

3.0V Radial Supercapacitors



ADCR-S03R0S

Request Samples



Check Inventory



Various Sizes

RoHS/RoHS II Compliant

MSL Level = 1

Features

- High Voltage 3.0V Series
- 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	Stored Energy (Max)	Gravimetric Energy Density	Power Density	Volumetric Energy Density
ADCR-S03R0S	DC(V)	Farads	±%	mΩ	A	A	mA	mWh	Wh/kg	kW/kg	Wh/L
ADCR-S03R0SA105MB	3.0V	1	±20	350	0.28	1.11	0.008	1.25	1.37	3.53	1.91
ADCR-S03R0SA305MB	3.0V	3	±20	120	0.84	3.31	0.013	3.75	2.82	4.05	3.73
ADCR-S03R0SA335MB	3.0V	3.3	±20	120	0.92	3.55	0.013	4.13	1.77	4.02	4.11
ADCR-S03R0SA505MB	3.0V	5	±20	80	1.39	5.36	0.016	6.25	4.40	9.90	5.18
ADCR-S03R0SB505MB	3.0V	5	±20	75	1.40	5.45	0.016	6.25	4.03	9.68	3.98
ADCR-S03R0SA605MB	3.0V	6	±20	75	1.65	6.21	0.024	7.50	4.21	8.43	4.77
ADCR-S03R0SA605QB	3.0V	6	-10/+30	75	1.65	6.21	0.024	7.50	4.21	8.43	4.77
ADCR-S03R0SA106MB	3.0V	10	±20	65	2.65	9.09	0.032	12.50	5.71	7.90	6.37
ADCR-S03R0SA156MB	3.0V	15	±20	55	3.86	12.33	0.052	18.75	7.08	7.72	6.11
ADCR-S03R0SA256MB	3.0V	25	±20	30	6.52	21.43	0.075	31.25	5.04	6.05	6.22
ADCR-S03R0SA306MB	3.0V	30	±20	30	7.63	23.68	0.075	37.50	5.15	5.15	6.22

Operating Temperature: -40°C to +65°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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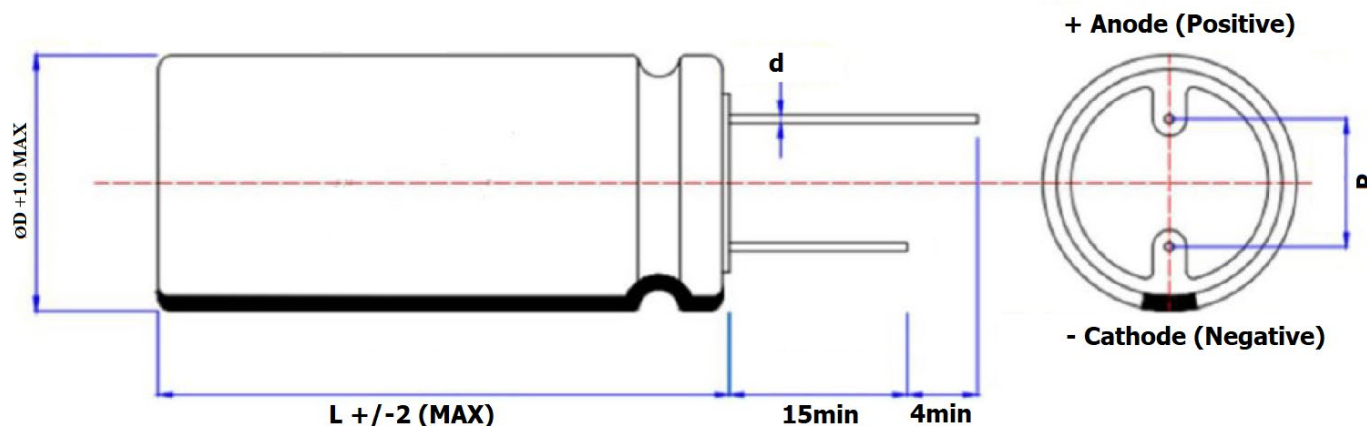


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Mechanical Specifications



Dimensions	D	L	P	d
ADCR-S03R0SA105MB	8±1.0	13±1.5	3.5±0.5	0.6±0.05
ADCR-S03R0SA305MB	8±1.0	20±1.5	3.5±0.5	0.6±0.05
ADCR-S03R0SA335MB	8±1.0	20±1.5	3.5±0.5	0.6±0.05
ADCR-S03R0SA505MB	8±1.0	24±1.0	3.5±0.5	0.6±0.05
ADCR-S03R0SB505MB	10±1.0	20±1.5	5.0±0.5	0.6±0.05
ADCR-S03R0SA605MB	10±1.0	20±1.5	5.0±0.5	0.6±0.05
ADCR-S03R0SA605QB	10±1.0	20±1.5	5.0±0.5	0.6±0.05
ADCR-S03R0SA106MB	10±1.0	25±2.0	5.0±0.5	0.6±0.05
ADCR-S03R0SA156MB	12.5±1.0	25±2.0	5.0±0.5	0.6±0.05
ADCR-S03R0SA256MB	16±1.0	25±2.0	7.5±0.5	0.8±0.05
ADCR-S03R0SA306MB	16±1.0	30±2.0	7.5±0.5	0.8±0.05

Dimensions: mm



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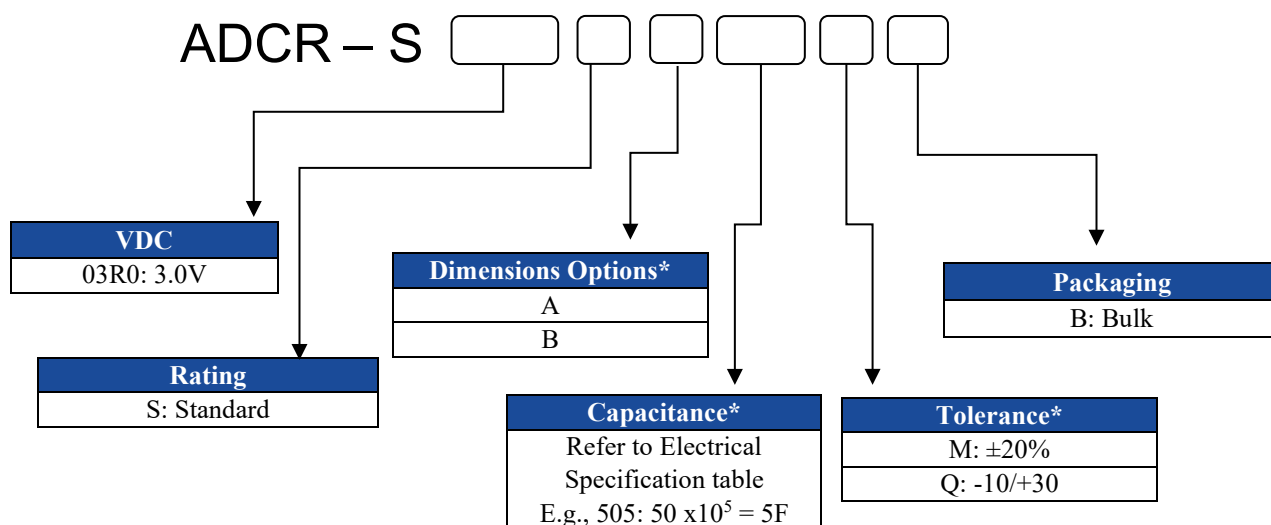


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Part Number Identification



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

Part Marking



Example of the Markings of a 1.0F 3.0V capacitor

Capacitance (F)

Rated Voltage (V)

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



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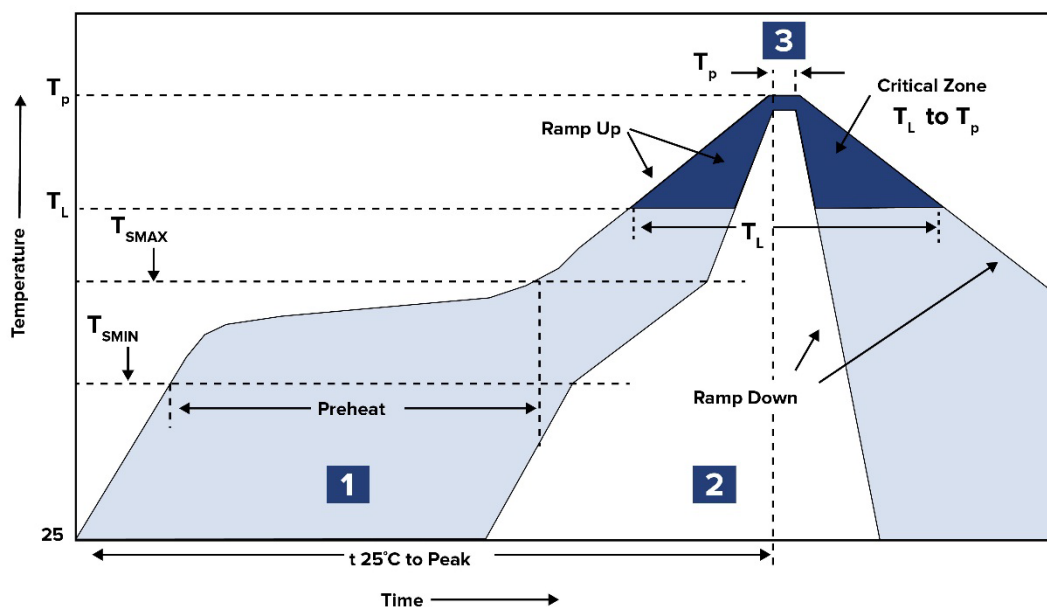


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Reflow Profile



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/Tray)
ADCR-S03R0SA105MB	160
ADCR-S03R0SA305MB	120
ADCR-S03R0SA335MB	120
ADCR-S03R0SA505MB	100
ADCR-S03R0SB505MB	120
ADCR-S03R0SA605MB	120
ADCR-S03R0SA605QB	120
ADCR-S03R0SA106MB	80
ADCR-S03R0SA156MB	60
ADCR-S03R0SA256MB	50
ADCR-S03R0SA306MB	50

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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