

# Series-Connected Supercapacitor Module, 5.5V



ADCM-S05R5S

Request Samples



Check Inventory



Various Sizes

RoHS/RoHS II Compliant

MSL Level = 1

## Features

- Assembled Type Supercapacitor
- Series 2-Cell configuration
- No balancing required.
- 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	Gravimetric Power Density
ADCM-S05R5S	DC(V)	Farads	±%	Ω	A	A	μA	mWh	Wh/kg	KW/kg
ADCM-S05R5SA473WB	5.5	0.047	0/+40	2.10	0.025	0.118	3	0.197	0.245	4.501
ADCM-S05R5SA104RB	5.5	0.1	0/+30	1.80	0.053	0.233	3	0.420	0.453	4.668
ADCM-S05R5SA224XB	5.5	0.22	0/+50	1.05	0.116	0.491	4	0.924	0.658	5.145
ADCM-S05R5SA334WB	5.5	0.33	0/+40	0.90	0.171	0.699	4	1.386	0.686	4.201
ADCM-S05R5SA474RB	5.5	0.47	0/+50	0.90	0.238	0.908	5	1.975	0.859	3.653
ADCM-S05R5SA105RB	5.5	1	0/+30	0.40	0.509	1.964	8	4.201	1.347	6.099
ADCM-S05R5SA155RB	5.5	1.5	0/+30	0.42	0.73	2.53	14	6.302	2.046	5.846
ADCM-S05R5SA205RB	5.5	2	0/+50	0.24	1.004	3.716	14	8.403	1.254	4.703
ADCM-S05R5SA305RB	5.5	3	0/+30	0.23	1.45	4.88	16	12.604	2.554	6.656
ADCM-S05R5SA505RB	5.5	5	0/+30	0.16	2.370	7.638	28	21.000	3.854	8.594
ADCM-S05R5SA605RB	5.5	6	0/+30	0.12	2.885	9.593	36	25.208	2.083	5.208
ADCM-S05R5SA106RB	5.5	10	0/+30	0.08	4.74	15.28	60	42.014	3.458	7.780
ADCM-S05R5SA126QB	5.5	12	-10/+20	0.09	5.428	15.865	75	50.417	4.099	6.832

**Operating Temperature:** -40°C to +70°C

**Storage Temperature:** -40°C to +70°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  $U_R$  to  $1/2U_R$ .

**Peak Current (Max.):** 1 second to discharge to  $U_R$  to  $1/2U_R$ .

**Leakage Current:** Measured after 72h at  $U_R$ .

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

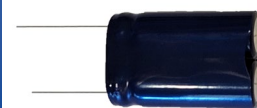


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**REVISION** Initial Release :  
**9/25/2023**

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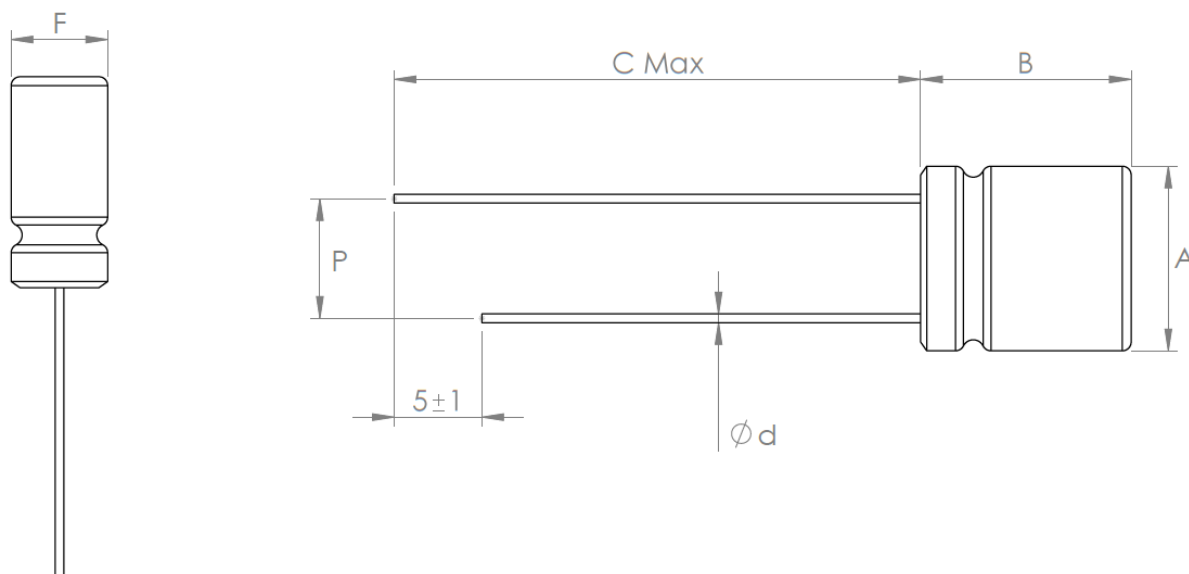


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## Mechanical Specifications



ABRACON PART#	SIZE (A x F x B) ±1	Pin Spacing P	Pin Length C (MAX)	Pin Diameter Ød
ADCM-S05R5SA473WB	10.5 x 5.5 x 12	6.8 ±0.5	30	0.5 ±0.05
ADCM-S05R5SA104RB	10.5 x 5.5 x 12	6.8 ±0.5	30	0.5 ±0.05
ADCM-S05R5SA224XB	13.5 x 7 x 15	9.0 ±0.5	30	0.5 ±0.05
ADCM-S05R5SA334WB	16.5 x 8.5 x 15	12.0 ±0.5	30	0.6 ±0.1
ADCM-S05R5SA474RB	16.5 x 8.5 x 15	12.0 ±0.5	30	0.6 ±0.1
ADCM-S05R5SA105RB	16.5 x 8.5 x 22	12.0 ±0.5	30	0.6 ±0.1
ADCM-S05R5SA155RB	16.5 x 8.5 x 22	12.0 ±0.5	30	0.6 ±0.1
ADCM-S05R5SA205RB	25.5 x 13 x 23	17.8 ±0.5	30	0.6 ±0.1
ADCM-S05R5SA305RB	20.5 x 10.5 x 22	15.3 ±0.5	30	0.6 ±0.1
ADCM-S05R5SA505RB	20.5 x 10.5 x 27	15.3 ±0.5	30	0.6 ±0.1
ADCM-S05R5SA605RB	25.5 x 13 x 36	17.8 ±0.5	30	0.6 ±0.1
ADCM-S05R5SA106RB	25.5 x 13 x 36	17.8 ±0.5	30	0.6 ±0.1
ADCM-S05R5SA126QB	25.5 x 13 x 36	17.8 ±0.5	30	0.6 ±0.1

Dimensions: mm



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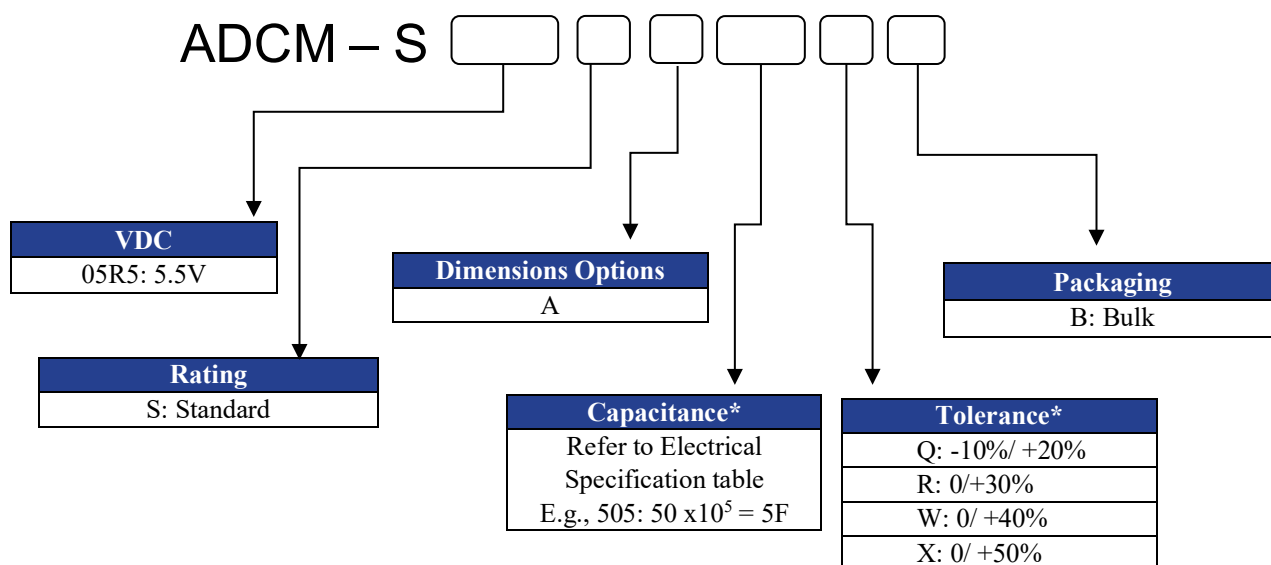


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## Part Number Identification



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

## Part Marking



Example of the Marking of a 5.5V 1.0F Supercapacitor

Capacitance (F)

Rated Voltage (V)

Polarity (negative bar indicator on the sleeve to indicate the cathode).



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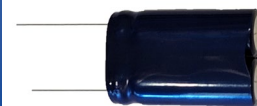
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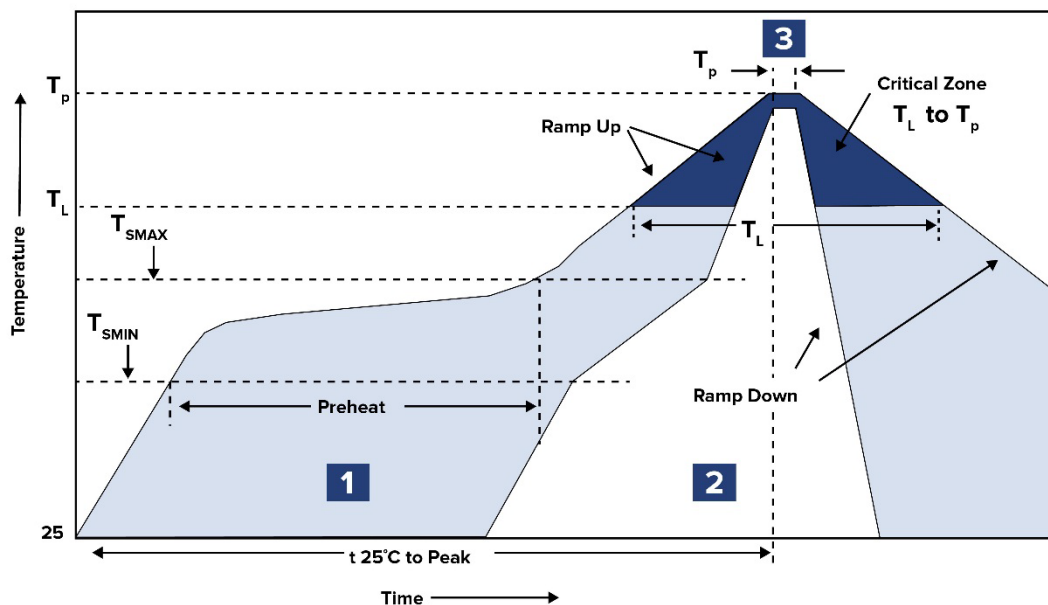


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## Reflow Profile



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



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## Packaging

Part Number	Pcs/Box	Pcs/Carton
ADCM-S05R5SA473WB	768	4608
ADCM-S05R5SA104RB	768	4608
ADCM-S05R5SA224XB	512	3072
ADCM-S05R5SA334WB	224	1344
ADCM-S05R5SA474RB	320	1920
ADCM-S05R5SA105RB	224	1344
ADCM-S05R5SA155RB	224	1244
ADCM-S05R5SA205RB	120	720
ADCM-S05R5SA305RB	192	1152
ADCM-S05R5SA505RB	120	720
ADCM-S05R5SA605RB	120	720
ADCM-S05R5SA106RB	80	480
ADCM-S05R5SA126QB	80	480

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