

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 _R)	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	uA	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.

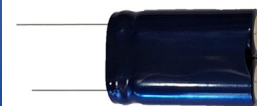


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Phone: 512-371-6159 Fax: 512-351-8858
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REVISION Initial Release :
9/25/2023

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ISO9001-2015
CERTIFIED

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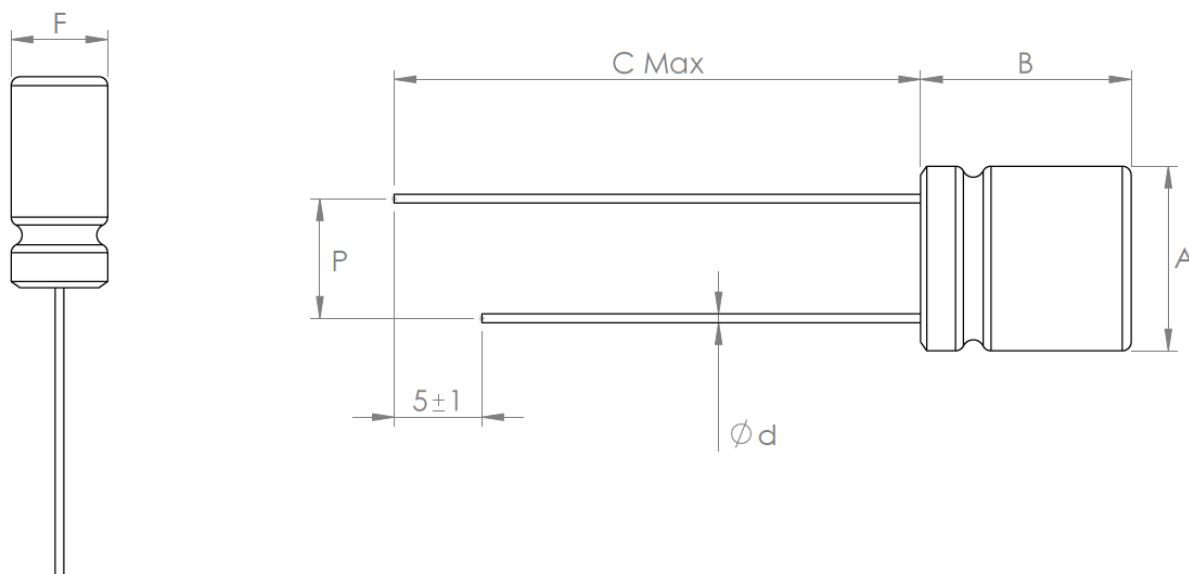


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Mechanical Specifications



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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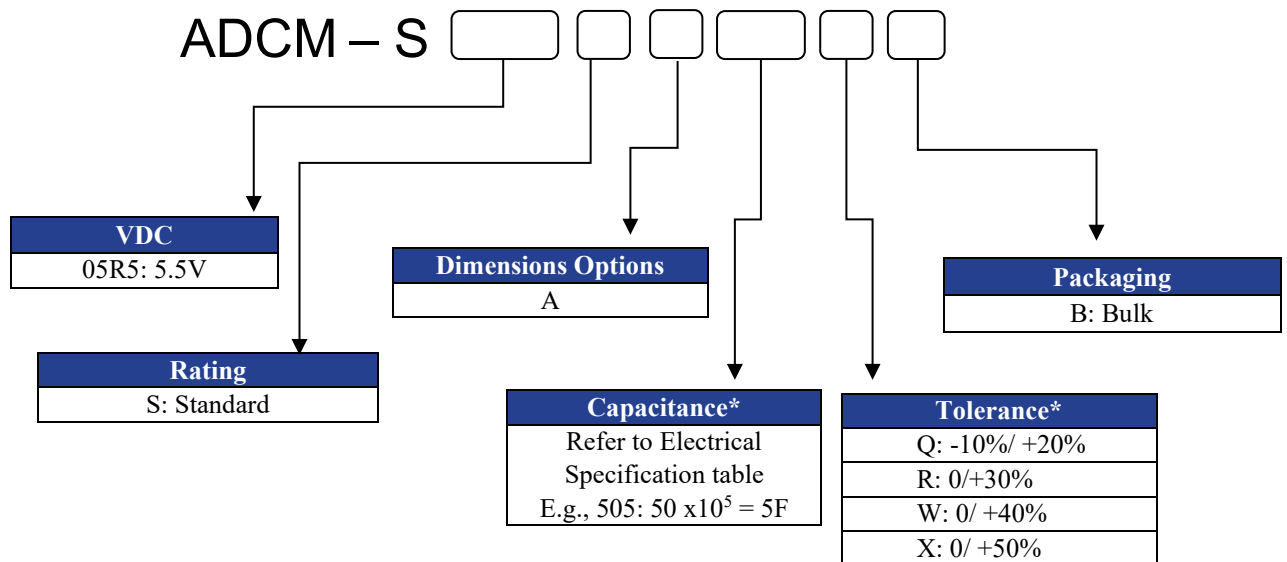


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Part Number Identification



*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)

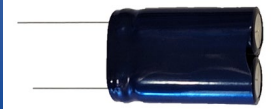


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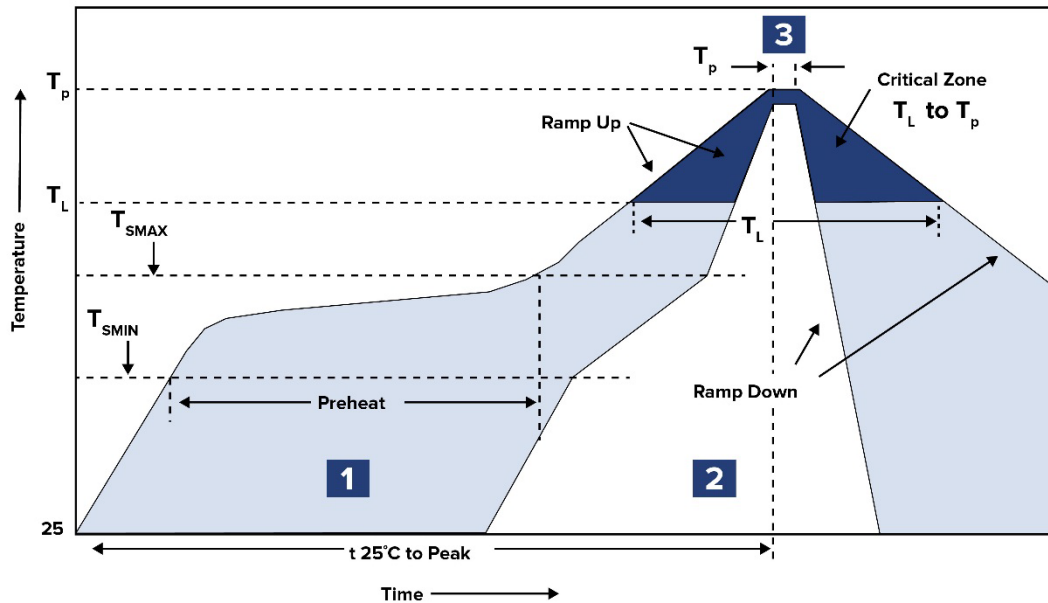


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Reflow Profile



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	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

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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