

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 +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 :
5/26/2023

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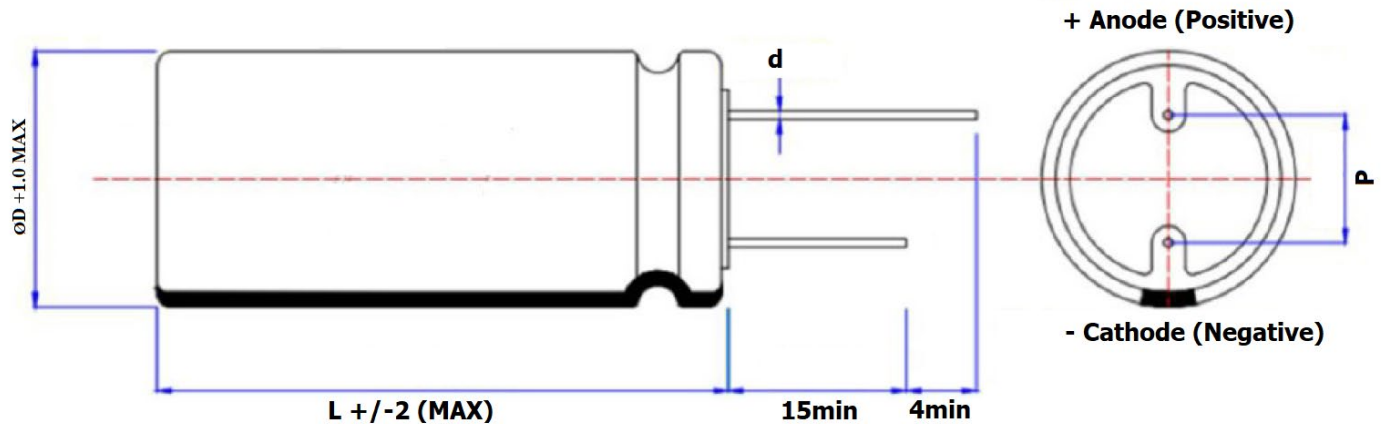


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Mechanical Specifications



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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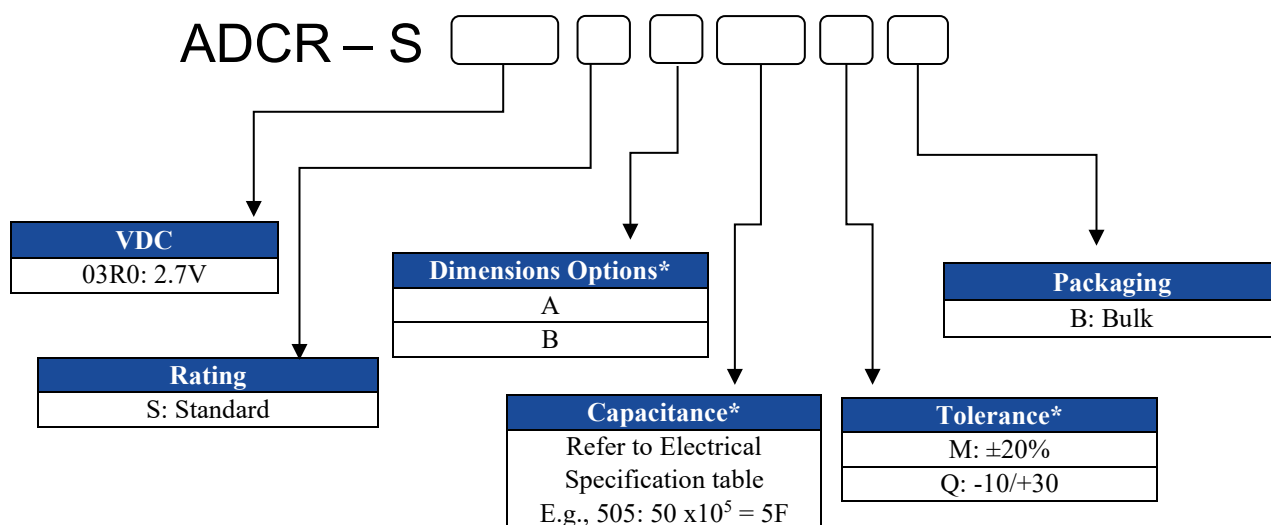


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Part Number Identification



*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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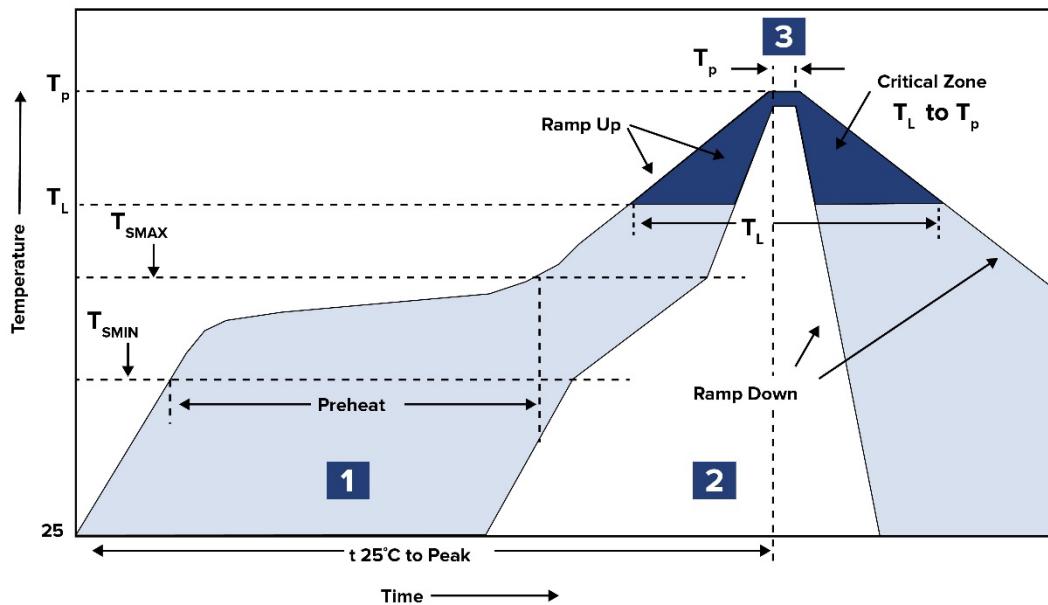


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Reflow Profile



Zone	Description	Temperature	Times
1	Preheat	$T_{SMIN} \sim T_{SMAX}$ $100^{\circ}C \sim 150^{\circ}C$	60 ~ 120 sec.
2	Reflow	T_L $200^{\circ}C$	30 ~ 40 sec.
3	Peak heat	T_p $240^{\circ}C \pm 5^{\circ}C$	5 sec. MAX

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Packaging

Part Number	Quantity (PCS/bag)
ADCR-S03R0SA105MB	1500
ADCR-S03R0SA305MB	1000
ADCR-S03R0SA335MB	1000
ADCR-S03R0SA505MB	1000
ADCR-S03R0SB505MB	800
ADCR-S03R0SA605MB	800
ADCR-S03R0SA605QB	800
ADCR-S03R0SA106MB	600
ADCR-S03R0SA156MB	500
ADCR-S03R0SA256MB	250
ADCR-S03R0SA306MB	200

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