

Wide Temperature, 2.7V Radial Super Capacitor



ADCR-T02R7S

Request Samples



Check Inventory



Various Sizes

RoHS/RoHS II Compliant

MSL Level = 1

Features

- Extended Temperature 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-T02R7S	DC(V)	Farads	±%	mΩ	A	A	mA	mWh	Wh/kg	kW/kg	Wh/L
ADCR-T02R7SA504MB	2.7V	0.5	20	500	0.13	0.54	0.008	0.51	1.13	4.05	1.31
ADCR-T02R7SA105MB	2.7V	1	20	350	0.25	1.00	0.008	1.01	1.14	2.93	1.55
ADCR-T02R7SA205MB	2.7V	2	20	180	0.50	1.99	0.012	2.03	1.67	4.18	2.52
ADCR-T02R7SB205MB	2.7V	2	20	260	0.49	1.78	0.013	2.03	1.81	3.13	2.02
ADCR-T02R7SA305MB	2.7V	3	20	120	0.76	2.98	0.013	3.04	2.27	5.67	3.02
ADCR-T02R7SA335MB	2.7V	3.3	20	120	0.83	3.19	0.015	3.34	1.45	3.29	3.32
ADCR-T02R7SA505MB	2.7V	5	20	80	1.25	4.82	0.016	5.06	3.54	6.97	4.19
ADCR-T02R7SA605MB	2.7V	6	20	75	1.25	4.91	0.016	6.08	3.51	7.02	3.87
ADCR-T02R7SA705MB	2.7V	7	20	70	1.72	6.34	0.028	7.09	3.83	7.04	4.51
ADCR-T02R7SA106MB	2.7V	10	20	65	2.39	8.18	0.030	20.25	5.77	5.77	10.31
ADCR-T02R7SA256MB	2.7V	25	20	30	5.87	19.29	0.070	25.31	4.30	5.16	5.04

Operating Temperature: -40°C to +85°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 $I(mA) = 8(C * U_R)$

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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3/30/2023

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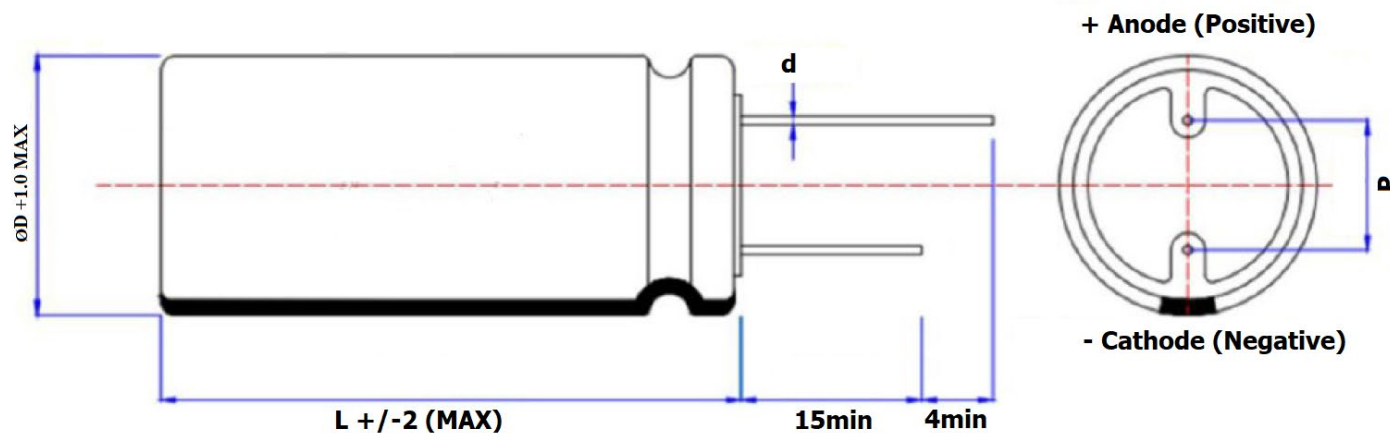


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Mechanical Specifications



Dimensions	D	L	P	d
ADCR-T02R7SA504MB	6.3±1.0	12.5±1.0	2.5±0.5	0.5±0.05
ADCR-T02R7SA105MB	8.0±1.0	13.0±1.0	3.5±0.5	0.6±0.05
ADCR-T02R7SA205MB	8.0±1.0	16.0±1.5	3.5±0.5	0.6±0.05
ADCR-T02R7SB205MB	8.0±1.0	20.0±1.0	3.5±0.5	0.6±0.05
ADCR-T02R7SA305MB	8.0±1.0	20.0±1.0	3.5±0.5	0.6±0.05
ADCR-T02R7SA335MB	8.0±1.0	20.0±1.0	3.5±0.5	0.6±0.05
ADCR-T02R7SA505MB	8.0±1.0	24.0±1.0	3.5±0.5	0.6±0.05
ADCR-T02R7SA605MB	10.0±1.0	20.0±1.0	5.0±0.5	0.6±0.05
ADCR-T02R7SA705MB	10.0±1.0	20.0±1.0	5.0±0.5	0.6±0.05
ADCR-T02R7SA106MB	10.0±1.0	25.0±1.0	5.0±0.5	0.6±0.05
ADCR-T02R7SA256MB	16.0±0.5	25.0±2.0	7.5±0.5	0.8±0.05

Dimensions: mm



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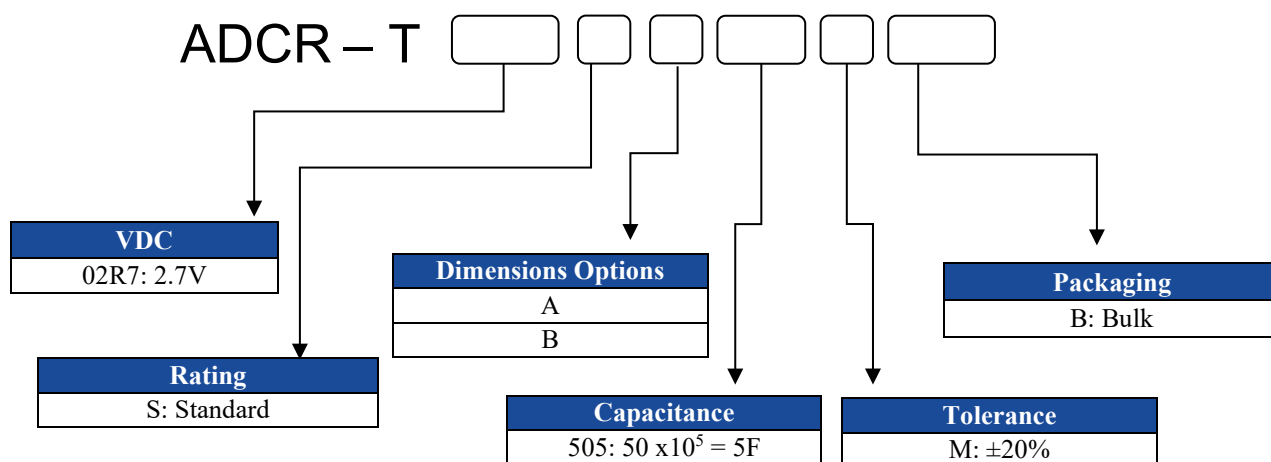


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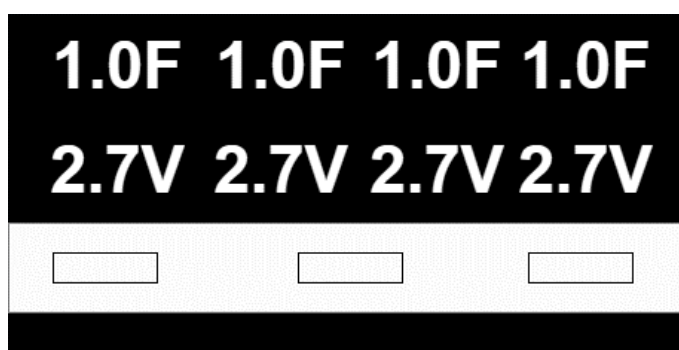
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Part Number Identification



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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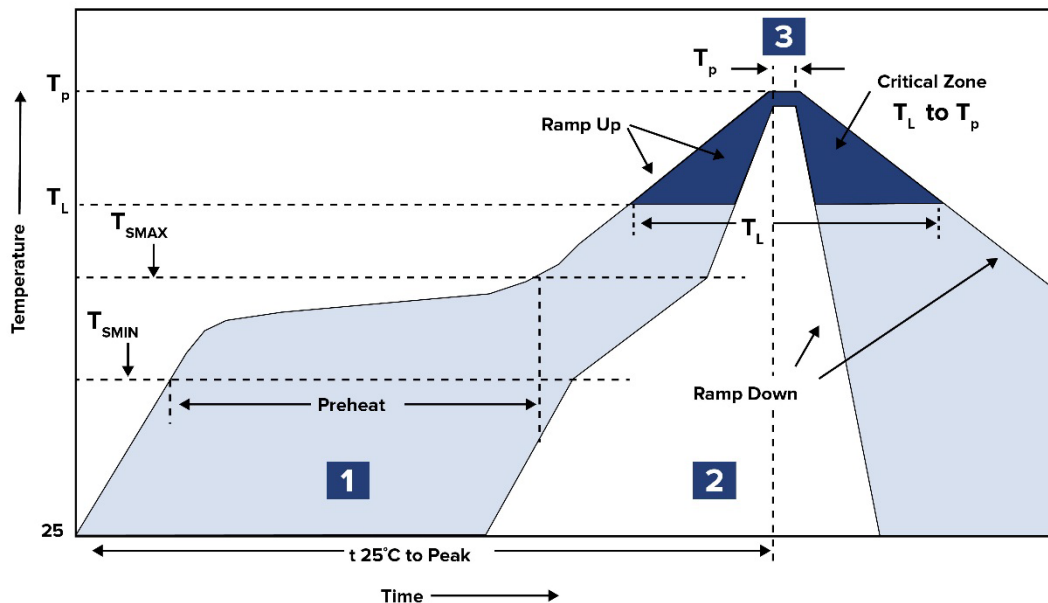


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Reflow Profile



Zone	Description	Temperature	Times
1	Preheat	$T_{SMIN} \sim T_{SMAX}$ $100^{\circ}C \sim 150^{\circ}C$	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-T02R7SA504MB	2000
ADCR-T02R7SA105MB	1500
ADCR-T02R7SA205MB	1000
ADCR-T02R7SB205MB	1000
ADCR-T02R7SA305MB	1000
ADCR-T02R7SA335MB	1000
ADCR-T02R7SA505MB	1000
ADCR-T02R7SA605MB	800
ADCR-T02R7SA705MB	800
ADCR-T02R7SA106MB	600
ADCR-T02R7SA256MB	250

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