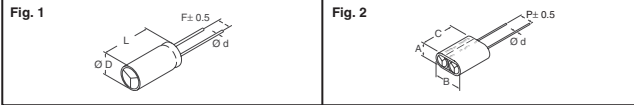




Aerogel Supercapacitors – A, B and P Series

The PowerStor Aerogel Capacitor is a unique, ultra-high capacitance device based on a novel type of carbon foam, known as carbon aerogel. Aerogel capacitors are similar to ultracapacitors and electrochemical double layer capacitors (EDLCs) and gold capacitors with the added benefit of low ESR. Temperature range: -25°C ~ 70°C

- A Series: Features:** • Ultra low ESR • Low leakage current • Long cycle life • High usable capacity • 2.5VDC working voltage can be configured in series for higher voltage applications. **Applications:** • Pulse power • Hold-up power • DC/DC converters • Hybrid battery packs • Valve and solenoid actuation
- B Series: Features:** • Higher energy density • Very low ESR • Low leakage currents • Long cycle life • 2.5VDC working voltage can be configured in series for higher voltage applications. **Applications:** • Main power • Hybrid battery packs • Hold-up power • Pulse power
- P Series: Features:** • Available in an ultra-low ESR version (PA), a low ESR but higher energy density version (PB) or Ultra Low ESR and high energy density (PM) • 5.0VDC working voltage. **Applications:** PB Series: • Memory, microprocessor or RTC backup; PA and PM Series: • Pulse power • Hybrid battery packs • Hold-up power • Valve and solenoid actuation

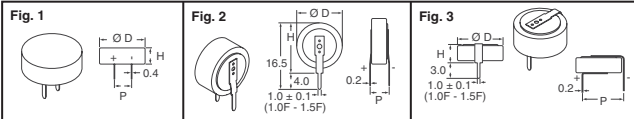


Capacitance (F)	Nominal Internal Series Res. @ 1kHz (Ω)	Dimensions — mm				Digi-Key Part No.	Price Each			PowerStor Part No.
		D	L	F (±0.02)	F (±0.5)		1	10	100	
Fig. 1 — A Series										
.47	.150	8.5	21.0	.50	3.5	283-2771-ND	3.90	3.72	2.70	A0820-2R5474-R
1.0	.090	10.5	22.3	.60	5.0	283-2772-ND	5.85	5.58	4.05	A1020-2R5105-R
1.5	.060	10.5	31.5	.60	5.0	283-2773-ND	7.80	7.44	5.40	A1030-2R5155-R
4.7	.025	16.5	38.0	.80	7.5	283-2774-ND	14.63	13.95	10.13	A1635-2R5475-R
Fig. 1 — B Series										
.22	3.00	5.5	12.0	.50	2.0	283-2775-ND	1.46	1.40	1.02	B0510-2R5224-R
1.0	4.00	8.5	13.5	.50	3.5	283-2776-ND	2.44	2.33	1.69	B0810-2R5105-R
1.5	3.00	10.5	14.4	.60	5.0	283-2779-ND	3.67	3.51	2.55	B1010-2R5155-R
2.2	2.00	8.5	21.0	.50	3.5	283-2777-ND	4.88	4.65	3.38	B0820-2R5225-R
3.3	1.50	10.5	22.3	.60	5.0	283-2780-ND	6.11	5.83	4.23	B1020-2R5335-R
4.7	.150	8.5	31.0	.50	3.5	283-2778-ND	6.50	6.20	4.50	B0830-2R5475-R
6.8	1.00	10.5	31.5	.60	5.0	283-2781-ND	7.31	6.98	5.07	B1030-2R5685-R
10	.060	13.5	28.4	.60	5.0	283-2782-ND	8.58	8.19	5.94	B1325-2R5106-R
22	.040	16.5	38.0	.80	7.5	283-2783-ND	17.06	16.28	11.82	B1635-2R5226-R
33	.030	18.5	38.0	.80	7.5	283-2784-ND	23.17	22.11	16.05	B1835-2R5336-R
50	.025	18.5	42.0	.80	7.5	283-2785-ND	29.02	27.69	20.10	B1840-2R5506-R
100	.020	18.5	60.0	.80	7.5	283-2824-ND	37.70	35.96	26.10	B1860-2R5107-R

Capacitance (F)	Nominal Internal Series Res. @ 1kHz (Ω)	Dimensions — mm				Digi-Key Part No.	Price Each			PowerStor Part No.	
		A	B	C	P (±0.5)		1	10	100		
Fig. 2 — PA Series											
.22	3.00	8.5	16.8	21.5	0.5	11.8	283-2786-ND	6.34	6.05	4.39	PA-5R0V224-R
.47	2.00	10.5	20.8	21.5	0.6	5.3	283-2787-ND	8.06	7.69	5.58	PA-5R0V474-R
Fig. 2 — PB Series											
.10	10.0	5.5	10.8	12.5	0.5	7.3	283-2788-ND	3.41	3.26	2.37	PB-5R0V104-R
.47	2.00	8.5	16.8	12.5	0.5	11.8	283-2790-ND	4.65	4.44	3.22	PB-5R0V474-R
1.0	1.00	8.5	16.8	12.5	0.5	11.8	283-2789-ND	7.31	6.98	5.07	PB-5R0V105-R
NEW! Fig. 2 — PM Series NEW!											
1.5	0.07	11.0	21.3	23.0	0.6	5.3	283-2857-ND	10.89	10.39	7.54	PM-5R0V155-R
3.0	0.05	11.0	21.3	32.5	0.6	5.3	283-2858-ND	14.46	13.80	10.02	PM-5R0V305-R

Supercapacitors – KR Series

Features: • Wide range of high capacitance coin cell style products for use in memory and RTC back-up applications: computers, camera's, camcorders, telephones, printers, car stereos, CCTV, set top box and PDP • Vinyl sleeve protection **Specifications:** • Surge Voltage: 6.3V • Capacitance Tolerance: -20% ~ 80% (20°C) • Operating Temperature Range: -25°C ~ 70°C



Working Voltage (DC)	Capacitance (F)	Internal Resistance (Ω)	Dimensions — mm			Digi-Key Part No.	Price Each			PowerStor Part No.
			φD	H	P		1	10	100	
Fig. 1 — C Type										
5.5	.10	75	13.5	7.5	5	283-2806-ND	2.11	2.02	1.47	KR-5R5C104-R
	.22	75	13.5	7.5	5	283-2807-ND	2.11	1.95	1.47	KR-5R5C224-R
	.33	50	13.5	7.5	5	283-2808-ND	2.11	1.95	1.47	KR-5R5C334-R
	.47	50	13.5	7.5	5	283-2809-ND	3.74	3.45	2.59	KR-5R5C474-R
	1.0	30	21.5	7.5	5	283-2810-ND	4.23	4.03	2.93	KR-5R5C105-R
1.5	30	21.5	7.5	5	283-2811-ND	5.53	5.10	3.83	KR-5R5C155-R	
Fig. 2 — V Type										
5.5	.10	75	11.5	12.5	5	283-2812-ND	2.11	1.95	1.47	KR-5R5V104-R
	.22	75	11.5	12.5	5	283-2813-ND	2.11	2.02	1.47	KR-5R5V224-R
	.33	50	11.5	12.5	5	283-2814-ND	2.11	2.02	1.47	KR-5R5V334-R
	.47	50	11.5	12.5	5	283-2815-ND	3.74	3.57	2.59	KR-5R5V474-R
	1.0	30	19	19.5	5	283-2816-ND	4.23	3.90	2.93	KR-5R5V105-R
1.5	30	19	19.5	5	283-2817-ND	5.53	5.10	3.83	KR-5R5V155-R	
Fig. 3 — H Type										
5.5	.10	75	11.5	5	10	283-2818-ND	2.11	1.95	1.47	KR-5R5H104-R
	.22	75	11.5	5	10	283-2819-ND	2.11	1.95	1.47	KR-5R5H224-R
	.33	50	11.5	5	10	283-2820-ND	2.11	1.95	1.47	KR-5R5H334-R
	.47	50	11.5	5	10	283-2821-ND	3.74	3.45	2.59	KR-5R5H474-R
	1.0	30	19	6.5	20	283-2822-ND	4.23	3.90	2.93	KR-5R5H105-R
1.5	30	19	6.5	20	283-2823-ND	5.53	5.10	3.83	KR-5R5H155-R	

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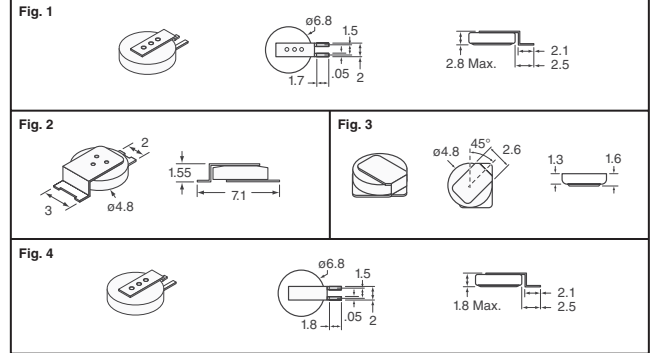
NEW! Surface Mount Supercapacitors – KS, KSL and KSR Series



KS Series: Features: • Eco-friendly • Long life cycle • High-rated voltage **Specifications:** • Working Voltage: KS-2R8-334-R: 2.8V; KS-3R3-224-R: 3.3V • Capacitance Tolerance: -20% ~ 80% (20°C) • Operating Temperature Range: KS-2R8-334-R: -25°C ~ 70°C; KS-3R3-224-R: -10°C ~ 60°C **Applications:** RTC back-up (MP3, PMP, MD Player) DSC Wireless and cellular phones, Pagers and PDAs • Solar watch and solar calculators

KSL Series: Features: • Eco-friendly • Compatible with lead free reflow solder (260°C peak) **Specifications:** • Working Voltage: 3.3V • Capacitance Tolerance: -20% ~ 80% (20°C) • Operating Temperature Range: -25°C ~ 70°C **Applications:** • RTC back-up (MP3, PMP, MD Player) DSC Wireless and Cellular phones, pagers, PDAs, etc. • Solar watch and solar calculators

KSR Series: Features: • Eco-friendly **Specifications:** • Working Voltage: 3.3V • Capacitance Tolerance: -20% ~ 80% (20°C) • Operating Temperature Range: -10°C ~ 60°C **Applications:** • RTC back-up (MP3, PMP, MD Player) DSC Wireless and Cellular phones, pagers, PDAs, etc. • Solar watch and solar calculators



Capacitance (F)	Nominal Internal Series Resistance @ 1kHz (Ω)	Digi-Key Part No.	Price Each			Tape and Reel Qty.	Reel Pricing	PowerStor Part No.
			1	10	100			
Fig. 1 — KS Series								
0.33	100	283-2862-ND	2.11	2.02	1.47	—	—	KS-2R8-334-R
0.22	200	283-2863-ND	1.85	1.77	1.29	—	—	KS-3R3-224-R
Fig. 2 — KSL Series								
0.07	100	283-2860-1-ND†	1.69	1.56	1.31	4,000	585.00/M	KSL-3R3703E-R
Fig. 3 — KSL Series								
0.07	100	283-2861-1-ND‡	1.69	1.56	1.31	4,000	585.00/M	KSL-3R3703S-R
Fig. 4 — KSR Series								
0.20	200	283-2859-ND	1.46	1.40	1.02	—	—	KSR-3R3204-R

† For Tape and Reel part number, change 1-ND to 2-ND. ‡ Cut Tape

AVX BestCap® Ultra-Low ESR High Power Pulse Supercapacitor



Features: AVX's BestCap technology provides excellent high power pulse characteristics based upon the combination of very high capacitance and ultra-low ESR, together with extremely low leakage current. Based on a unique patented aqueous chemistry and an innovative design, this series offers high capacitance, even with short pulse applications such as in GSM, GPRS, Edge, and PCS based systems.

While BestCap technology offers more efficient energy savings in battery circuits than conventional supercapacitors, its low ESR results in a high current handling capability, making this an ideal solution for any portable or wireless device requiring high power availability.

Specifications: • Capacitance Tolerance: -20% ~ 80% • Temperature Range: A Series: -20°C ~ 75°C; B Series: -20°C ~ 70°C

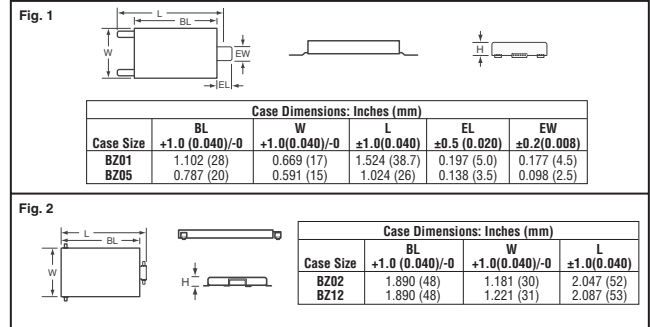


Fig.	Capacitance (F)	Rated Voltage (V)	Typ. ESR @ 1 kHz (mΩ)	Maximum Leakage Current (µA)	Dim. H (mm)	Digi-Key Part No.	Price Each			AVX Part No.
							1	10	100	
1	.050	3.6	100	5	3.2	478-3521-ND	15.05	12.90	10.75	BZ013B503ZSB
	.100	5.5	80	10	7.2	478-3522-ND	19.25	16.50	13.75	BZ015A104ZSB
	.022	12.0	350	5	7.6	478-3523-ND	26.25	22.50	18.75	BZ01CA223ZSB
	.015	5.5	250	5	2.7	478-3845-ND	15.75	13.50	11.25	BZ055B153ZSB
	.033	5.5	250	5	3.5	478-3846-ND	18.20	15.60	13.00	BZ05A333ZSB
2	.40	5.5	35	40	6.9	478-3524-ND	53.90	46.20	38.50	BZ025A404ZLB
	1.0	5.5	35	40	6.1	478-3525-ND	68.25	58.50	48.75	BZ125A105ZLB