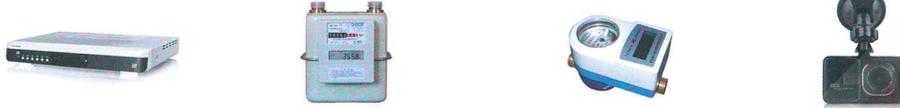


Product Application

- 1 It is used as a reserve power source, data protection and spare in the electronic products with memory function.



- 2 It is used as a power source of device with mini watt.



- 3 It is used for electric start system of various internal-combustion engine with storage battery .



- 4 It is used as dc operating power source of high-voltage switch equipment.



- 5 It is used for starting the electric vehicles , recovering accelerating and braking energy ,can effectively protect the storage battery,lengthen the life of the storage battery economize the energy, protect the environment .



- 6 It is used for the reserve power source or short-time energy-compensation power source of continuous power supply system of important users in chemical fiber , chemical industry and petroleum.



- 7 It is used for the equipments of electric pulse technology.

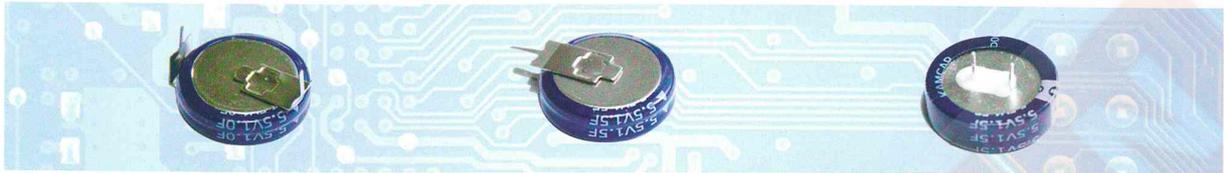


COIN TYPE SERIES

SE Series

Characteristics: Standard energy series.

Typical application: Solar lighting, backup power, medical equipment, LED lighting, handheld electronics



Series name	SE Series
Type name	SE -5R5-D
Rated voltage	5.5V
Surge voltage	5.8V
Capacitance range	0.1F~1.5F
Operating temperature range	-25~ +70°C
Life time	Normal temperature cycle life: at 25°C, cycle 50,000 times between VR to 1/2 VR , capacity attenuation ≤ 30%, internal resistance change ≤ 3 times . High temperature endurance life: at 60°C, keep rated voltage for 1000 hours. Capacity attenuation ≤ 30%, internal resistance change ≤ 3 times

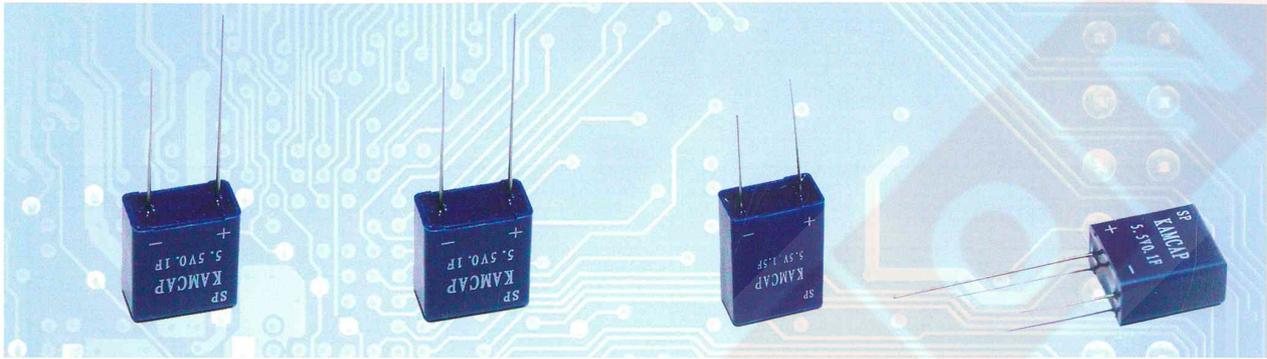
Model	C(F)	ESR (Ω)		W (g)	Size (mm)		
		DC	AC(1kHz)		D	H	P
SE-5R5-D104VY	0.1	100	50	2.7	13.5	6.0	5
SE-5R5-D104VYH	0.1	100	50	1.2	11	6.5	10.5
SE-5R5-D104VYV	0.1	100	50	1.2	11	12.5	5
SE-5R5-D224VY	0.22	80	40	2.8	13.5	6.5	5
SE-5R5-D224VYH	0.22	80	40	1.3	11	6.5	10.5
SE-5R5-D224VYV	0.22	80	40	1.3	11	12.5	5
SE-5R5-D334VY	0.33	80	40	2.9	13.5	6.5	5
SE-5R5-D334VYH	0.33	80	40	1.3	11	6.5	10.5
SE-5R5-D334VYV	0.33	80	40	1.3	11	12.5	5
SE-5R5-D474VY	0.47	80	40	6.5	13.5	6.5	5
SE-5R5-D474VYH	0.47	80	40	2.5	11	6.5	10.5
SE-5R5-D474VYV	0.47	80	40	2.5	11	12.5	5
SE-5R5-D105VY	1	30	15	8	20.5	7.0	6/5
SE-5R5-D105VYH	1	30	15	3.5	18.5	5.5	19
SE-5R5-D105VYV	1	30	15	3.5	18.5	20	5
SE-5R5-D155VY	1.5	20	10	8.2	20.5	7.0	6/5
SE-5R5-D155VYH	1.5	20	10	3.8	18.5	5.5	19
SE-5R5-D155VYV	1.5	20	10	3.8	18.5	20	5

ENTIRE SEALING SERIES

SP Series

Characteristics: Standard energy series.

Typical application: Solar lighting, backup power, medical equipment, LED lighting, handheld electronics



Series name	SP Series	SE Series
Type name	SP -5R5	SE -5R5
Rated voltage	5.5V	5.5V
Surge voltage	5.8V	5.8V
Capacitance range	0.1F~1.5F	0.1F~1.5F
Operating temperature range	-40 ~ +70°C	-25 ~ +70°C
Life time	Normal temperature cycle life: at 25°C, cycle 50,000 times between VR to 1/2 VR, capacity attenuation ≤ 30%, internal resistance change ≤ 3 times.	
	High temperature endurance life: at 60°C, keep rated voltage for 1000 hours. Capacity attenuation ≤ 30%, internal resistance change ≤ 3 times	

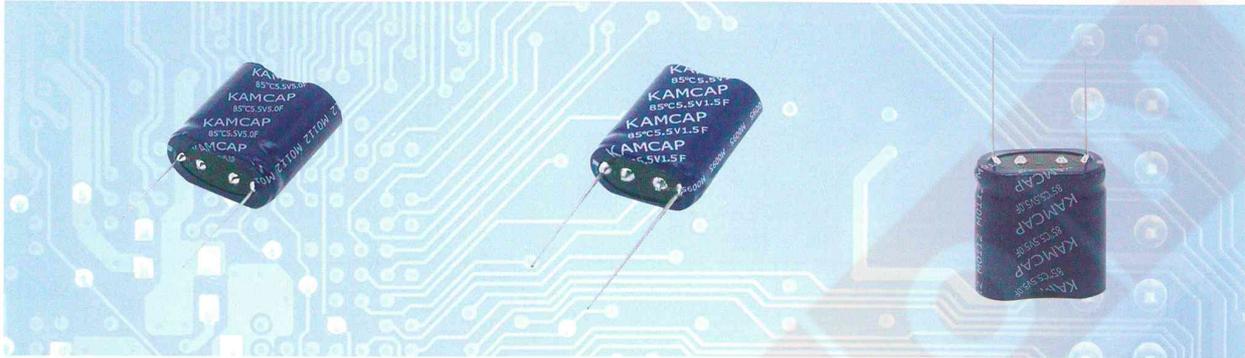
Model	C(F)	ESR (mΩ)		W(g)	Size (mm)			
		DC	AC(1kHz)		T	W	H	P
SP/SE-5R5-Z104VYA	0.1	2400/4800	1200/2400	1.6	6.6	12	13.5	7
SP/SE-5R5-Z224VYA	0.22	1400/2400	700/1200	2.3	8	14.5	13.5	9.1
SP/SE-5R5-Z334VYA	0.33	1200/2400	600/1200	2.9	9.6	18.1	18	12
SP/SE-5R5-Z474VYA	0.47	1200/2400	600/1200	3	9.6	18.1	18	12
SP/SE-5R5-Z105VYA	1	480/1000	240/500	6	11.6	22	25.5	15
SP/SE-5R5-Z155VYA	1.5	480/1000	240/500	4	9.6	18.1	25.5	12
SP/SE-5R5-Z155VYA	1.5	280/800	140/400	6.2	11.6	22	25.5	15

COMBINED SERIES

SP Series

Characteristics: Standard energy series.

Typical application: Solar lighting, backup power, medical equipment, LED lighting, handheld electronics



Series name	SP / SE Series	
Type name	SP -5R5	SE -5R5
Rated voltage	5.5V	5.5V
Surge voltage	5.8V	5.8V
Capacitance range	0.1F~7.5F	0.1F~7.5F
Operating temperature range	-40 ~ +70°C	-25 ~ +70°C
Life time	Normal temperature cycle life: at 25°C, cycle 50,000 times between VR to 1/2 VR, capacity attenuation ≤ 30%, internal resistance change ≤ 3 times .	
	High temperature endurance life: at 60°C, keep rated voltage for 1000 hours. Capacity attenuation ≤ 30%, internal resistance change ≤ 3 times	

Model	C(F)	ESR(mΩ)		W (g)	Size(mm)			
		DC	AC		T	W	H	P
SP/SE-5R5-Z104VY	0.1	2400/4800	1200/2400	0.8	5.5	11	11.5	6.8
SP/SE-5R5-Z224VY	0.22	1400/2400	700/1200	1.2	7	13	11.5	9.1
SP/SE-5R5-Z334VY	0.33	1200/2400	600/1200	2.4	8.5	17	16	12
SP/SE-5R5-Z474VY	0.47	1200/2400	600/1200	2.5	8.5	17	16	12
SP/SE-5R5-Z105VY	1.0	480/1000	240/500	2.9	8.5	16	23	12
SP/SE-5R5-Z105VY	1.0	480/1000	240/500	3.3	10.5	21	23	16
SP/SE-5R5-Z155TY	1.5	480/1000	240/500	3	8.5	16	23	12
SP/SE-5R5-Z155VY	1.5	280/800	140/400	3.5	10.5	21	23	16
SP-5R5-Z205VY	2	240/480	120/240	7	13	26	24	18
SP-5R5-Z355VY	3.5	400	200	7	10.5	21	23	16
SP/SE-5R5-Z405UY	4	200/400	100/200	8.5	13	26	24	18
SP/SE-5R5-Z505UY	5	180/240	90/120	10	13	26	28	18
SP/SE-5R5-Z605UY	6	180/240	90/120	13	13	26	37	18
SP/SE-5R5-Z755UY	7.5	120/200	60/100	15.5	16	32	28	8

WINDING SERIES

HP Series

Characteristics: Winding series.

Typical application: Solar lighting, backup power, medical equipment, LED lighting, handheld electronics



Series name	HP Series		
Type name	HP LR	HP LL	HP
Rated voltage	2.7V	2.7V	3.0V
Surge voltage	2.85V	2.85V	3.15V
Capacitance range	0.15F~3000F	0.35F~10F	1F-500F
Operating temperature range	-40 ~ +70°C	-25 ~ +70°C	-40 ~ +65°C
Life time	Normal temperature cycle life: at 25°C, cycle 50,000 times between VR to 1/2 VR , capacity attenuation ≤ 30%, internal resistance change ≤ 3 times .		
	High temperature endurance life: at 60°C, keep rated voltage for 1000 hours. Capacity attenuation ≤ 30%, internal resistance change ≤ 4 times		

Model	C (F)	ESR (mΩ)		W(g)	Size (mm)		
		DC	AC		D	H	P
HP-2R7-J154VY LR	0.15	500	250	0.4	5	10	2
HP-2R7-J354UY LR	0.35	500	250	0.6	5	12	2
HP-2R7-J504VY LR	0.5	700	350	0.6	6.3	13	2.5
HP-2R7-J704VY LR	0.7	600	300	1.5	8	13	3.5
HP-2R7-J105VY LR	1	600	300	1.5	8	13	3.5
HP-2R7-J335TY LR	3.3	500	120	1.6	8	20	3.5
HP-2R7-J335VY LR	3.3	140	70	2.4	10	20	5
HP-2R7-J475VY LR	4.7	120	60	3.1	12.5	21	5
HP-2R7-J505VYH LR	5	120	60	2	10	20	5
HP-2R7-J705VY LR	7	160	80	2.2	10	20	5
HP-2R7-J805UY LR	8	100	50	4	12.5	21	5
HP-2R7-J106UY LR	10	160	80	4.4	12.5	26	5
HP-2R7-J126UY	12	70	35	6.5	12.5	26	5
HP-2R7-J156UY	15	60	30	7.5	16	26	7.5
HP-2R7-J206UY	20	50	25	11	16	26	7.5
HP-2R7-J256UY	25	50	25	11	16	26	7.5
HP-2R7-J306UY	30	40	20	8.8	16	34	7.5
HP-2R7-J506UY	50	40	20	12.5	18	42	7.5
HP-2R7-J606UY	60	40	20	13	18	42	7.5
HP-2R7-J906UY	90	30	15	20	22	46	10

WINDING SERIES

HP-2R7-J107UY	100	30	15	22	22	46	10
HP-2R7-J127UY	120	30	15	27	25	54	10
HP-2R7-J157UY	150	30	15	32	25	54	10
HP-2R7-J207UY	200	20	10	46	35	62	10
HP-2R7-J307UY	300	20	10	60	35	62	10
HP-2R7-J367UY LR	360	7	3.5	70	35	62	10
HP-2R7-J407UY	400	20	10	70	35	62	10
HP-2R7-J477UY	470	10	5	85	35	62	10
HP-2R7-J657UN	650	10	5	110	35	95	12.5
HP-2R7-J707UN	700	10	5	110	35	95	12.5
HP-2R7-J108UN	1000	10	5	180	50.8	71	21.8
HP-2R7-J128UN	1200	6	3	220	50.8	108	21.8
HP-2R7-J158UN	1500	6	3	290	50.8	108	21.8
HP-2R7-J208UN	2000	4	2	350	50.8	133	21.8
HP-2R7-J248UN	2400	4	2	420	50.8	133	21.8
HP-2R7-J308UN	3000	4	2	570	63.5	133	28.2
HP-2R7-J357UC LR	350	3	1.6	70	33	62	/
HP-2R7-J308UL LR	3000	0.29	0.25	570	60	140	/
HP-2R7-J308UM LR	3000	0.29	0.25	570	60	140	/
HP-2R7-J354UY LL	0.35	1200	600	0.6	5	11	2
HP-2R7-J504VY LL	0.5	1200	600	0.6	6.3	13	2.5
HP-2R7-J704VY LL	0.7	1200	600	1.5	8	13	3.5
HP-2R7-J105VY LL	1	1200	600	1.5	8	13	3.5
HP-2R7-J205VY LL	2	500	250	2	8	20	3.5
HP-2R7-J335TY LL	3.3	500	250	1.8	8	20	3.5
HP-2R7-J335TY LL	3.3	500	250	1.8	8	24	3.5
HP-2R7-J335VY LL	3.3	400	200	1.8	10	20	5
HP-2R7-J475VY LL	4.7	240	120	3.1	12.5	21	5
HP-2R7-J805UY LL	8	200	100	4	12.5	21	5
HP-2R7-J106UY LL	10	160	80	4.4	12.5	26	5
HP-2R7-J106UY LL	10	120	60	6.2	12.5	34	5

Model	C (F)	ESR (mΩ)		W(g)		
		DC	AC			
HP-3R0-J105VY	1	300	200	8	13	3.5
HP-3R0-J205VY	2	150	100	8	20	3.5
HP-3R0-J335VY	3.3	105	70	8	20	3.5
HP-3R0-J475VY	4.7	90	60	10	20	5
HP-3R0-J505VY	5	60	40	8	25	3.5
HP-3R0-J106VY	10	52.5	35	10	25	5
HP-3R0-J106VY	10	37.5	25	10	30	5
HP-3R0-J106VY	10	60	40	12.5	21	5
HP-3R0-J156VY	15	45	30	12.5	26	5
HP-3R0-J256VY	25	30	20	16	26	7.5
HP-3R0-J506VY	50	22.5	15	18	42	7.5
HP-3R0-J606VY	60	22.5	15	18	42	7.5
HP-3R0-J107UY	100	12	8	22	45	10
HP-3R0-J367UY	360	4.8	3.2	35	62	10
HP-3R0-J507UY	500	4.5	3.0	35	82	22

HT SERIES

Characteristics: 85°C high temperature series.

Typical application: Solar lighting, backup power, medical equipment, LED lighting, handheld electronics

Series name	HT Series	Model	C (F)	ESR (mΩ)		Size (mm)		
Type name	HT -2R7			DC	AC(1kHz)	D	H	P
Rated voltage	2.7V	HT-2R7-J105VY	1	450	300	8	13	3.5
Surge voltage	2.85V	HT-2R7-J205TY	2	240	160	8	20	3.5
Capacitance range	1.0F~100F	HT-2R7-J335TY	3.3	225	150	10	20	3.5
Operating temperature range	-40 ~ +85°C	HT-2R7-J475VY	4.7	120	80	10	20	5
Life time	Normal temperature cycle life: at 25°C, cycle 50,000 times between VR to 1/2 VR , capacity attenuation ≤ 30%, internal resistance change ≤ 3 times . High temperature endurance life: at 60°C , keep rated voltage for 1000 hours. Capacity attenuation ≤ 30%, internal resistance change ≤ 4 times	HT-2R7-J605VY	6	105	70	12.5	21	5
		HT-2R7-J705VY	7	90	60	12.5	21	5
		HT-2R7-J805UY	8	75	50	12.5	21	5
		HT-2R7-J106UY	10	60	40	12.5	34	5
		HT-2R7-J206UY	20	45	30	16	26	8
		HT-2R7-J306UY	30	38	25	16	34	8
		HT-2R7-J506UY	50	30	20	18	42	8
		HT-2R7-J606UY	60	30	20	18	42	8
		HT-2R7-J107UY	100	23	15	22	43	10

HB SERIES

Characteristics: Hybrid capacitor.

Typical application: Solar lighting, backup power, medical equipment, LED lighting, handheld electronics

Series name	HB Series	Model	C (F)	ESR (mΩ)		W (g)	Size (mm)		
Type name	HB -2R3			DC	AC (1kHz)		D	H	P
Rated voltage	2.3V	HB-2R3-J106U	10	300	150	3.2	10	20	5
Surge voltage	2.4V	HB-2R3-J156U	15	280	140	3.5	12.5	21	5
Capacitance range	10F~8800F	HB-2R3-J206U	20	260	130	3.7	10	30	5
Operating temperature range	-25 ~ +60°C	HB-2R3-J606U	60	120	60	9	16	34	8
Life time	Normal temperature cycle life: at 25°C, cycle 50,000 times between VR to 1/2 VR , capacity attenuation ≤ 30%, internal resistance change ≤ 3 times . High temperature endurance life: at 60°C , keep rated voltage for 1000 hours. Capacity attenuation ≤ 30%, internal resistance change ≤ 3 times	HB-2R3-J127U	120	100	50	13	18	42	8
		HB-2R3-J307U	300	50	25	32	25	54	10
		HB-2R3-J607U	600	40	20	70	35	62	10
		HB-2R3-J178U	1700	10	5	138	35	95	12.5
		HB-2R3-J888U	8800	1.6	0.8	650	63.5	133	28.2



MOUDLE SERIES

MK Series : Moudle

Characteristics: Increase the use voltage of the product by connecting the supercapacitor cells in series to form a module product through advanced processes and components.

Power terminal voltage	Rated voltage	Surge voltage	Capacitance range	Operating temperature range	Life time
3.3~5V	5.4V	5.4V	10~200F	-40 ~ +65°C	Normal temperature cycle life: at 25°C, cycle 50,000 times between VR to 1/2 VR, capacity attenuation ≤ 30%, internal resistance change ≤ 3 times. High temperature endurance life: at 60°C, keep rated voltage for 1000 hours. Capacity attenuation ≤ 30%, internal resistance change ≤ 3 times
6~7.5V	8V	8.1V	6~133F		
9V	10V	10.8V	0.5~117F		
12V	12.5V	12.5	4~80F		
	13.5V	13.5V	4~80F		
	15V	15V	3~500F		
	16V	16.2	3~500F		
24V	27V	27	2~300F		
	30V	32	1~250F		
48V	48V	48.6	1~165F		
	50V	54	1~150F		
	60V	64	1~125F		
100V	100V	105	1~75F		
120V	125V	130	1~62F		