

AEC-Q200 EDLC Supercapacitors



ADCR-S03R0Q

Request Samples



Check Inventory



Various Sizes

RoHS/RoHS II Compliant

MSL Level = 1

Features

- High Energy density of over 3.91Wh/Kg
- Low Leakage Current as small as 25μA
- Low Self-discharge rate, 72 hours @ discharge <5%
- Excellent cycle life of >500K cycles
- Green, meet RoHS requirements.

Applications

- Automotive and Transportation
- Regenerative braking
- Automotive electronics (infotainment, ADAS, E-latch, and lighting systems)
- Backup power
- Power assist
- Renewable energy

Electrical Specifications

Part Number	Rated Voltage (V _R)	Surge Voltage (max)	Capacitance	Tolerance	DC ESR (Max)	AC ESR (Max)	Continuous Current (Max)	Peak Current (Max)	Leakage Current (Max)	Stored Energy (Max)	Gravimetric Energy Density
AHCR-S04R0S	DC(V)	DC(V)	Farads	0 ~ +30%	mΩ	mΩ	A	A	mA	Wh	Wh/kg
ADCR-S03R0QA106RB	3.0V	3.15	10	R	50	25	1.75	10.00	0.025	0.0125	3.91
ADCR-S03R0QA156RB	3.0V		15	R	33	35	1.54	10.98	0.035	0.0188	4.36
ADCR-S03R0QA256RB	3.0V		25	R	25	15	2.96	23.08	0.070	0.0313	4.17
ADCR-S03R0QA506RB	3.0V		50	R	15	11	5.02	42.86	0.100	0.0625	4.70
ADCR-S03R0QA107RB	3.0V		100	R	10	8	7.39	75.00	0.260	0.1250	5.95

Operating Temperature: -40°C to +65°C.

Storage Temperature: -40°C to +70°C, RH<75%, Max. Humidity.

Test Conditions: +20°C, 65%RH.

All parameters are measured according to the IEC 62813 standard.

Capacitance and DC ESR: Measured with $I(mA) = (4 \cdot C \cdot V_R)$

AC ESR: 1KHz

Continuous Current (Max): Current that causes temperature rise $\Delta T = 15^\circ C$

Peak Current (Max): Max current 1 second peak

Leakage Current (Max): Measured after 72h at rated voltage V_R

Lifetime: 10 years at rated voltage (at 25°C) (Remaining capacitance >80%, $\Delta ESR < 200\%$)

High Temperature Endurance: 1000 hours at rated voltage (at 65°C) (Remaining capacitance >80%, $\Delta ESR < 200\%$)

Cycle Life: 500,000 cycles, charging and discharging between V_R and $\frac{1}{2} V_R$ (at 25°C) (Remaining capacitance >80%, $\Delta ESR < 200\%$)

Shelf Life: 4 years (25°C, uncharged)

ADCR-S03R0Q Series is RoHS Compliant and Pb free.

ADCR-S03R0Q is AEC-Q200 qualified.



12117 Bee Caves Rd, Bldg-3, Suite 200
Bee Cave, TX 78738
Phone: 512-371-6159 Fax: 512-351-8858
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REVISION Initial Release :
5/5/2026

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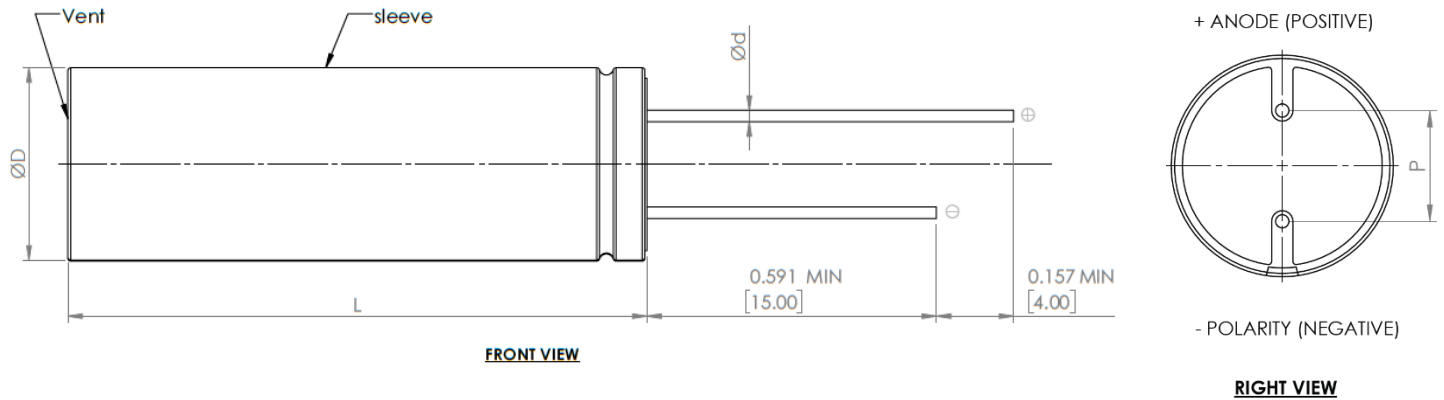


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Mechanical Specifications



Dimensions	Outer Diameter	Height	Pin Spacing	Pin Diameter
	$\varnothing D \pm 0.039$ [1.00]	$L \pm 0.078$ [2.00]	$P \pm 0.078$ [0.50]	$\varnothing d \pm 0.001$ [0.05]
ADCR-S03R0QA106RB	0.393 [10.00]	1.181 [30.00]	0.196 [5.00]	0.023 [0.60]
ADCR-S03R0QA156RB	0.472 [12.50]	0.984 [25.00]	0.196 [5.00]	0.023 [0.60]
ADCR-S03R0QA256RB	0.629 [16.00]	0.984 [25.00]	0.303 [7.70]	0.031 [0.80]
ADCR-S03R0QA506RB	0.708 [18.00]	1.574 [40.00]	0.303 [7.70]	0.031 [0.80]
ADCR-S03R0QA107RB	0.708 [18.00]	2.362 [60.00]	0.303 [7.70]	0.031 [0.80]

DIMENSIONS: INCHES [mm]



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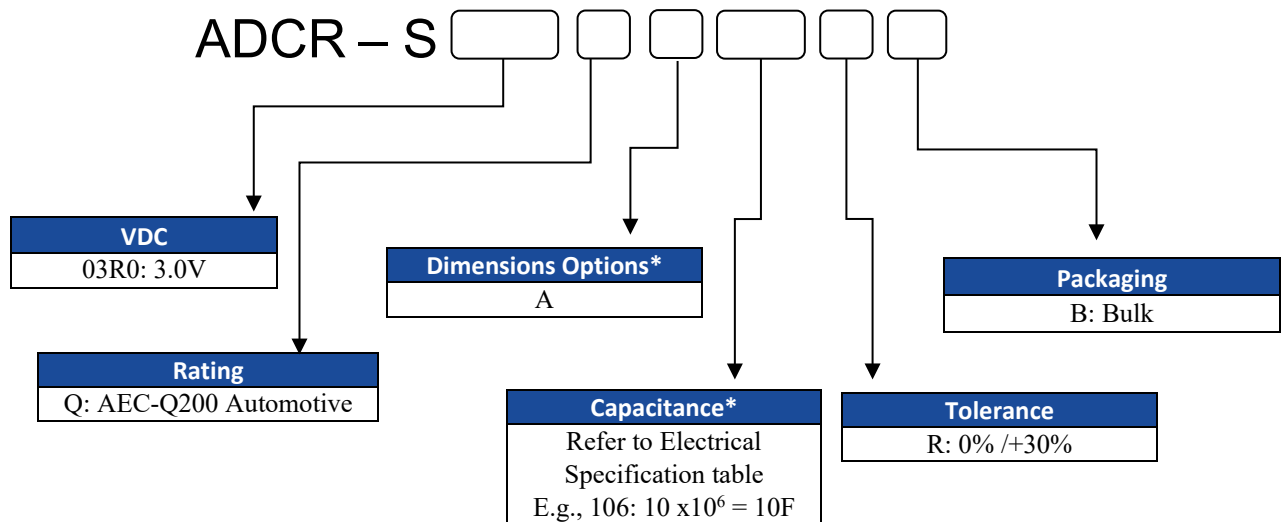


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Part Number Identification



*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 100F 3.0V capacitor

Rated Voltage (V)

Capacitance (F)

Polarity Marking (negative bars on the sleeve to indicate the cathode)



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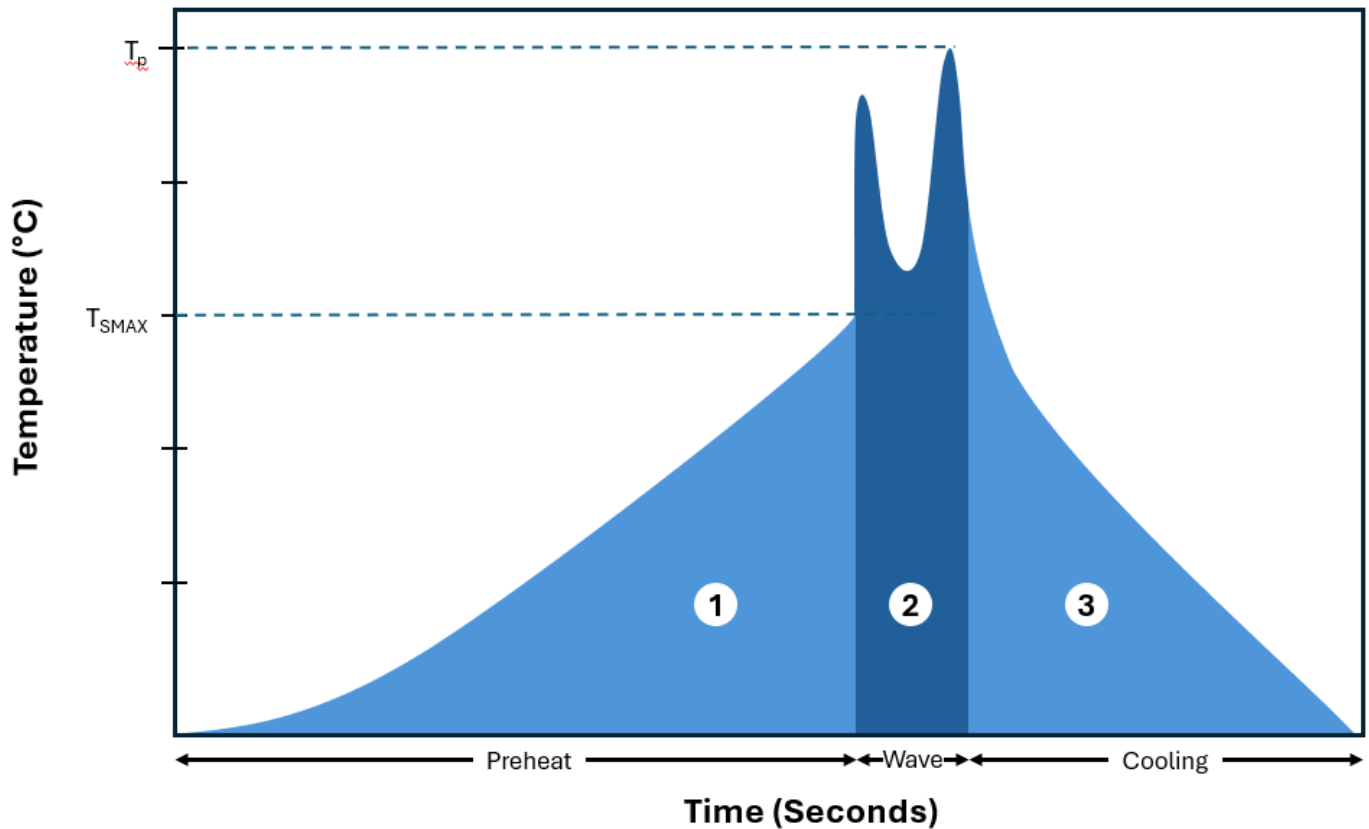


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Wave Profile



Zone	Description	Temperature		Times
1	Preheat	Pb-free	Standard SnPb	60 sec. MAX
		T _{SMIN} ~ T _{SMAX} 25°C ~ 100°C		
	Preheat Rate	T _{PREHEAT} +4°C/Sec MAX		
2	Wave Temperature	T _w 250°C ~ 260°C	T _w 220°C ~ 260°C	10 sec. MAX,
	Wave Peak Temperature	T _p 260°C		5 sec. MAX/wave
3	Cooling Rate	T _{COOLING}		-5°C/Sec MAX

Total soldering time from RT to RT: 4 mins

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Packaging

The product is packaged in a 410 x 320 x 305mm carton.

Each carton contains multiple inner boxes. Each box has the following bulk quantity:

Part Number	SPQ (Pcs/box)
ADCR-S03R0QA106RB	600
ADCR-S03R0QA156RB	400
ADCR-S03R0QA256RB	216
ADCR-S03R0QA506RB	160
ADCR-S03R0QA107RB	160

Transport of Product

This product is not subject to US DOT or IATA regulations UN3499 since maximum stored energy is below 10Wh and can be considered Non-Hazardous Goods.

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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