



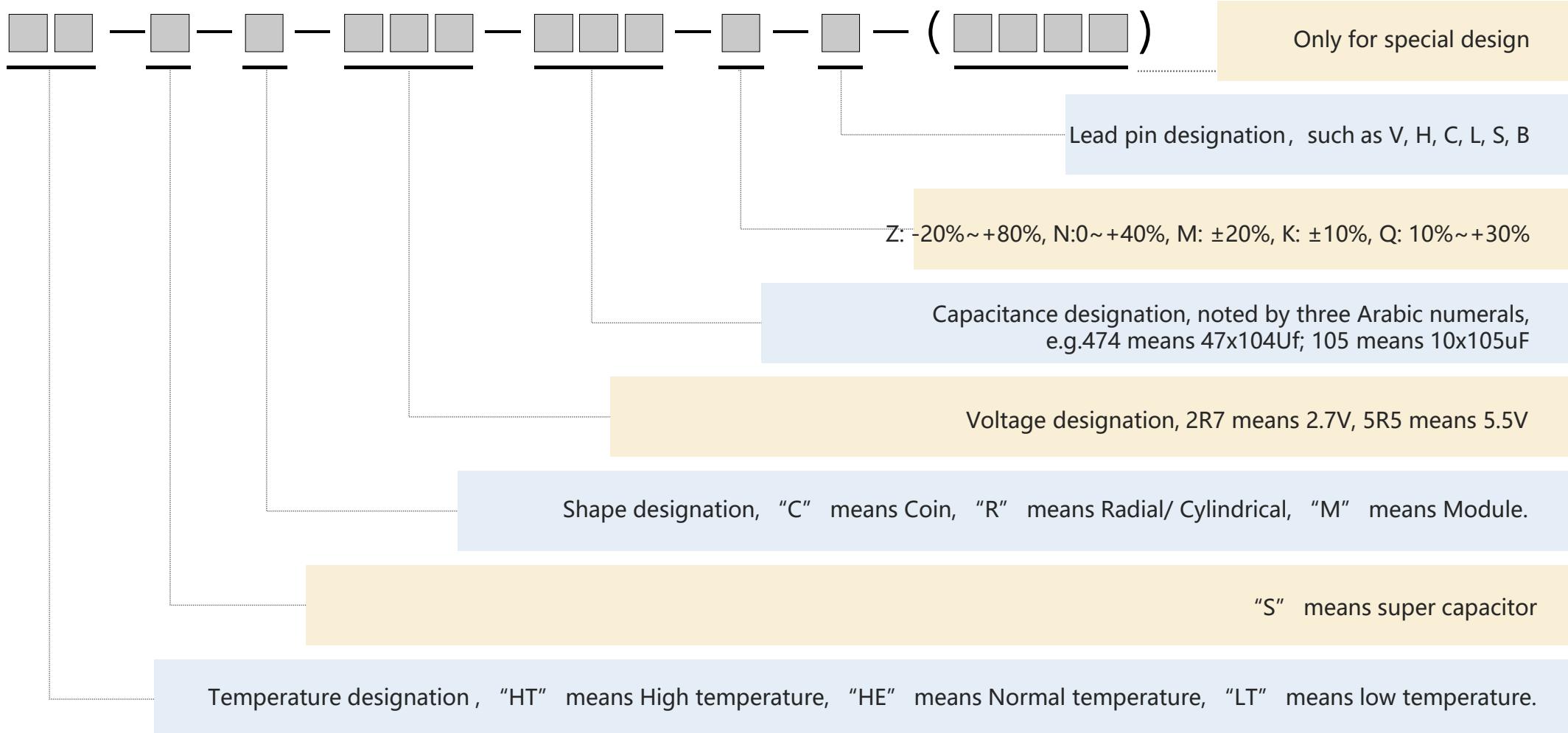
SHANGHAI BIZUPWINGS I&E FOREIGN TRADE CO.LTD.

Shandong Goldencell Energy Technology Co., Ltd.

To be world-class manufacturer of super capacitor



Goldencell Battery Lighting Global



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

# HESC SERIES

## 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 ≤ 4 times of specified ESR  $ \Delta C/C  \leq 30\%$ , ESR ≤ 4 times of specified ESR(25°C) at +70±2°C / 1000hrs/rated voltage



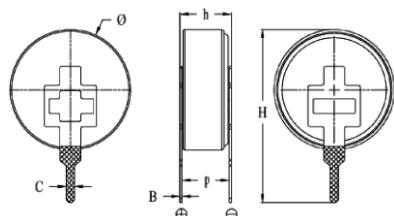
# HESC SERIES—V

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

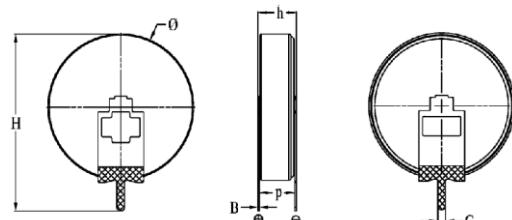
## Product Features

Product drawing

HESC Series -V



0.1~0.47F Capacitor diagram



1.0~4.0F Capacitor diagram

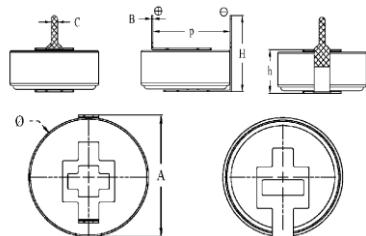
## HESC SERIES—H

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

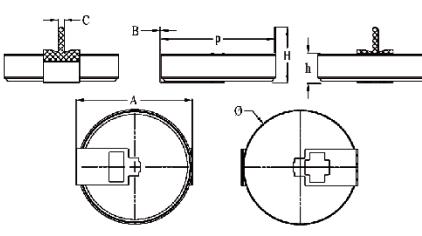
## Product Features

Product drawing

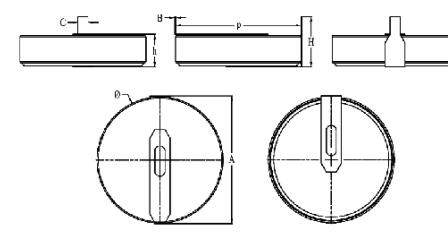
HESC Series -H



0.1~0.47F Capacitor diagram



1.0~1.5F Capacitor diagram



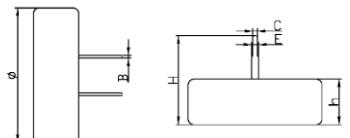
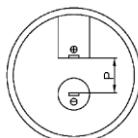
4.0F Capacitor diagram

## HESC SERIES—C&amp;T

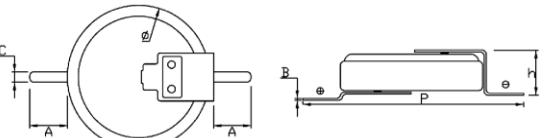
Part Number	Rated voltage /V	Rated capacity /F	ESR (1KHz) /Ω	Leakage current (24h) /mA	Φ/mm	H/mm	P/mm
HESC5R5104Z-C	5.5	0.10	≤50	≤0.005	13.0	13.0	5.0
HESC5R5224Z-C	5.5	0.22	≤50	≤0.005	13.0	13.0	5.0
HESC5R5334Z-C	5.5	0.33	≤50	≤0.005	13.0	13.0	5.0
HESC5R5474Z-C	5.5	0.47	≤50	≤0.005	13.0	13.0	5.0
HESC5R5684Z-C	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

# HTSC SERIES

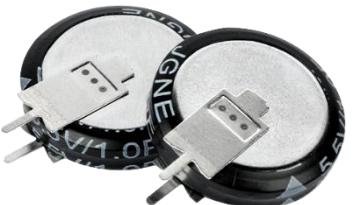
## Product Features

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 ≤ 4 times of specified ESR  $ \Delta C/C  \leq 30\%$ , ESR ≤ 4 times of specified ESR(25°C) at $+85 \pm 2^\circ\text{C}$ / 1000hrs/ratedvoltage	

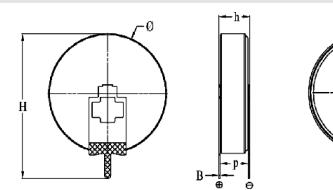


# HTSC SERIES-V/H/C

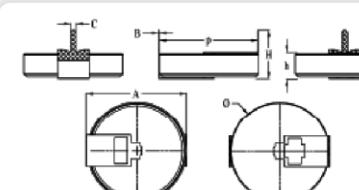
Part Number	Rated voltage /V	Rated capacity /F	ESR (1KHz) /Ω	Leakage current (24h) /mA	Φ/mm	H/mm	P/mm
HTSC5R5105Z-V	5.5	1.0	≤30	≤0.02	19.0	14.1	4.5
HTSC5R5155Z-V	5.5	1.5	≤30	≤0.02	19.0	14.1	4.5
HTSC5R5105Z-H	5.5	1.0	≤30	≤0.02	19.0	14.1	19.0
HTSC5R5155Z-H	5.5	1.5	≤30	≤0.02	19.0	16.5	19.0
HTSC5R5105Z-C	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

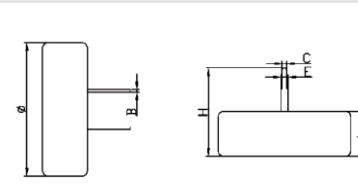
Product drawing  
HTSC SERIES-V/H/C



V type super capacitor



H type super capacitor



C type super capacitor

# HESR SERIES

## 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 ≤ 4 times of specified ESR $ \Delta C/C  \leq 30\%$ , ESR ≤ 4 times of specified ESR(25°C) at $+70 \pm 2^\circ\text{C}$ /1000hrs/ratedvoltage



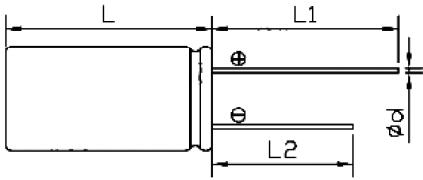
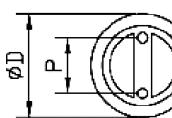
# HESR SERIES 1~50F

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	4.7	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

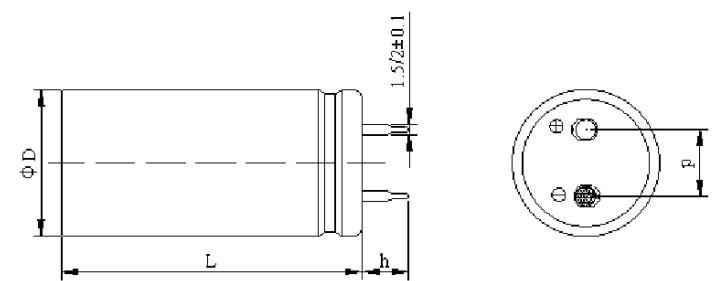
Product drawing

HESR Series 1~50F



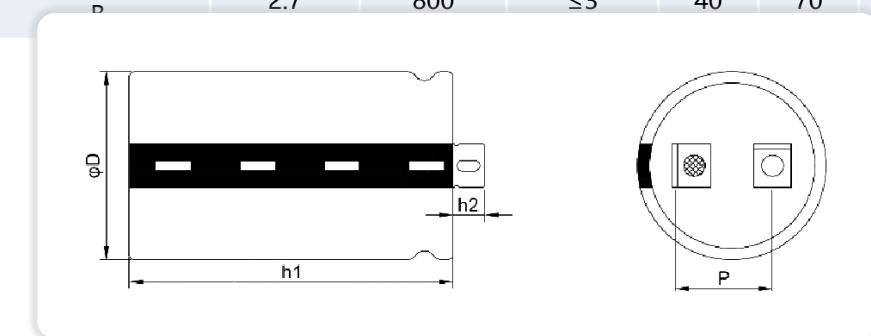
# HESR SERIES 60~800F

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



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

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



HESR Series 300~800F (B)

# HTSR SERIES

## 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 ≤ 4 times of specified ESR  $ \Delta C/C  \leq 30\%$ , ESR ≤ 4 times of specified ESR(25°C) at $+85 \pm 2^\circ\text{C}$ / 1000hrs/rated voltage

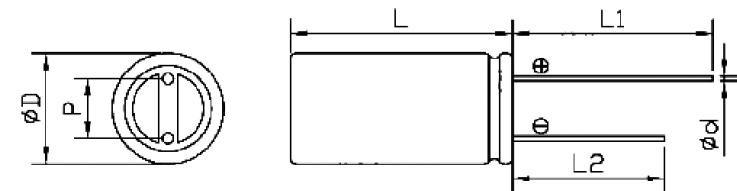


Part Number	Rated voltage /V	Rated capacity /F	ESR (1KHz) /mΩ	SIZE/mm		
				Φ/mm	H/mm	P/mm
HTSR2R7105Z-L	2.7	1	≤600	8.0	13.3	3.5
HTSR2R7205Z-L	2.7	2	≤450	8.0	20.2	3.5
HTSR2R7305Z-L	2.7	3	≤330	8.0	20.2	3.5
HTSR2R7335Z-L	2.7	3.3	≤330	8.0	20.2	3.5
HTSR2R7475Z-L	4.7	4.7	≤300	10.0	20.2	5.5
HTSR2R7605Z-L	2.7	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



# HESM SERIES

## 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 $+70 \pm 2^\circ\text{C}$ / 1000hrs/rated voltage



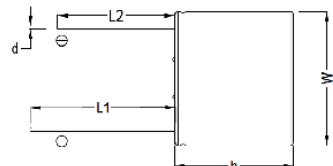
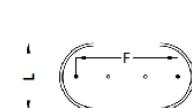
# HESM SERIES

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



# MODULE SERIES

## 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 >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 $+65 \pm 2^\circ C / 1000\text{hrs}/\text{rated voltage}$

