

# Low ESR, 2.7V Radial Supercapacitor

F-10F-10F-10F  
V 2.7V 2.7V 2.7V

ADCR-E02R7S

Request Samples



Check Inventory



Various Sizes

RoHS/RoHS II Compliant

MSL Level = 1

## Features

- Very Low internal resistance (ESR)
- 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	Stored Energy (Max)	Gravimetric Energy Density	Power Density	Volumetric Energy Density
ADCR-E02R7S	DC(V)	Farads	±%	mΩ	A	A	mA	mWh	Wh/kg	kW/kg	Wh/L
ADCR-E02R7SA504MB	2.7V	0.5	20	280	0.13	0.59	0.013	0.51	0.72	4.65	1.31
ADCR-E02R7SA105MB	2.7V	1	20	240	0.26	1.09	0.016	1.01	1.58	5.93	2.59
ADCR-E02R7SB105MB	2.7V	1	20	200	0.26	1.13	0.016	1.01	0.99	4.47	1.55
ADCR-E02R7SA205MB	2.7V	2	20	140	0.51	2.11	0.018	2.03	0.96	3.10	2.02
ADCR-E02R7SA335MB	2.7V	3.3	20	80	0.85	3.52	0.021	3.34	1.57	5.35	3.32
ADCR-E02R7SA505MB	2.7V	5	20	60	1.27	5.19	0.030	5.06	1.43	4.29	4.19
ADCR-E02R7SB505MB	2.7V	5	20	60	1.27	5.19	0.030	5.06	1.00	3.00	3.22
ADCR-E02R7SA605MB	2.7V	6	20	55	1.52	6.09	0.036	6.08	1.20	3.27	3.87
ADCR-E02R7SA705MB	2.7V	7	20	50	1.77	7.00	0.042	7.09	1.14	2.93	4.51
ADCR-E02R7SA106MB	2.7V	10	20	45	2.48	9.31	0.050	10.13	1.00	2.00	5.16

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

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

**Test Conditions:** +25°C

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

Capacitance and ESR are measured with  $I(\text{mA}) = 8(C \cdot U_R)$

**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  $U_R$



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**REVISION: Initial Release**  
3/30/2023

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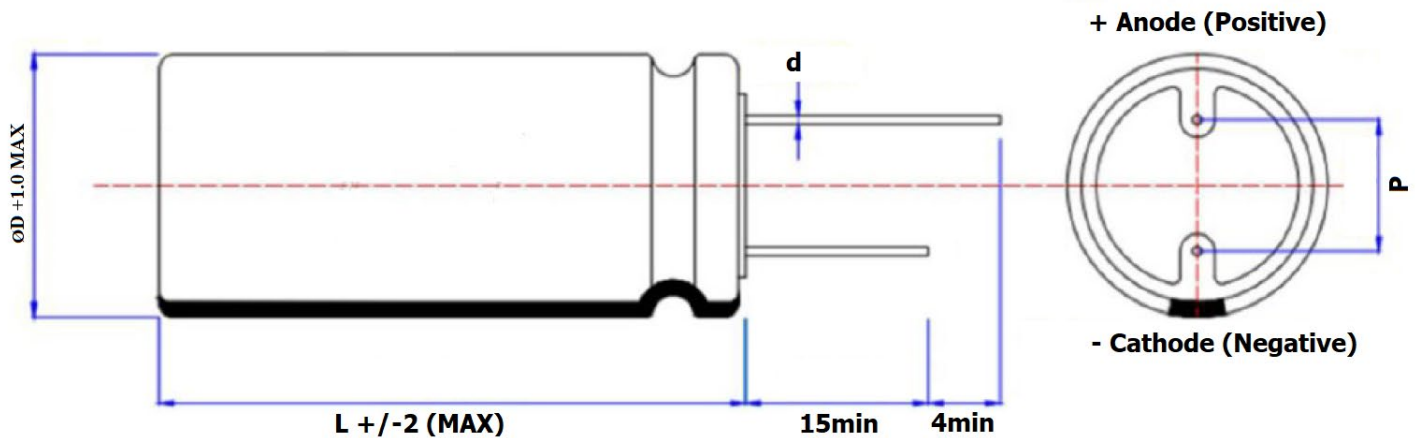


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## Mechanical Specifications



Dimensions	D	L	P	d
ADCR-E02R7SA504MB	6.3±1.0	12.5±1.5	2.5±0.5	0.5±0.05
ADCR-E02R7SA105MB	6.3±1.0	12.5±1.5	2.5±0.5	0.5±0.05
ADCR-E02R7SB105MB	8±1.0	13±1.5	3.5±0.5	0.6±0.05
ADCR-E02R7SA205MB	8±1.0	20±1.5	3.5±0.5	0.6±0.05
ADCR-E02R7SA335MB	8±1.0	20±1.5	3.5±0.5	0.6±0.05
ADCR-E02R7SA505MB	8±1.0	24±1.5	3.5±0.5	0.6±0.05
ADCR-E02R7SB505MB	10±1.0	20±1.5	5.0±0.5	0.6±0.05
ADCR-E02R7SA605MB	10±1.0	20±1.5	5.0±0.5	0.6±0.05
ADCR-E02R7SA705MB	10±1.0	20±1.5	5.0±0.5	0.6±0.05
ADCR-E02R7SA106MB	10±1.0	25±2.0	5.0±0.5	0.6±0.05

**Dimensions: mm**



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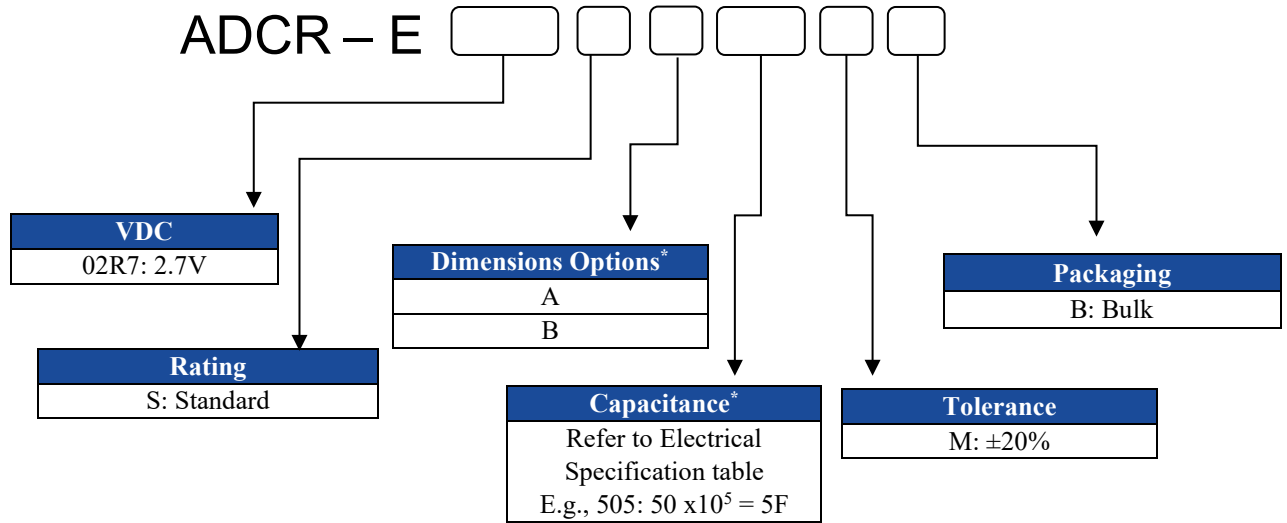


Various Sizes

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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 1.0F 2.7V capacitor

Capacitance (F)

Rated Voltage (V)

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



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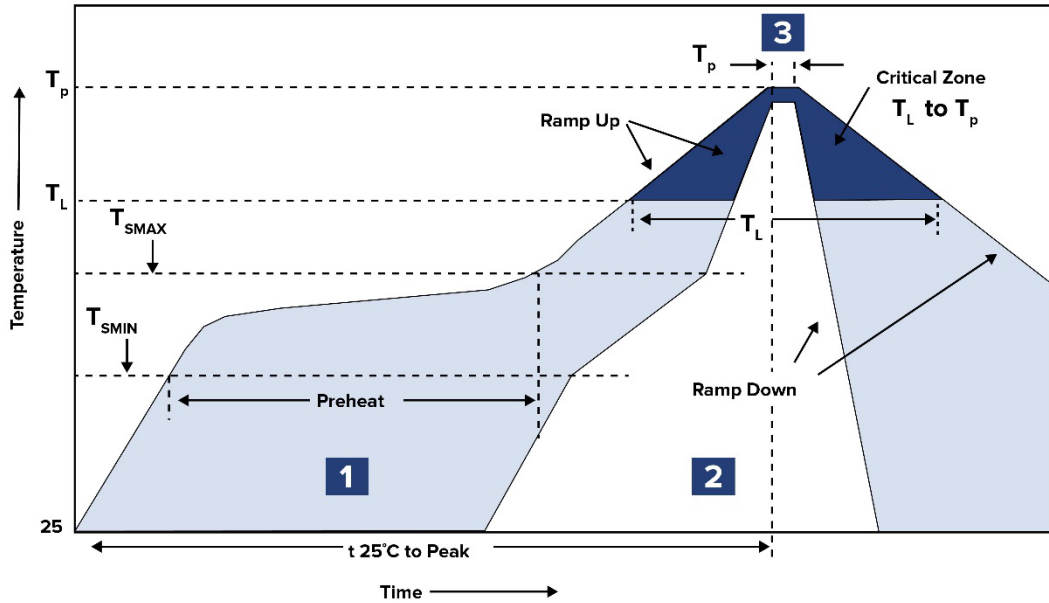


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## Reflow Profile



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	Quantity (PCS/bag)
ADCR-E02R7SA504MB	2000
ADCR-E02R7SA105MB	2000
ADCR-E02R7SB105MB	1500
ADCR-E02R7SA205MB	1000
ADCR-E02R7SA335MB	1000
ADCR-E02R7SA505MB	1000
ADCR-E02R7SB505MB	800
ADCR-E02R7SA605MB	800
ADCR-E02R7SA705MB	800
ADCR-E02R7SA106MB	600

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