

5.5V Coin Supercapacitor, Vertical



ADCV-S05R5S

Request Samples



Check Inventory



Various Sizes

RoHS/RoHS II Compliant

MSL Level = 1

Features

- Coin Type Supercapacitor
- Vertical 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 _R) | Capacitance | Tol. | ESR (Max) | Nominal Current | Peak Current (Max) | Leakage Current (Max) | Stored Energy (Max) | Gravimetric Energy Density | Volumetric Energy Density |
|------------------|-----------------------------------|-------------|------------|-----------|-----------------|--------------------|-----------------------|---------------------|----------------------------|---------------------------|
| ADCV-S05R5S | DC(V) | Farads | ±% | Ω | A | A | uA | mWh | Wh/kg | Wh/L |
| ADCV-S05R5SA473W | 5.5V | 0.047 | -20%/ 100% | 120 | 0.010 | 0.014 | 3 | 0.197 | 0.156 | 0.380 |
| ADCV-S05R5SA104X | 5.5V | 0.1 | -20%/ 150% | 50 | 0.022 | 0.032 | 3 | 0.420 | 0.303 | 0.809 |
| ADCV-S05R5SA224W | 5.5V | 0.22 | -20%/ 100% | 40 | 0.033 | 0.043 | 4 | 0.924 | 0.707 | 1.780 |
| ADCV-S05R5SA334Z | 5.5V | 0.33 | -20%/ 80% | 40 | 0.037 | 0.044 | 5 | 1.386 | 0.998 | 2.670 |
| ADCV-S05R5SA474Q | 5.5V | 0.47 | -10%/ 30% | 40 | 0.039 | 0.044 | 6 | 1.975 | 1.412 | 3.802 |
| ADCV-S05R5SA105R | 5.5V | 1 | 0/+30% | 15 | 0.100 | 0.117 | 8 | 4.201 | 1.004 | 2.833 |
| ADCV-S05R5SA155R | 5.5V | 1.5 | 0/+30% | 10 | 0.150 | 0.176 | 12 | 6.302 | 1.488 | 4.249 |

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_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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8/18/2023

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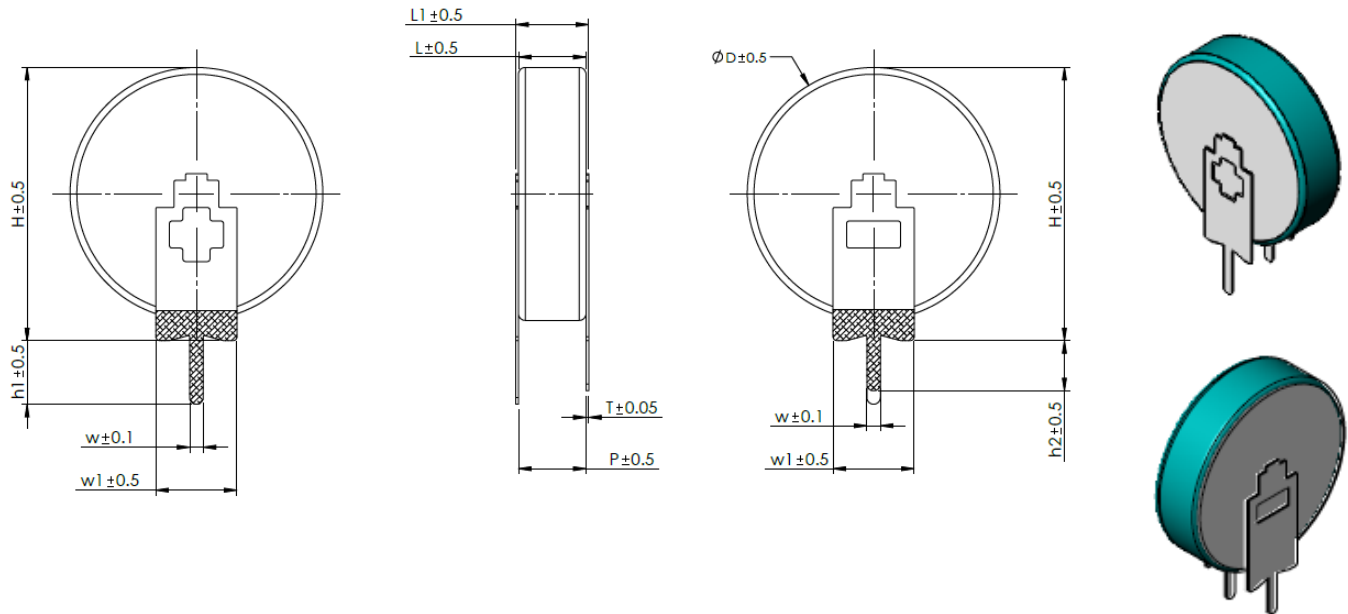


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Mechanical Specifications



| ABRACON PART# | SIZE D x L x H | TOTAL THICKNESS L1 | PIN SPACING P | PIN WIDTH w/w1 | PIN LENGTH h1/h2 | LEAD THICKNESS T |
|------------------|-------------------|--------------------------|---------------------|-------------------|---------------------|---------------------|
| ADCV-S05R5SA473W | 11.5 x 4.6 x 12.3 | 5.0 | 4.7 | 1/3.0 | 4.7/3.7 | 0.2 |
| ADCV-S05R5SA104X | 11.5 x 4.6 x 12.3 | 5.0 | 4.7 | 1/3.0 | 4.7/3.7 | 0.2 |
| ADCV-S05R5SA224W | 11.5 x 4.6 x 12.3 | 5.0 | 4.7 | 1/3.0 | 4.7/3.7 | 0.2 |
| ADCV-S05R5SA334Z | 11.5 x 4.6 x 12.3 | 5.0 | 4.7 | 1/3.0 | 4.7/3.7 | 0.2 |
| ADCV-S05R5SA474Q | 11.5 x 4.6 x 12.3 | 5.0 | 4.7 | 1/3.0 | 4.7/3.7 | 0.2 |
| ADCV-S05R5SA105R | 18.7 x 5.0 x 20.2 | 5.4 | 5.0 | 1/6.0 | 4.7/3.7 | 0.2 |
| ADCV-S05R5SA155R | 18.7 x 5.0 x 20.2 | 5.4 | 5.0 | 1/6.0 | 4.7/3.7 | 0.2 |

Dimensions: mm



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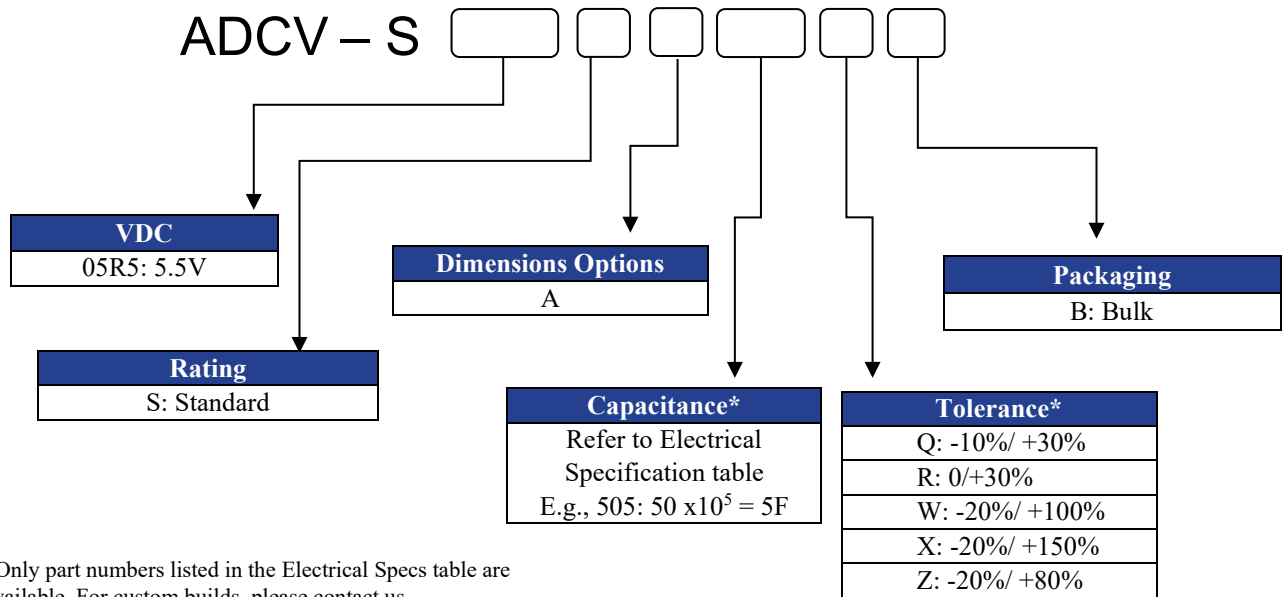


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Part Number Identification



Part Marking



Example of the Markings of a 5.5V 0.1F supercapacitor

Capacitance (F)

Rated Voltage (V)

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



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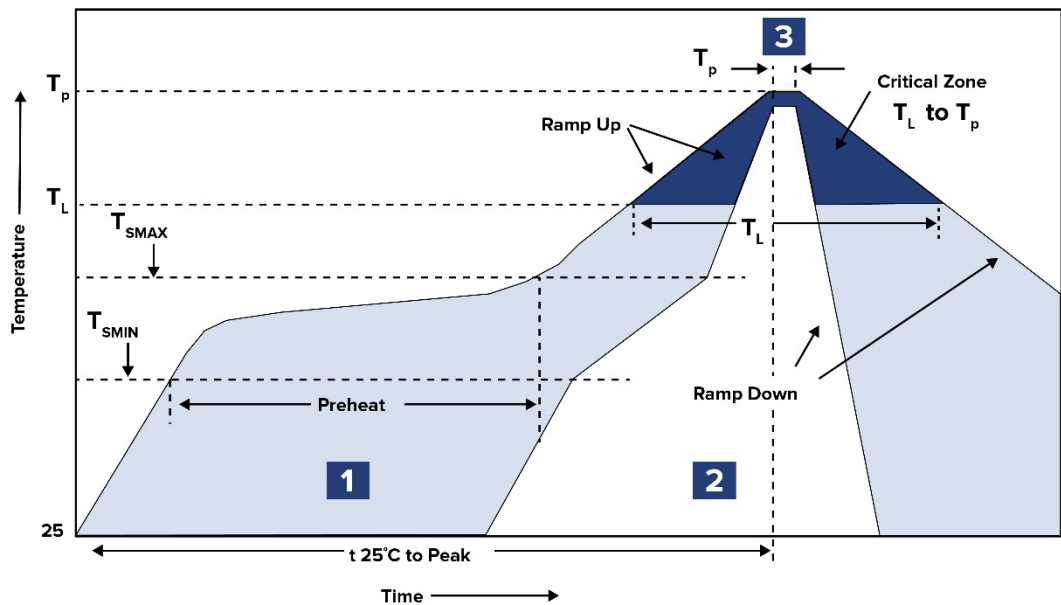


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Reflow Profile



| Zone | Description | Temperature | Times |
|------|-------------|--|---------------|
| 1 | Preheat | T _{SMIN} ~ 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) |
|-------------------|-----------------------|
| ADCV-S05R5SA473WB | 1456 |
| ADCV-S05R5SA104XB | 1456 |
| ADCV-S05R5SA224WB | 1232 |
| ADCV-S05R5SA334ZB | 1232 |
| ADCV-S05R5SA474QB | 1204 |
| ADCV-S05R5SA105RB | 1134 |
| ADCV-S05R5SA155RB | 1134 |

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