



# Shandong Goldencell Electronics Technology Co., Ltd.

Shandong Goldencell Energy Technology Co., Ltd.

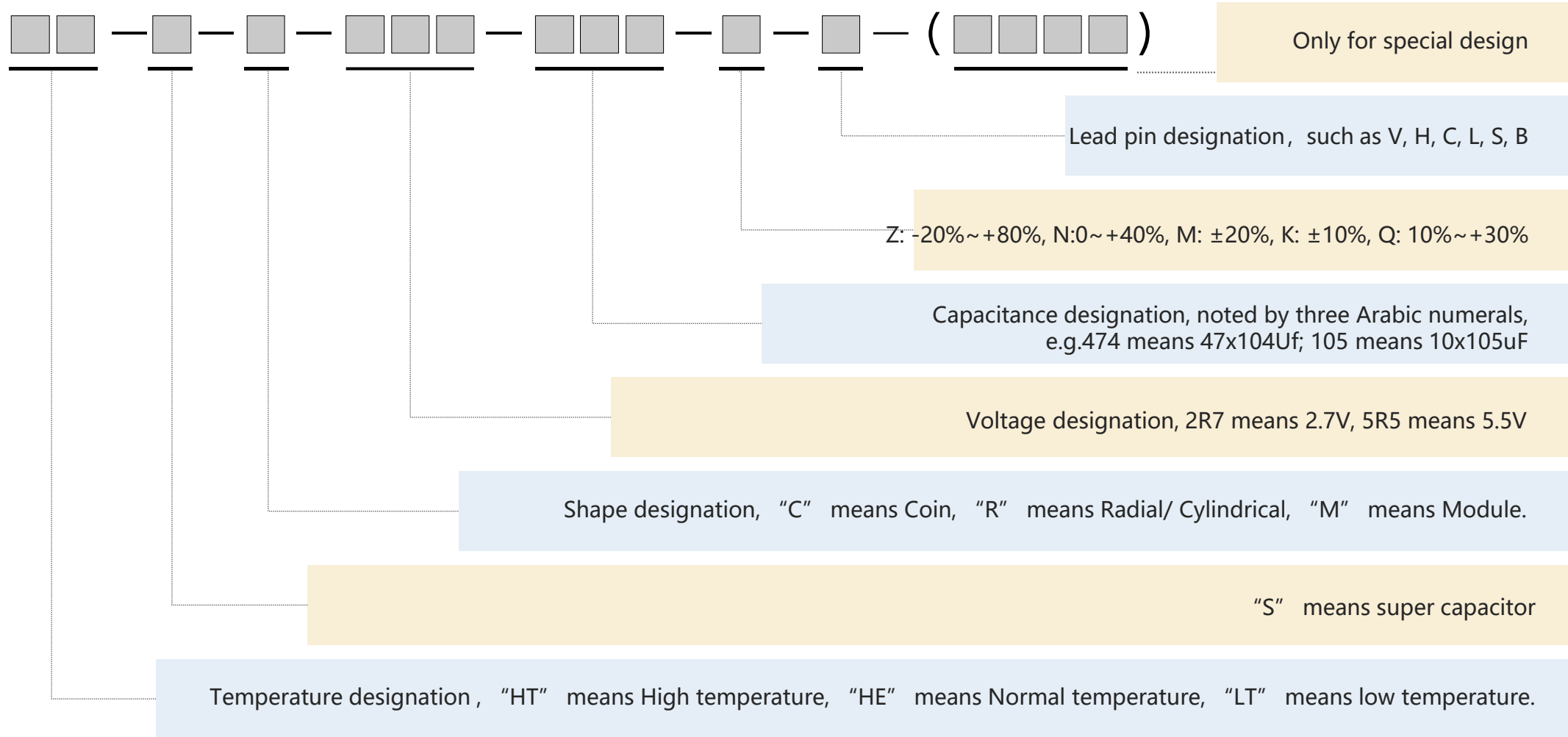
To be world-class manufacturer of super capacitor

Shandong Goldencell Energy Technology Co., Ltd. is located in X6699 Guangming Road, High-tech Zone, Zaozhuang, Shandong, which is a new energy enterprise integrating R&D, manufacturing, sales and service of supercapacitor. Due to the needs of the group 's business development, it began to undertake the overall business of supercapacitor products from its parent company Shandong Goldencell Electronic Technology Co., LTD. in July 2021. Over ten years of cultivation in supercapacitor products, it also has many intellectual property rights, including more than ten invention patents. In December 2021, the new energy Industrial Park of Shandong Goldencell Energy Technology Co., LTD, covering an area of 113 mu, started construction. The main construction contents are: annual production line of 100 million high performance coin super capacitors, annual production line of 1 million square meter high performance dry super capacitors, annual production line of 100 million piece high performance cylindrical super capacitors, and supporting the construction of super capacitors and dry electrode preparation technology research and development, testing center.

Guided by the overall goal of "Carbon Neutrality, Emission Peak" and the development philosophy and strategy of "Clean water and green mountains are golden mountains and silver mountains" of the General Secretary, the supercapacitor is becoming a major industry in the field of new energy. It is also one of the most core industrial links in the realization of the "double carbon" goal and the "two mountains" concept advocated by the state, shouldering an important mission and responsibility. In the current mature energy storage devices and technical solutions, supercapacitors are the most stable and efficient energy storage devices, widely used in car starting, teaching display, wind turbine, bicycle taillights and other new energy fields. It is characterized by strong adaptability, long service life and effective integration of renewable resources. Following the trend of development, the company carries out reverse research and development from all angles to meet the needs of customers at different levels, and also has built a complete production line of supercapacitors on coin, cylindrical and combination modules. We value scientific and technological R&D, independent innovation and digital intelligent production, always adhere to the scientific and technological R&D oriented, market requirements oriented, pay attention to R&D investment, improve independent innovation, R&D capability.

We will use ingenuity to gather innovation and seek development based on the market, and we are willing to unremittingly provide new energy products with high reliability for the society and make efforts to promote the sustainable development of human green energy.





HESC5R5105Z-L means coin super capacitor 5.5V 1F V at normal temperature

## Product Features

High capacity, low ESR, good consistency

## Product Features

RTC, fault indicator, tachograph, DTU, toys (toy cars, toy planes), intelligent three meter, cycle rear light, radio, electronic door lock, digital frame, set top box, remote control, tax control machine, controller (temperature controller), punch in machine, counter, bus card reader, identification, vehicle monitoring.

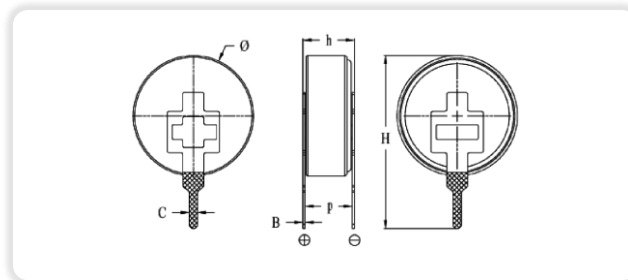
Series Name	HESC Series
Rated voltage VR	5.5V
Work temperature	-40~70°C
Capacity range	0.1F~4F
Capacity tolerance	-20%~+80%
Cycle life	25°C, rated voltage-half rated voltage >500000 cycles, $ \Delta C/C  \leq 30\%$ , $ESR \leq 4$ times of specified ESR
	$ \Delta C/C  \leq 30\%$ , $ESR \leq 4$ times of specified ESR(25°C) at +70±2°C / 1000hrs/rated voltage



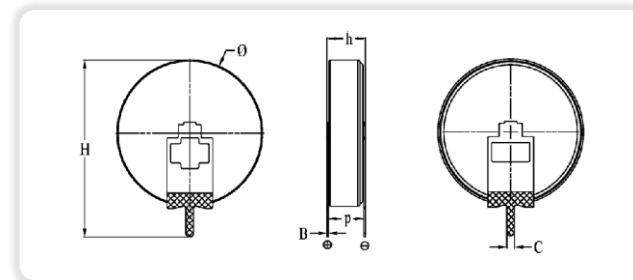
Part Number	Rated voltage /V	Rated capacity /F	ESR (1KHz) /Ω	Leakage current (24h) /mA	Φ/mm	H/mm	P/mm
HESC5R5104Z-V(Z009)	5.5	0.10	≤65	≤0.005	9.5	14.1	4.5
HESC5R5224Z-V(Z009)	5.5	0.22	≤65	≤0.005	9.5	14.1	4.5
HESC5R5334Z-V(Z009)	5.5	0.33	≤65	≤0.005	9.5	14.1	4.5
HESC5R5224Z-V(Z011)	5.5	0.22	≤50	≤0.005	11.5	16.5	4.5
HESC5R5334Z-V(Z011)	5.5	0.33	≤50	≤0.005	11.5	16.5	4.5
HESC5R5474Z-V(Z011)	5.5	0.47	≤50	≤0.005	11.5	16.5	4.5
HESC5R5105Z-V	5.5	1.0	≤20	≤0.02	19.0	23.0	4.5
HESC5R5155Z-V	5.5	1.5	≤20	≤0.02	19.0	23.0	4.5
HESC5R5405Z-V	5.5	4.0	≤16	≤0.03	25.0	29.0	6.0

## Product Features

Product drawing  
HESC Series -V



0.1~0.47F Capacitor diagram

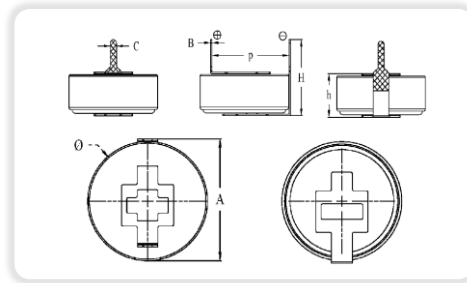


1.0~4.0F Capacitor diagram

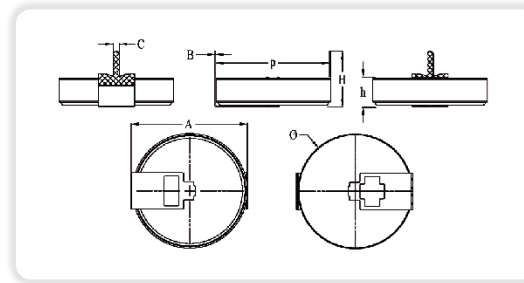
Part Number	Rated voltage /V	Rated capacity /F	ESR (1KHz) /Ω	Leakage current (24h) /mA	Φ/mm	H/mm	P/mm
HESC5R5104Z-H(Z009)	5.5	0.10	≤65	≤0.005	9.5	8.6	10.0
HESC5R5224Z-H(Z009)	5.5	0.22	≤65	≤0.005	9.5	8.6	10.0
HESC5R5334Z-H(Z009)	5.5	0.33	≤65	≤0.005	9.5	8.6	10.0
HESC5R5224Z-H(Z011)	5.5	0.22	≤50	≤0.005	11.5	8.6	10.0
HESC5R5334Z-H(Z011)	5.5	0.33	≤50	≤0.005	11.5	8.6	10.0
HESC5R5474Z-H(Z011)	5.5	0.47	≤50	≤0.005	11.5	8.6	10.0
HESC5R5105Z-H	5.5	1.0	≤20	≤0.02	19.0	9.2	19.0
HESC5R5155Z-H	5.5	1.5	≤20	≤0.02	19.0	9.2	19.0
HESC5R5405Z-H	5.5	4.0	≤16	≤0.03	25.0	9.0	25.0

## Product Features

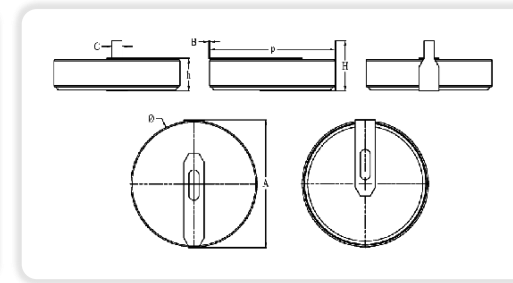
Product drawing  
HESC Series -H



0.1~0.47F Capacitor diagram



1.0~1.5F Capacitor diagram

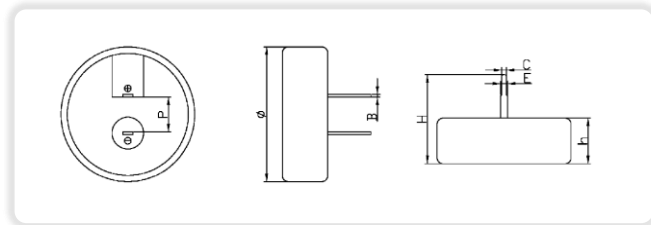


4.0F Capacitor diagram

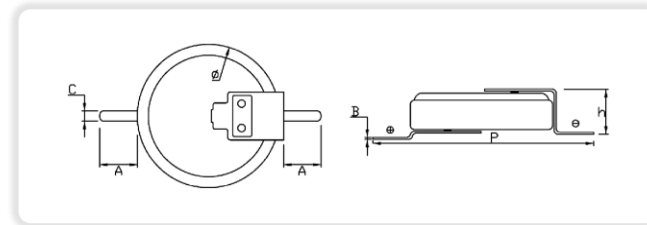
Part Number	Rated voltage /V	Rated capacity /F	ESR (1KHz) /Ω	Leakage current (24h) /mA	Φ/mm	H/mm	P/mm
HESC5R5104Z-C	5.5	0.10	≤50	≤0.005	13.0	13.0	5.0
HESC5R5224Z-C	5.5	0.22	≤50	≤0.005	13.0	13.0	5.0
HESC5R5334Z-C	5.5	0.33	≤50	≤0.005	13.0	13.0	5.0
HESC5R5474Z-C	5.5	0.47	≤50	≤0.005	13.0	13.0	5.0
HESC5R5684Z-C	5.5	0.68	≤20	≤0.02	20.5	12.5	5.0
HESC5R5105Z-C	5.5	1.0	≤20	≤0.02	20.5	12.5	5.0
HESC5R5155Z-C	5.5	1.5	≤20	≤0.02	20.5	12.5	5.0
HESC5R5224Z-T(Z009)	5.5	0.22	≤65	≤0.005	9.5	5.5	16.2
HESC5R5334Z-T(Z009)	5.5	0.33	≤65	≤0.005	9.5	5.5	16.2
HESC5R5474Z-T(Z011)	5.5	0.47	≤50	≤0.005	11.5	5.5	19.0
HESC5R5105Z-T	5.5	1.0	≤20	≤0.02	19.0	5.5	26.0
HESC5R5155Z-T	5.5	1.5	≤20	≤0.02	19.0	5.5	26.0

## Product Features

Product drawing  
HESC Series-C&T



C type super capacitor



T type super capacitor

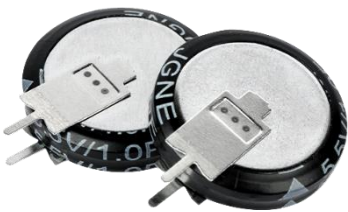
## Product Features

High temperature 85°C series

## Product Features

RTC, fault indicator, tachograph, DTU, toys (toy cars, toy planes), intelligent three meter, cycle rear light, radio, electronic door lock, digital frame, set top box, remote control, tax control machine, controller (temperature controller), punch in machine, counter, bus card reader, identification, vehicle monitoring.

Series Name	HESC Series	
Rated voltage VR	5.5V(High temperature electrolyte)	5.5V(three layer)
Work temperature	-20~85°C	-40~85°C
Capacity range	1.0F~1.5F	0.47F~1F
Capacity tolerance	-20%~+80%	-20%~+80%
Cycle life	25°C, rated voltage-half rated voltage >500000 cycles, $ \Delta C/C  \leq 30\%$ , $ESR \leq 4$ times of specified ESR	
	$ \Delta C/C  \leq 30\%$ , $ESR \leq 4$ times of specified ESR(25°C) at +85±2°C / 1000hrs/ratedvoltage	

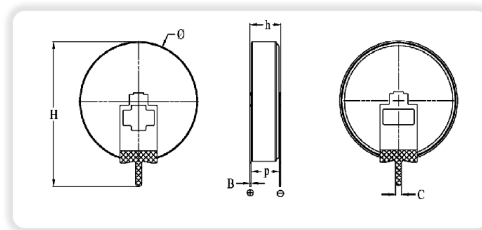




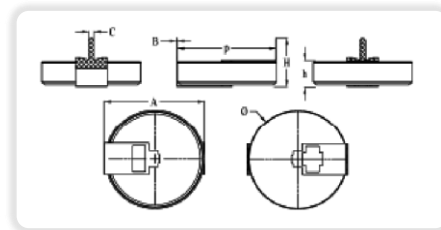
Part Number	Rated voltage /V	Rated capacity /F	ESR (1KHz) /Ω	Leakage current (24h) /mA	Φ/mm	H/mm	P/mm
HTSC5R5105Z-V	5.5	1.0	≤30	≤0.02	19.0	14.1	4.5
HTSC5R5155Z-V	5.5	1.5	≤30	≤0.02	19.0	14.1	4.5
HTSC5R5105Z-H	5.5	1.0	≤30	≤0.02	19.0	14.1	19.0
HTSC5R5155Z-H	5.5	1.5	≤30	≤0.02	19.0	16.5	19.0
HTSC5R5105Z-C	5.5	1.0	≤30	≤0.02	20.5	16.5	5.0
HTSC5R5155Z-C	5.5	1.5	≤30	≤0.02	20.5	16.5	5.0
HTSC5R5474Z-C(C003)	5.5	0.47	≤30	≤0.02	20.5	23.0	5.0
HTSC5R5684Z-C(C003)	5.5	0.68	≤30	≤0.02	20.5	23.0	5.0
HTSC5R5105Z-C(C003)	5.5	1.00	≤30	≤0.02	20.5	29.0	5.0

## Product Features

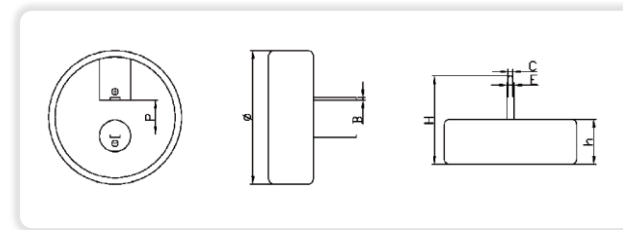
Product drawing  
HTSC SERIES-V/H/C



V type super capacitor



H type super capacitor



C type super capacitor

## Product Features

High capacity, low ESR, good consistency

## Product Features

Tachograph, intelligent three meters (water meter, electricity meter, gas meter), solar energy storage, wind pitch, rail transit (energy recovery), aerospace (aircraft opening doors), electric forklift, crane, electric drill, flashlight, charger, fishing float, copier, printer, spike machine, electric welding machine, laser, electric tools, power data transmission, wind power, solar lamp, electric vehicle auxiliary power, switch cabinet, pulse power supply, emergency light, batons.

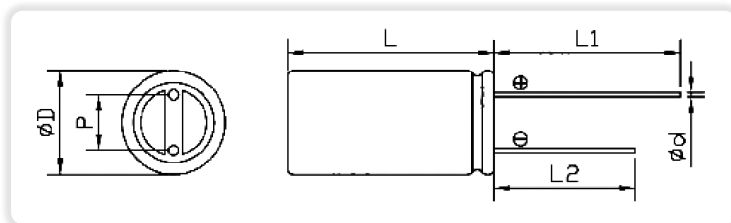


Series Name	HESC Series
Rated voltage VR	2.7V
Work temperature	-40~70°C
Capacity range	1F~800F
Capacity tolerance	-20%~+80%
Cycle life	25°C, rated voltage-half rated voltage >500000 cycles, $ \Delta C/C  \leq 30\%$ , ESR $\leq 4$ times of specified ESR
	$ \Delta C/C  \leq 30\%$ , ESR $\leq 4$ times of specified ESR(25°C) at +70±2°C /1000hrs/ratedvoltage

Part Number	Rated voltage /V	Rated capacity /F	ESR (1KHz) /mΩ	SIZE/mm		
				Φ/mm	H/mm	P/mm
HESR2R7105Z-L	2.7	1	≤400	8.0	13.3	3.5
HESR2R7205Z-L	2.7	2	≤300	8.0	20.2	3.5
HESR2R7305Z-L	2.7	3	≤220	8.0	20.2	3.5
HESR2R7335Z-L	2.7	3.3	≤220	8.0	20.2	3.5
HESR2R7475Z-L	2.7	4.7	≤200	10.0	20.2	5.5
HESR2R7605Z-L	2.7	6	≤200	10.0	20.2	5.5
HESR2R7685Z-L	2.7	6.8	≤100	12.5	21.0	5.5
HESR2R7805Z-L	2.7	8	≤90	12.5	21.0	5.5
HESR2R7106Z-L(1025)	2.7	10	≤70	10.0	25.2	5.5
HESR2R7106Z-L(1226)	2.7	10	≤70	12.5	26.1	5.5
HESR2R7156Z-L(1230)	2.7	15	≤50	12.5	30.7	5.5
HESR2R7156Z-L(1626)	15	15	≤50	16.0	26.3	7.5
HESR2R7206Z-L	20	20	≤40	16.0	26.3	7.5
HESR2R7306Z-L	30	30	≤30	16.0	32.0	7.5
HESR2R7406Z-L	40	40	≤30	18.0	41.3	7.5
HESR2R7506Z-L	50	50	≤25	18.0	41.3	7.5

## Product Features

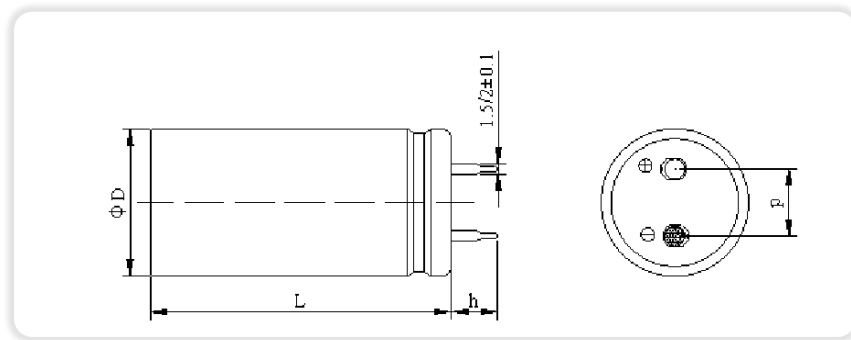
Product drawing  
HESR Series 1~50F



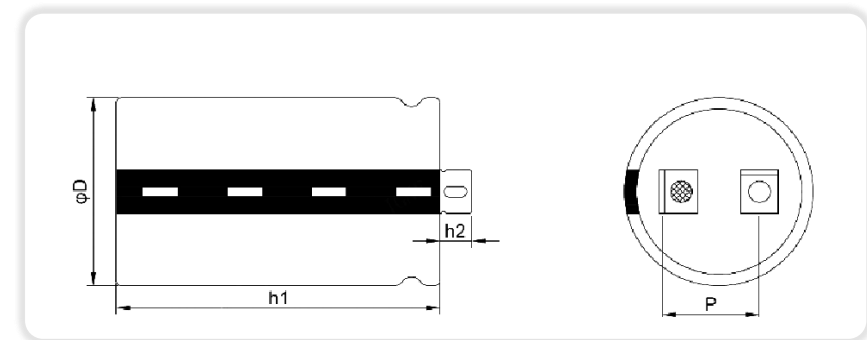
# HESR SERIES 60~800F

Part Number	Rated voltage /V	Rated capacit y /F	ESR (1KHz) /mΩ	SIZE/mm			
				ΦD	L	h	p
HESR2R7606Z-S	2.7	60	≤25	22	44.5	7.0	10.0
HESR2R7906Z-S	2.7	90	≤18	22	44.5	7.0	10.0
HESR2R7107Z-S	2.7	100	≤16	22	49.5	7.0	10.0
HESR2R7157Z-S	2.7	150	≤14	25	49.5	7.0	10.0
HESR2R7207Z-S	2.7	200	≤12	25	59.5	7.0	10.0

Part Number	Rated voltage /V	Rated capacit y /F	ESR (1KHz) /mΩ	SIZE/mm		
				ΦD	h1	p
HESR2R7307Z-B	2.7	300	≤5	35.5	60	18.4
HESR2R7367Z-B	2.7	360	≤4	35.5	60	18.4
HESR2R7407Z-B	2.7	400	≤3.5	35.5	60	18.4
HESR2R7607Z-B	2.7	600	≤3	35.5	70	18.4
HESR2R7807Z-B	2.7	800	≤3	40	70	18.4



Product drawing-HESR Series 60~200F(S)



HESR Series 300~800F (B)

## Product Features

High temperature 85°C series

## Product Features

Tachograph, intelligent three meters (water meter, electricity meter, gas meter), solar energy storage, wind pitch, rail transit (energy recovery), aerospace (aircraft opening doors), electric forklift, crane, electric drill, flashlight, charger, fishing float, copier, printer, spike machine, electric welding machine, laser, electric tools, power data transmission, wind power, solar lamp, electric vehicle auxiliary power, switch cabinet, pulse power supply, emergency light, batons.



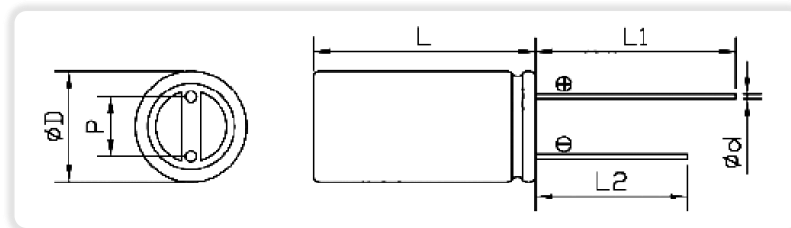
Series Name	HESC Series
Rated voltage VR	2.7V
Work temperature	-20~85°C
Capacity range	1F~10F
Capacity tolerance	-20%~+80%
Cycle life	25°C, rated voltage-half rated voltage >500000 cycles, $ \Delta C/C  \leq 30\%$ , ESR $\leq 4$ times of specified ESR
	$ \Delta C/C  \leq 30\%$ , ESR $\leq 4$ times of specified ESR(25°C) at +85±2°C / 1000hrs/rated voltage



Part Number	Rated voltage /V	Rated capacity /F	ESR (1KHz) /mΩ	SIZE/mm		
				Φ/mm	H/mm	P/mm
HTSR2R7105Z-L	2.7	1	≤600	8.0	13.3	3.5
HTSR2R7205Z-L	2.7	2	≤450	8.0	20.2	3.5
HTSR2R7305Z-L	2.7	3	≤330	8.0	20.2	3.5
HTSR2R7335Z-L	2.7	3.3	≤330	8.0	20.2	3.5
HTSR2R7475Z-L	2.7	4.7	≤300	10.0	20.2	5.5
HTSR2R7605Z-L	2.7	6	≤300	10.0	20.2	5.5
HTSR2R7685Z-L	2.7	6.8	≤150	12.5	21.0	5.5
HTSR2R7805Z-L	2.7	8	≤130	12.5	21.0	5.5
HTSR2R7106Z-L(1025)	2.7	10	≤100	10.0	25.2	5.5
HTSR2R7106Z-L(1226)	2.7	10	≤100	12.5	26.1	5.5

## Product Features

Product drawing  
HTSR Series 1~10F



## Product Features

High capacity, low ESR, good consistency

## Product Features

Tachograph, intelligent three meters (water meter, electricity meter, gas meter), solar energy storage, wind pitch, rail transit (energy recovery), aerospace (aircraft opening doors), electric forklift, crane, electric drill, flashlight, charger, fishing float, copier, printer, spike machine, electric welding machine, laser, electric tools, power data transmission, wind power, solar lamp, electric vehicle auxiliary power, switch cabinet, pulse power supply, emergency light, batons.

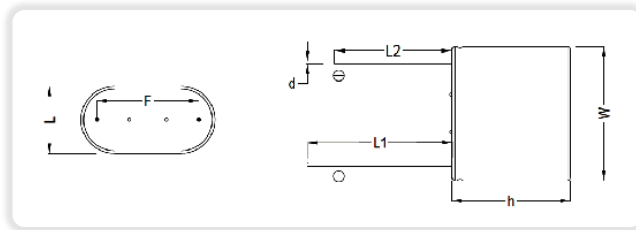


Series Name	HESC Series
Rated voltage VR	5.5V
Work temperature	-40~70°C
Capacity range	0.47F~5F
Capacity tolerance	-20%~+80%
Cycle life	25°C, rated voltage-half rated voltage >500000 cycles, $ \Delta C/C  \leq 30\%$ , ESR $\leq 4$ times of specified ESR
	$ \Delta C/C  \leq 30\%$ , ESR $\leq 4$ times of specified ESR(25°C) at +70±2°C / 1000hrs/rated voltage

Part Number	Rated voltage /V	Rated capacity /F	ESR (1KHz) /mΩ	Size/mm			
				ΦD	L	h	p
HESM5R5474Z-L	5.5	0.47	≤850	16.5	8.5	15	11.7
HESM5R5105Z-L	5.5	1	≤650	16.5	8.5	22	11.7
HESM5R5155Z-L	5.5	1.5	≤500	16.5	8.5	22	11.7
HESM5R5205Z-L(1221)	5.5	2	≤300	25.5	12.5	22	18.7
HESM5R5205Z-L(1020)	5.5	2	≤300	20.5	10.0	23	15.3
HESM5R5505Z-L(1025)	5.5	5	≤200	20.5	10.5	27.5	15.4
HESM5R5505Z-L(1226)	5.5	5	≤200	20.5	12.5	28	18.7

## Product Features

Product drawing  
HESM Series 0.47~5F





## Product Features

High capacity, low ESR, good consistency

## Product Features

Car, car start, car accelerates, energy recovery, vehicle starts at low temperature, medical X-ray machines, port crane, solar energy storage, wind pitch, rail transit (energy recovery), aerospace, electric forklift, crane, electric drill, solar power generation (energy storage), electric bicycle auxiliary power, hoist, locomotive, elevator, laser cannons, electromagnetic artillery.

Series Name	HESC Series
Rated voltage VR	16V (Can be customized as required)
Work temperature	--40~65°C
Capacity range	100F (Can be customized as required)
Capacity tolerance	--20%~+80%
Cycle life	25°C, rated voltage-half rated voltage >50000 cycles, $ \Delta C/C  \leq 30\%$ , ESR $\leq 4$ times of specified ESR
	$ \Delta C/C  \leq 30\%$ , ESR $\leq 4$ times of specified ESR(25°C) at +65±2°C / 1000hrs/rated voltage





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