COTS, which are designed, intended and validated for use in commercial, industrial and automotive applications. The customer is responsible for testing and verifying the performance of an Abracon solution to meet their system-level requirements.



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