

# 5.5V Coin Supercapacitor, Horizontal



ADCH-S05R5S

Request Samples



Check Inventory



Various Sizes

RoHS/RoHS II Compliant

MSL Level = 1

## Features

- Coin Type Supercapacitor
- Horizontal Configuration
- High power density
- Minimal discharge rate, 72 hours @ discharge < 20%
- Excellent cycle life
- Green, meet RoHS requirements.

## Applications

- Power Assist Circuits
- Power Backup
- Micro Energy Storage
- IoT Energy Harvesting
- SSD applications
- DDR power back up
- RTC System power transfer to battery backup

## Electrical Specifications

Part Number	Nominal Voltage (U <sub>R</sub> )	Capacitance	Tol.	ESR (Max)	Nominal Current	Peak Current (Max)	Leakage Current (Max)	Stored Energy (Max)	Gravimetric Energy Density	Volumetric Energy Density
ADCH-S05R5S	DC(V)	Farads	±%	Ω	A	A	uA	mWh	Wh/kg	Wh/L
ADCH-S05R5SA473W	5.5V	0.047	-20%/ 100%	120	0.010	0.014	3	0.197	0.146	0.380
ADCH-S05R5SA104X	5.5V	0.1	-20%/ 150%	50	0.022	0.032	3	0.420	0.311	0.809
ADCH-S05R5SA224W	5.5V	0.22	-20%/ 100%	40	0.033	0.043	4	0.924	0.685	1.780
ADCH-S05R5SB224W	5.5V	0.22	-20%/ 100%	40	0.033	0.043	4	0.924	0.685	1.780
ADCH-S05R5SA334Z	5.5V	0.33	-20%/ 80%	40	0.037	0.044	5	1.386	1.027	2.670
ADCH-S05R5SA474Q	5.5V	0.47	-10%/ 30%	40	0.039	0.044	6	1.975	1.463	3.802
ADCH-S05R5SA105R	5.5V	1	0/+30%	15	0.100	0.117	8	4.201	0.977	2.886
ADCH-S05R5SA155R	5.5V	1.5	0/+30%	10	0.150	0.176	12	6.302	1.466	4.329

**Operating Temperature:** -25°C to +70°C

**Storage Temperature:** -30°C to +50°C, RH < 60%, Max. Humidity < 85% RH

### Test Conditions:

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

**Ambient Temperature:** +25°C

**Capacitance:** measured with  $I(mA) = 4(C * U_R)$ .

**ESR:** Measured at 1KHz.

**Nominal Current:** 5 Seconds to discharge from U<sub>R</sub> to 1/2U<sub>R</sub>.

**Peak Current (Max.):** 1 second to discharge to U<sub>R</sub> to 1/2U<sub>R</sub>.

**Leakage Current:** Measured after 72h at U<sub>R</sub>.

**Life Cycles:** 500,000 cycles with less than 30% change in capacitance.



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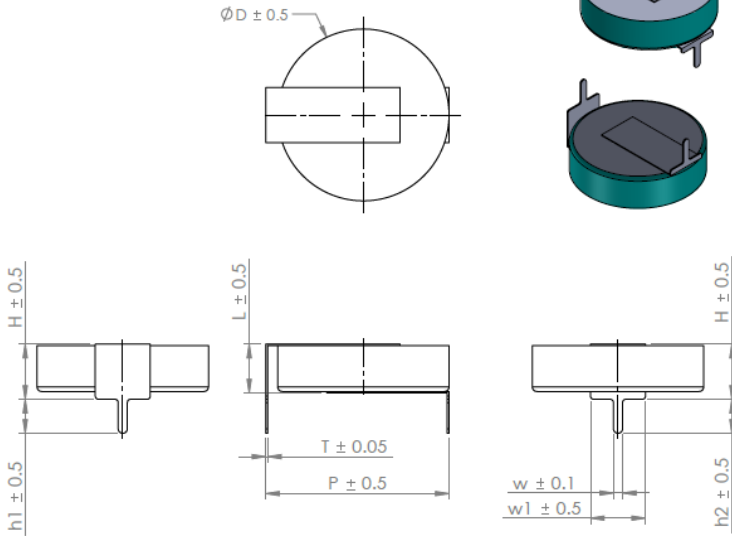
Various Sizes

RoHS/RoHS II Compliant

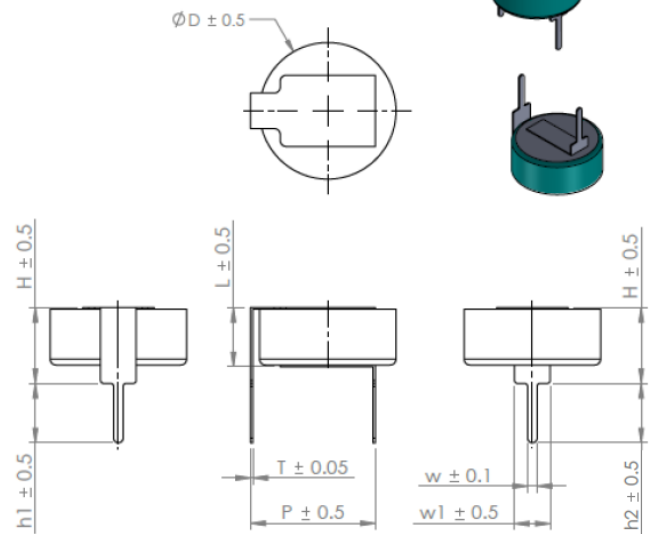
MSL Level = 1

## Mechanical Specifications

### PIN TYPE A



### PIN TYPE B



ABRACON PART#	PIN TYPE	SIZE D x L x H	PIN SPACING P	PIN WIDTH w/w1	PIN LENGTH h1/h2	LEAD THICKNESS T
ADCH-S05R5SA473W	B	11.5 x 5.0 x 6.4	10.5	0.8/3.0	5.0/5.0	0.2
ADCH-S05R5SA104X	B	11.5 x 5.0 x 6.4	10.5	0.8/3.0	5.0/5.0	0.2
ADCH-S05R5SA224W	B	11.5 x 5.0 x 6.4	10.5	0.8/3.0	5.0/5.0	0.2
ADCH-S05R5SB224W	B	11.5 x 5.0 x 6.4	10.5	0.8/3.0	2.6/2.6	0.2
ADCH-S05R5SA334Z	B	11.5 x 5.0 x 6.4	10.5	0.8/3.0	5.0/5.0	0.2
ADCH-S05R5SA474Q	B	11.5 x 5.0 x 6.4	10.5	0.8/3.0	5.0/5.0	0.2
ADCH-S05R5SA105R	A	18.7 x 5.3 x 6.0	20	1/6.0	3.7/3.7	0.2
ADCH-S05R5SA155R	A	18.7 x 5.3 x 6.0	20	1/6.0	3.7/3.7	0.2

Dimensions: mm



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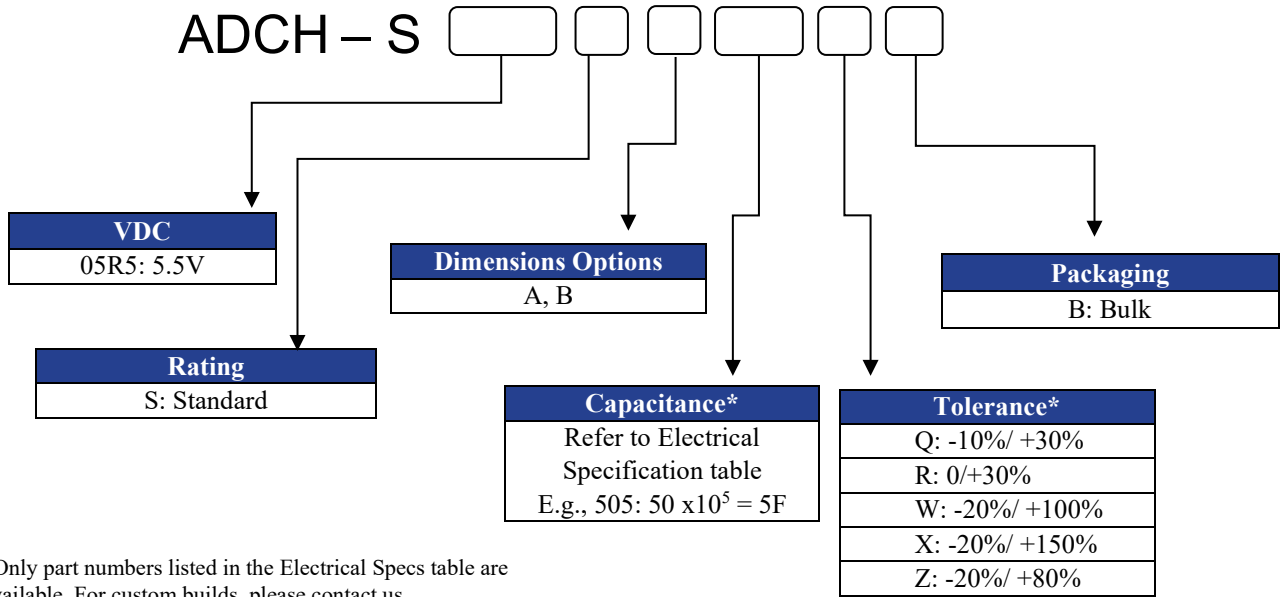


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## Part Number Identification



\*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 5.5V 0.1F capacitor

Capacitance (F)

Rated Voltage (V)

Polarity: Set of triangles on the sleeve to indicate the cathode. (The bar might look slightly different for 1.0F and 1.5F parts)



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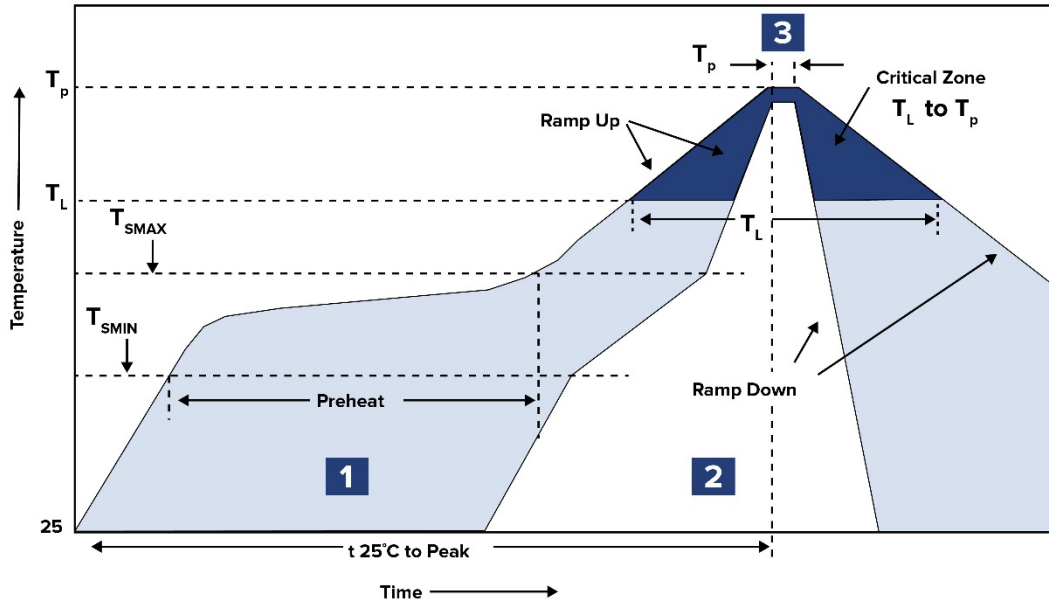


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## Reflow Profile



Zone	Description	Temperature	Times
1	Preheat	$T_{SMIN} \sim T_{SMAX}$ 100°C ~ 150°C	60 ~ 120 sec.
2	Reflow	$T_L$ 200°C	30 ~ 40 sec.
3	Peak heat	$T_P$ 240°C±5°C	5 sec. MAX

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## Packaging

Part Number	Quantity (PCS/Box)
ADCH-S05R5SA473WB	1300
ADCH-S05R5SA104XB	1300
ADCH-S05R5SA224WB	1300
ADCH-S05R5SB224WB	1300
ADCH-S05R5SA334ZB	1300
ADCH-S05R5SA474QB	1300
ADCH-S05R5SA105RB	672
ADCH-S05R5SA155RB	672

**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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