

A large background image showing a landscape with several wind turbines and rows of solar panels under a blue sky with light clouds. A semi-transparent blue box is overlaid on the left side of the image, containing the text.

FILM CAPACITOR  
POWER ELECTRONIC  
CAPACITOR



# STRENGTH





## ■ Comprehensive Testing and Analysis Capability

Hongfa owns the largest and most comprehensive testing Lab, Certified by VDE, UL and CNAS, Partner of VDE since 2007, the only enterprise in the global component industry. Chemical Analysis Lab is accredited by CNAS, capable of providing with the reliable and RoHS compliance test report.

## ■ Top-notch Designing and Manufacturing Capacity in Machine Automation

Hongfa owns the top-notch designing and manufacturing capacity in machine automation, focuses on the factor analysis and process optimization in the production process.

## ■ Complete Quality Assurance System

Hongfa strictly insists on the operational philosophy of "Focus on the market, Winning through quality", Quality Policy of "Pursue impeccable quality to win customer's satisfaction of our products and services", Integrally fulfill the international quality and safety environment system of ISO9001 & ISO14001.





# ABOUT US »







HONGFA ( Hongfa Group: SH600885)is the leading relay manufacturer in China and one of the major relay suppliers in the world, with the No.1 relay output globally and being ranking as the top relay manufacturer in China in terms of overall economic index.

HONGFA produces relay, capacitor, low-voltage device, L/H voltage complete equipment, precision component, automatic equipment & etc. Products are currently being exported to over 120 countries and regions, localized sales and service network are established among multiple regions with the capability of globalized market operation and technical support. Customers involve multiple world-renowned enterprises in the fields of industry, energy, transportation, home appliance, medical care, national defense, etc.

HONGFA always focuses on developing and absorbing the leading edge technology in relay technical field, owns the state-accredited technical center, the largest and most comprehensive testing center, established the first postdoctoral research station and academician research station in relay industry. Hongfa participates in formulating relay national and industry standard, implements several national key projects, which contributes to the development of relay industry.

Founded in 1984, Zhojiang Hongfa Wufeng Capacitors Co. Ltd. is a professional film capacitor manufacturer with the integrate capability of R&D, design, production and sales, and the annual capacity of 0.38billion pcs.

The company is located in Zhuji, Zhejiang province, with strong technical force, product research and development ability. The factory integrates metal film evaporation, plastic case mold manufacturing and production of the previous parts supporting capacity, has won the national key high-tech enterprise, intelligent manufacturing demonstration base. Products are widely used in communication, home appliance, power supply, industrial control, green energy and other fields.



The background features a dark blue field with abstract, glowing light patterns. In the upper left, there is a bright, teardrop-shaped light source. Below it, a series of curved, glowing lines suggest motion or a manufacturing process. On the right side, there are several overlapping geometric shapes: a small dark blue square, a larger medium blue square, and a large light blue square that partially overlaps the text area.

*With more than 30 years of film capacitor manufacturing experience, provide customer with one-stop solution of film capacitor application.*



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# HCDA


DC-Link-Capacitor(Dry-type,Aluminum Case)



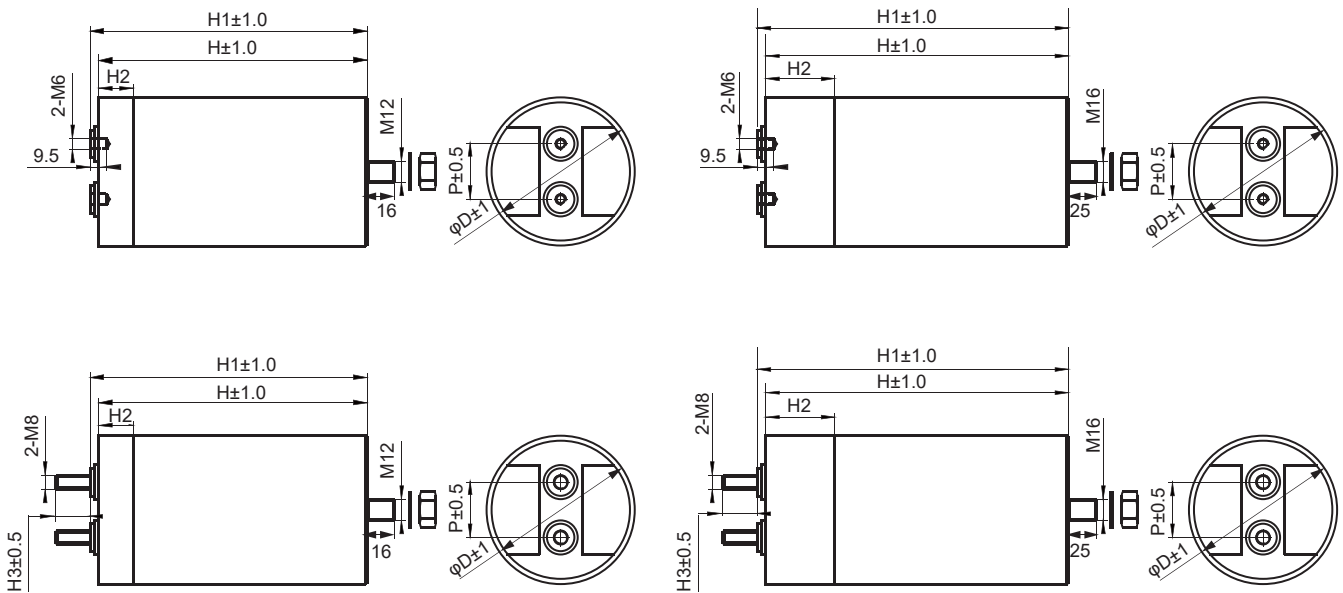
## Features

- Applied in DC-Link circuits,can replace electrolytic capacitor
- Low ESR, high capability of ripple current
- Low ESL
- Self-healing property, long lifetime
- Aluminum case, resin filled

## Safety Approvals

	UL	UL810	10 $\mu$ F-5500 $\mu$ F,max 4000Vd.c. max 90°C File No.: E222132,CCN:CZDS2
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## Outline Drawing



Note: 1)  $\phi D \leq 96$ ,  $H2=20$ ,  $\phi D > 96$ ,  $H2=40$ ;  
 2) Bottom bolt can be seen in table 3

Specifications

Reference standard		GB/T 17702 (IEC 61071)
Rated voltage (U <sub>N</sub> )		600Vd.c. ~ 4000Vd.c.
Capacitance range		20μF ~ 5500μF
Climatic category		D ≤ 116mm: 40/85/56 D = 136mm: 40/80/56
Operating temperature range (Θ <sub>hs</sub> )		D ≤ 116mm: -40°C ~ 85°C (Θ <sub>hs</sub> ≤ 85°C) D = 136mm: -40°C ~ 80°C (Θ <sub>hs</sub> ≤ 80°C)
Capacitance tolerance		±5%(J)/±10%(K)
Voltage proof	Between terminals	1.5U <sub>N</sub> (10s, 20°C ± 5°C)
	Between terminal and case	U <sub>N</sub> ≤ 1500Vd.c., 3000Va.c. (10s, 50Hz, 20°C ± 5°C) U <sub>N</sub> > 1500Vd.c., (U <sub>N</sub> + 1000V)Va.c. (10s, 50Hz, 20°C ± 5°C)
Insulation resistance (IR × C <sub>N</sub> )		≥ 5000s (20°C, 500Vd.c., 60s)
Dielectric dissipation factor (tan δ <sub>d</sub> )		2 × 10 <sup>-4</sup>
Over voltage		1.1U <sub>N</sub> (30% of on-load duration/d) 1.15 U <sub>N</sub> (30min/d) 1.2 U <sub>N</sub> (5min/d) 1.3 U <sub>N</sub> (1min/d) 1.5U <sub>N</sub> (An overvoltage equal to 1.5U <sub>N</sub> for 30ms is permitted 1000 times during the life of the capacitor)
Max. altitude		2000m
Max. torque of terminals		M6: 5N·m M8: 6N·m
Installation		Any Position
Expected lifetime		100,000h @ U <sub>N</sub> , Θ <sub>hs</sub> = 70°C
Failure rate		200FIT @ U <sub>N</sub> , Θ <sub>hs</sub> = 70°C

Ordering Information

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
H	C	D	A	/																(	x	x	x	)
<b>Series code</b>				<b>DC rated voltage</b>		<b>Rated capacitance value</b>		<b>Capacitance tolerance</b>		<b>Outline dimension code</b>		<b>Terminal code</b>		<b>Internal code</b>		<b>Internal code</b>								
				See table 1		For example: 5006 = 500 × 10 <sup>6</sup> pF = 500 μF		J = ±5% K = ±10%		See table 2		See table 3		0 = (Standard part)		To identify when the special requirements needed								

Table 1 Outline Dimensions Code

Rated voltage	600V	700V	800V	900V	1000V	1100V	1200V	1300V	1400V	1500V
Code	1U	1V	2K	1X	3A	1M	3L	2M	3M	4M
Rated voltage	2000V	2200V	2400V	2600V	2800V	3000V	3200V	3600V	4000V	
Code	3D	2N	1N	3N	6P	4Q	6Q	7R	3G	

**Table2 Outline Dimension Code**

Code	ΦD (mm)	*h (mm)	H (mm)	Code	ΦD (mm)	*h (mm)	H (mm)
12	76	75	95	3C	96	155	175
16	76	100	120	51	116	55	95
18	76	120	140	53	116	80	120
1A	76	135	155	56	116	100	140
1C	76	155	175	58	116	120	160
22	86	75	95	5A	116	135	175
26	86	100	120	5G	116	185	225
27	86	116	136	5H	116	190	230
28	86	120	140	5M	116	225	265
2A	86	135	155	63	136	80	120
2C	86	155	175	66	136	100	140
2S	86	205	225	6A	136	135	175
2T	86	230	250	6G	136	185	225
32	96	75	95	6M	136	225	265
36	96	100	120	6Q	136	255	295
38	96	120	140				

Note: \*h=The height of aluminum case

**Table3 Terminal Code**

Digit 15		Digit 16		Digit 17		Digit 18	
Code	Terminal Form	Code	Fix style	Code	Length of terminals	Code	Specifications of terminals
M	Male Terminal	1	Bottom bolt M12 (D≤96mm)	0	20mm	0	M8 (P=32mm, D≤86mm)
		2	Bottom bolt M16 (D≥106mm)			1	M8 (P=45mm, D=96mm)
T	Thread Hole	1	Bottom bolt M12 (D≤96mm)	1	9.5mm	2	M8 (P=50mm, D≥106mm)
						3	M6 (P=32mm, D≤86mm)
		4	M6 (P=45mm, D=96mm)				
		2	Bottom bolt M16 (D≥106mm)			5	M6 (P=50mm, D≥106mm)



Outline Dimensions

UN=600Vd.c.									
C <sub>N</sub> (μF)	ESR (mΩ(1kHz))	R <sub>th</sub> (K/W)	Ī (A)	I <sub>max</sub>			D (mm)	H (mm)	Ordering Information
				50°C	60°C	70°C			
500	1.5	5.6	1604	63	53	40	76	95	HCDA/1U5006-12****0
650	1.9	4.7	3189	61	51	39	76	120	HCDA/1U6506-16****0
780	1.8	4.6	3253	64	53	40	76	140	HCDA/1U7806-18****0
860	1.6	4.3	2988	70	58	44	76	155	HCDA/1U8606-1A****0
1000	1.5	4.2	2978	73	61	46	76	175	HCDA/1U1007-1C****0
650	1.3	5.1	2085	71	60	45	86	95	HCDA/1U6506-22****0
860	1.5	4.7	4219	69	58	44	86	120	HCDA/1U8606-26****0
1000	1.7	4.6	4170	65	55	42	86	136	HCDA/1U1007-27****0
1000	1.7	4.5	4170	66	55	42	86	140	HCDA/1U1007-28****0
1200	1.5	4.4	4170	71	60	45	86	155	HCDA/1U1207-2A****0
1400	1.3	4.3	4170	77	65	49	86	175	HCDA/1U1407-2C****0
2100	1.1	3	6255	100	84	64	86	250	HCDA/1U2107-2T****0
900	1.4	4.8	2681	71	59	45	96	95	HCDA/1U9006-32****0
1100	1.3	4.2	5397	78	66	50	96	120	HCDA/1U1107-36****0
1250	1.4	3.9	5213	78	66	50	96	140	HCDA/1U1257-38****0
1800	1.1	3.3	5362	96	80	61	96	175	HCDA/1U1807-3C****0
1300	1.4	5.4	4170	67	56	42	116	95	HCDA/1U1307-51****0
1700	1.1	5	8341	78	65	50	116	120	HCDA/1U1707-53****0
2000	1.1	4.9	8341	79	66	50	116	140	HCDA/1U2007-56****0
2400	0.9	3.6	8341	100	85	65	116	160	HCDA/1U2407-58****0
2700	0.9	3.4	8043	100	82	66	116	175	HCDA/1U2707-5A****0
3400	0.8	2.7	11816	100	100	68	116	230	HCDA/1U3407-5H****0
5500	0.8	2	14893	100	100	79	136	295	HCDA/1U5507-6Q****0

Note: (1) “-”=capacitance tolerance code, J=±5%,K=±10%;  
 (2) “\*\*\*\*” =terminal code(see table 3).

Outline Dimensions

UN=700Vd.c.									
C <sub>N</sub> (μF)	ESR (mΩ(1kHz))	R <sub>th</sub> (K/W)	Ī (A)	I <sub>max</sub>			D (mm)	H (mm)	Ordering Information
				50°C	60°C	70°C			
360	1.7	5.6	1354	59	50	38	76	95	HCDA/1V3606-12****0
480	2.1	4.7	2761	58	49	37	76	120	HCDA/1V4806-16****0
580	2.4	4.6	2835	55	46	35	76	140	HCDA/1V5806-18****0
640	1.6	4.3	2607	70	58	44	76	155	HCDA/1V6406-1A****0
730	1.6	4.2	2549	71	59	45	76	175	HCDA/1V7306-1C****0
480	1.3	5.1	1805	71	60	45	86	95	HCDA/1V4806-22****0
620	1.7	4.7	3566	65	54	41	86	120	HCDA/1V6206-26****0
750	2.0	4.6	3667	60	51	38	86	136	HCDA/1V7506-27****0
860	1.5	4.4	3504	71	60	45	86	155	HCDA/1V8606-2A****0
1000	1.6	4.3	3492	70	58	44	86	175	HCDA/1V1007-2C****0
1500	1.1	3	5238	100	84	64	86	250	HCDA/1V1507-2T****0
650	1.5	4.8	2270	68	57	43	96	95	HCDA/1V6506-32****0
780	1.6	4.2	4486	71	59	45	96	120	HCDA/1V7806-36****0
950	1.6	3.9	4645	73	61	47	96	140	HCDA/1V9506-38****0
1300	1.9	3.3	4540	73	61	46	96	175	HCDA/1V1307-3C****0
920	1.6	5.4	3460	62	52	40	116	95	HCDA/1V9206-51****0
1250	1.7	5	7190	63	53	40	116	120	HCDA/1V1257-53****0
1500	1.3	4.9	7334	73	61	46	116	140	HCDA/1V1507-56****0
1700	1.0	3.6	6926	96	81	61	116	160	HCDA/1V1707-58****0
1600	1.0	3.4	6245	100	83	63	116	175	HCDA/1V1607-5A****0
2100	0.9	2.7	9563	100	90	64	116	230	HCDA/1V2107-5H****0
4200	0.8	2	13501	100	90	79	136	295	HCDA/1V4207-6Q****0
UN=800Vd.c.									
C <sub>N</sub> (μF)	ESR (mΩ(1kHz))	R <sub>th</sub> (K/W)	Ī (A)	I <sub>max</sub>			D (mm)	H (mm)	Ordering Information
				50°C	60°C	70°C			
290	1.8	5.6	1219	58	48	37	76	95	HCDA/2K2906-12****0
360	1.7	4.7	2314	65	54	41	76	120	HCDA/2K3606-16****0
450	2.3	4.6	2459	56	47	36	76	140	HCDA/2K4506-18****0
540	1.7	4.3	2459	68	57	43	76	155	HCDA/2K5406-1A****0
650	1.8	4.2	2537	67	56	42	76	175	HCDA/2K6506-1C****0

Note: (1) “-”=capacitance tolerance code, J=±5%,K=±10%;  
 (2) “\*\*\*\*”=terminal code(see table 3).

Outline Dimensions

UN=800Vd.c.									
C <sub>N</sub> (μF)	ESR (mΩ(1kHz))	R <sub>th</sub> (K/W)	Ī (A)	I <sub>max</sub>			D (mm)	H (mm)	Ordering Information
				50°C	60°C	70°C			
380	1.4	5.1	1597	68	57	43	86	95	HCDA/2K3806-22****0
480	1.3	4.7	3086	74	62	47	86	120	HCDA/2K4806-26****0
580	2.0	4.6	3169	60	51	38	86	136	HCDA/2K5806-27****0
600	2.0	4.5	3278	61	51	39	86	140	HCDA/2K6006-28****0
700	1.7	4.4	3187	67	56	42	86	155	HCDA/2K7006-2A****0
800	1.6	4.3	3122	70	58	44	86	175	HCDA/2K8006-2C****0
1200	1.3	3	4684	93	78	59	86	250	HCDA/2K1207-2T****0
540	1.5	4.8	2107	68	57	43	96	95	HCDA/2K5406-32****0
620	1.4	4.2	3986	75	63	48	96	120	HCDA/2K6206-36****0
750	1.6	3.9	4098	73	61	47	96	140	HCDA/2K7506-38****0
1000	1.8	3.3	3903	75	63	48	96	175	HCDA/2K1007-3C****0
750	1.0	5.4	3152	79	66	50	116	95	HCDA/2K7506-51****0
1000	1.1	5	6429	78	65	50	116	120	HCDA/2K1007-53****0
1150	1.2	4.9	6284	75	63	48	116	140	HCDA/2K1157-56****0
1400	0.9	3.6	6375	100	85	65	116	160	HCDA/2K1407-58****0
1600	1.0	3.4	6245	99	83	63	116	175	HCDA/2K1607-5A****0
1700	0.9	2.7	8760	100	95	64	116	230	HCDA/2K1707-5H****0
3200	0.8	2	11640	100	100	79	136	295	HCDA/2K3207-6Q****0
UN=900Vd.c.									
C <sub>N</sub> (μF)	ESR (mΩ(1kHz))	R <sub>th</sub> (K/W)	Ī (A)	I <sub>max</sub>			D (mm)	H (mm)	Ordering Information
				50°C	60°C	70°C			
290	2.0	5.6	1219	55	46	35	76	95	HCDA/1X2906-12****0
380	2.6	4.7	2443	52	44	33	76	120	HCDA/1X3806-16****0
450	2.9	4.6	2459	50	42	32	76	140	HCDA/1X4506-18****0
540	1.8	4.3	2459	66	55	42	76	155	HCDA/1X5406-1A****0
620	1.7	4.2	2420	68	57	43	76	175	HCDA/1X6206-1C****0
380	1.6	5.1	1597	64	54	41	86	95	HCDA/1X3806-22****0
500	2.1	4.7	3214	58	49	37	86	120	HCDA/1X5006-26****0
580	2.2	4.6	3169	58	48	37	86	136	HCDA/1X5806-27****0
600	2.4	4.5	3278	56	47	35	86	140	HCDA/1X6006-28****0

Note: (1) “-”=capacitance tolerance code, J=±5%,K=±10%;  
(2) “\*\*\*\*” =terminal code(see table 3).



Outline Dimensions

UN=900Vd.c.									
C <sub>N</sub> (μF)	ESR (mΩ(1kHz))	R <sub>th</sub> (K/W)	Ī (A)	I <sub>max</sub>			D (mm)	H (mm)	Ordering Information
				50°C	60°C	70°C			
700	1.6	4.4	3187	69	58	44	86	155	HCDA/1X7006-2A****0
820	1.6	4.3	3200	70	58	44	86	175	HCDA/1X8206-2C****0
1200	1.4	3	4684	89	75	57	86	250	HCDA/1X1207-2T****0
520	1.4	4.8	2029	71	59	45	96	95	HCDA/1X5206-32****0
620	1.6	4.2	3986	71	59	45	96	120	HCDA/1X6206-36****0
750	1.7	3.9	4098	71	60	45	96	140	HCDA/1X7506-38****0
1000	1.4	3.3	3903	85	71	54	96	175	HCDA/1X1007-3C****0
750	1.0	5.4	3152	79	66	50	116	95	HCDA/1X7506-51****0
980	1.2	5	6300	75	63	47	116	120	HCDA/1X9806-53****0
1150	1.4	4.9	6284	70	59	44	116	140	HCDA/1X1157-56****0
1400	1.2	3.6	6375	88	74	56	116	160	HCDA/1X1407-58****0
1600	1.1	3.4	6245	95	79	60	116	175	HCDA/1X1607-5A****0
1700	1.0	2.7	8760	100	90	70	116	230	HCDA/1X1707-5H****0
3200	0.9	2	11640	100	100	75	136	295	HCDA/1X3207-6Q****0
UN=1000Vd.c.									
C <sub>N</sub> (μF)	ESR (mΩ(1kHz))	R <sub>th</sub> (K/W)	Ī (A)	I <sub>max</sub>			D (mm)	H (mm)	Ordering Information
				50°C	60°C	70°C			
220	2.2	5.6	1046	52	44	33	76	95	HCDA/3A2206-12****0
300	2.1	4.7	2182	58	49	37	76	120	HCDA/3A3006-16****0
350	1.9	4.6	2164	62	52	39	76	140	HCDA/3A3506-18****0
420	1.9	4.3	2164	64	54	41	76	155	HCDA/3A4206-1A****0
500	1.9	4.2	2208	65	54	41	76	175	HCDA/3A5006-1C****0
290	1.8	5.1	1379	60	51	38	86	95	HCDA/3A2906-22****0
400	2.3	4.7	2910	56	47	35	86	120	HCDA/3A4006-26****0
460	2.2	4.6	2844	58	48	37	86	136	HCDA/3A4606-27****0
460	2.2	4.5	2844	58	49	37	86	140	HCDA/3A4606-28****0
550	1.6	4.4	2834	69	58	44	86	155	HCDA/3A5506-2A****0
640	1.6	4.3	2826	70	58	44	86	175	HCDA/3A6406-2C****0
900	1.4	3	3975	89	75	57	86	250	HCDA/3A9006-2T****0
400	1.5	4.8	1766	68	57	43	96	95	HCDA/3A4006-32****0

Note: (1) "-"=capacitance tolerance code, J=±5%,K=±10%;  
 (2) "\*\*\*\*" =terminal code(see table 3).

Outline Dimensions

UN=1000Vd.c.									
CN (μF)	ESR (mΩ(1kHz))	Rth (K/W)	Ī (A)	Imax			D (mm)	H (mm)	Ordering Information
				50°C	60°C	70°C			
500	1.8	4.2	3637	67	56	42	96	120	HCDA/3A5006-36****0
580	1.9	3.9	3586	67	56	43	96	140	HCDA/3A5806-38****0
800	1.2	3.3	3533	92	77	58	96	175	HCDA/3A8006-3C****0
600	1.1	5.4	2854	75	63	48	116	95	HCDA/3A6006-51****0
780	1.5	5	5674	67	56	42	116	120	HCDA/3A7806-53****0
900	1.5	4.9	5565	68	57	43	116	140	HCDA/3A9006-56****0
1100	1.2	3.6	5668	88	74	56	116	160	HCDA/3A1107-58****0
1300	1.0	3.4	5742	99	83	63	116	175	HCDA/3A1307-5A****0
1350	1.0	2.7	7765	100	90	70	116	230	HCDA/3A1357-5H****0
2600	0.9	2	10557	100	100	75	136	295	HCDA/3A2607-6Q****0
UN=1100Vd.c.									
CN (μF)	ESR (mΩ(1kHz))	Rth (K/W)	Ī (A)	Imax			D (mm)	H (mm)	Ordering Information
				50°C	60°C	70°C			
180	2.3	5.6	955	51	43	32	76	95	HCDA/1M1806-12****0
240	3.0	4.7	1949	49	41	31	76	120	HCDA/1M2406-16****0
280	3.2	4.6	1932	48	40	30	76	140	HCDA/1M2806-18****0
340	1.9	4.3	1955	64	54	41	76	155	HCDA/1M3406-1A****0
400	2.0	4.2	1972	63	53	40	76	175	HCDA/1M4006-1C****0
240	1.9	5.1	1274	59	49	37	86	95	HCDA/1M2406-22****0
300	2.4	4.7	2436	54	46	35	86	120	HCDA/1M3006-26****0
420	2.2	4.6	1380	58	48	37	86	136	HCDA/1M4206-27****0
420	1.7	4.4	2416	67	56	42	86	155	HCDA/1M4206-2A****0
500	1.8	4.3	2465	66	55	42	86	175	HCDA/1M5006-2C****0
750	1.3	3	3697	93	78	59	86	250	HCDA/1M7506-2T****0
330	1.6	4.8	1627	66	55	42	96	95	HCDA/1M3306-32****0
400	1.9	4.2	3248	65	54	41	96	120	HCDA/1M4006-36****0
480	2.0	3.9	3313	66	55	42	96	140	HCDA/1M4806-38****0
650	1.4	3.3	3204	85	71	54	96	175	HCDA/1M6506-3C****0
480	1.2	5.4	2548	72	60	46	116	95	HCDA/1M4806-51****0
620	1.4	5	5035	69	58	44	116	120	HCDA/1M6206-53****0

Note: (1) "-"=capacitance tolerance code, J=±5%,K=±10%;  
 (2) "\*\*\*\*" =terminal code(see table 3).

Outline Dimensions

UN=1100Vd.c.									
CN (μF)	ESR (mΩ(1kHz))	Rth (K/W)	Ī (A)	Imax			D (mm)	H (mm)	Ordering Information
				50°C	60°C	70°C			
750	1.6	4.9	5177	65	55	41	116	140	HCDA/1M7506-56****0
900	1.4	3.6	5177	82	68	52	116	160	HCDA/1M9006-58****0
1000	1.2	3.4	4930	91	76	58	116	175	HCDA/1M1007-5A****0
1300	1.1	2.7	7478	100	85	65	116	230	HCDA/1M1307-5H****0
2200	1.0	2	9863	100	100	80	136	295	HCDA/1M2207-6Q****0
UN=1200Vd.c.									
CN (μF)	ESR (mΩ(1kHz))	Rth (K/W)	Ī (A)	Imax			D (mm)	H (mm)	Ordering Information
				50°C	60°C	70°C			
140	2.7	5.6	820	47	39	30	76	95	HCDA/3L1406-12****0
200	2.6	4.7	1793	52	44	33	76	120	HCDA/3L2006-16****0
240	2.4	4.6	1829	55	46	35	76	140	HCDA/3L2406-18****0
280	2.1	4.3	1778	61	51	39	76	155	HCDA/3L2806-1A****0
320	2.0	4.2	1742	63	53	40	76	175	HCDA/3L3206-1C****0
200	2.2	5.1	1172	55	46	35	86	95	HCDA/3L2006-22****0
260	2.1	4.7	2331	58	49	37	86	120	HCDA/3L2606-26****0
310	2.5	4.6	2362	54	45	34	86	136	HCDA/3L3106-27****0
300	2.5	4.5	2286	55	46	35	86	140	HCDA/3L3006-28****0
360	1.8	4.4	2286	65	54	41	86	155	HCDA/3L3606-2A****0
420	1.9	4.3	2286	64	54	41	86	175	HCDA/3L4206-2C****0
640	1.7	3	3484	81	68	51	86	250	HCDA/3L6406-2T****0
270	1.8	4.8	1469	62	52	40	96	95	HCDA/3L2706-32****0
340	2.0	4.2	3048	63	53	40	96	120	HCDA/3L3406-36****0
380	2.2	3.9	2896	62	52	40	96	140	HCDA/3L3806-38****0
540	1.6	3.3	2939	80	67	51	96	175	HCDA/3L5406-3C****0
380	1.2	5.4	2227	72	60	46	116	95	HCDA/3L3806-51****0
510	1.6	5	4573	65	54	41	116	120	HCDA/3L5106-53****0
600	1.8	4.9	4573	62	52	39	116	140	HCDA/3L6006-56****0
720	1.6	3.6	4573	76	64	48	116	160	HCDA/3L7206-58****0
850	1.4	3.4	4627	84	70	53	116	175	HCDA/3L8506-5A****0
910	1.1	2.7	6325	100	89	65	116	230	HCDA/3L9106-5H****0
1800	1.0	2	8831	100	100	80	136	295	HCDA/3L1807-6Q****0

Note: (1) “-”=capacitance tolerance code, J=±5%,K=±10%; “\*\*\*\*” =terminal code(see table 3).



Outline Dimensions

UN=1300Vd.c.									
C <sub>N</sub> (μF)	ESR (mΩ(1kHz))	R <sub>th</sub> (K/W)	Ī (A)	I <sub>max</sub>			D (mm)	H (mm)	Ordering Information
				50°C	60°C	70°C			
120	2.9	5.6	769	45	38	29	76	95	HCDA/2M1206-12****0
170	2.6	4.7	1668	52	44	33	76	120	HCDA/2M1706-16****0
200	2.5	4.6	1668	54	45	34	76	140	HCDA/2M2006-18****0
240	2.4	4.3	1668	57	48	36	76	155	HCDA/2M2406-1A****0
280	2.3	4.2	1668	59	49	37	76	175	HCDA/2M2806-1C****0
170	2.3	5.1	1090	53	45	34	86	95	HCDA/2M1706-22****0
220	2.8	4.7	2158	50	42	32	86	120	HCDA/2M2206-26****0
250	2.8	4.6	2085	51	43	32	86	136	HCDA/2M2506-27****0
300	2.2	4.4	2085	59	49	37	86	155	HCDA/2M3006-2A****0
360	2.0	4.3	2144	62	52	40	86	175	HCDA/2M3606-2C****0
520	1.6	3	3098	84	70	53	86	250	HCDA/2M5206-2T****0
220	1.8	4.8	1310	62	52	40	96	95	HCDA/2M2206-32****0
280	1.7	4.2	2747	68	57	43	96	120	HCDA/2M2806-36****0
330	2.3	3.9	2752	61	51	39	96	140	HCDA/2M3306-38****0
450	1.4	3.3	2681	85	71	54	96	175	HCDA/2M4506-3C****0
320	1.3	5.4	2053	69	58	44	116	95	HCDA/2M3206-51****0
430	1.6	5	4219	65	54	41	116	120	HCDA/2M4306-53****0
510	1.8	4.9	4253	62	52	39	116	140	HCDA/2M5106-56****0
620	1.2	3.6	4309	88	74	56	116	160	HCDA/2M6206-58****0
700	1.3	3.4	4170	87	73	55	116	175	HCDA/2M7006-5A****0
900	1.2	2.7	6255	100	85	65	116	230	HCDA/2M9006-5H****0
1500	1.1	2	7994	100	100	75	136	295	HCDA/2M1507-6Q****0
UN=1400Vd.c.									
C <sub>N</sub> (μF)	ESR (mΩ(1kHz))	R <sub>th</sub> (K/W)	Ī (A)	I <sub>max</sub>			D (mm)	H (mm)	Ordering Information
				50°C	60°C	70°C			
100	3.1	5.6	769	45	38	29	76	95	HCDA/2M1206-12****0
140	3.9	4.7	1668	52	44	33	76	120	HCDA/2M1706-16****0
160	4.5	4.6	1668	54	45	34	76	140	HCDA/2M2006-18****0
190	2.4	4.3	1668	57	48	36	76	155	HCDA/2M2406-1A****0
220	2.5	4.2	1668	59	49	37	76	175	HCDA/2M2806-1C****0

Note: (1) "-"=capacitance tolerance code, J=±5%,K=±10%;  
 (2) "\*\*\*\*" =terminal code(see table 3).

Outline Dimensions

UN=1400Vd.c.									
CN (μF)	ESR (mΩ(1kHz))	Rth (K/W)	Ī (A)	Imax			D (mm)	H (mm)	Ordering Information
				50°C	60°C	70°C			
140	2.4	5.1	975	52	44	33	86	95	HCDA/3M1406-22****0
180	3.1	4.7	1918	48	40	30	86	120	HCDA/3M1806-26****0
220	2.9	4.6	1993	50	42	32	86	136	HCDA/3M2206-27****0
260	1.8	4.4	1963	65	54	41	86	155	HCDA/3M2606-2A****0
300	2.2	4.3	1941	60	50	38	86	175	HCDA/3M3006-2C****0
450	1.6	3	2912	84	70	53	86	250	HCDA/3M4506-2T****0
180	1.8	4.8	1164	62	52	40	96	95	HCDA/3M1806-32****0
240	2.2	4.2	2558	60	50	38	96	120	HCDA/3M2406-36****0
280	2.3	3.9	2536	61	51	39	96	140	HCDA/3M2806-38****0
380	1.6	3.3	2459	80	67	51	96	175	HCDA/3M3806-3C****0
280	1.4	5.4	1951	67	56	42	116	95	HCDA/3M2806-51****0
360	1.8	5	3837	61	51	39	116	120	HCDA/3M3606-53****0
430	1.9	4.9	3895	60	50	38	116	140	HCDA/3M4306-56****0
500	1.2	3.6	3775	88	74	56	116	160	HCDA/3M5006-58****0
600	1.4	3.4	3882	84	70	53	116	175	HCDA/3M6006-5A****0
750	1.2	2.7	5662	100	85	65	116	230	HCDA/3M7506-5H****0
1300	1.1	2	7567	100	100	75	136	295	HCDA/3M1307-6Q****0
UN=1500Vd.c.									
CN (μF)	ESR (mΩ(1kHz))	Rth (K/W)	Ī (A)	Imax			D (mm)	H (mm)	Ordering Information
				50°C	60°C	70°C			
90	3.3	5.6	687	43	36	27	76	95	HCDA/4M9005-12****0
120	3.2	4.7	1413	47	40	30	76	120	HCDA/4M1206-16****0
140	3.4	4.6	1397	46	39	29	76	140	HCDA/4M1406-18****0
170	2.6	4.3	1408	55	46	35	76	155	HCDA/4M1706-1A****0
200	2.5	4.2	1417	56	47	36	76	175	HCDA/4M2006-1C****0
120	2.6	5.1	916	50	42	32	86	95	HCDA/4M1206-22****0
150	3.2	4.7	1767	47	40	30	86	120	HCDA/4M1506-26****0
180	2.9	4.6	1796	50	42	32	86	136	HCDA/4M1806-27****0
220	2.1	4.4	1823	60	50	38	86	155	HCDA/4M2206-2A****0
260	2.2	4.3	1842	60	50	38	86	175	HCDA/4M2606-2C****0

Note: (1) “-”=capacitance tolerance code, J=±5%,K=±10%;  
 (2) “\*\*\*\*”=terminal code(see table 3).

Outline Dimensions

U <sub>N</sub> =1500Vd.c.									
C <sub>N</sub> (μF)	ESR (mΩ(1kHz))	R <sub>th</sub> (K/W)	Ī (A)	I <sub>max</sub>			D (mm)	H (mm)	Ordering Information
				50°C	60°C	70°C			
160	2.0	4.8	1133	59	49	38	96	95	HCDA/4M1606-32****0
200	2.2	4.2	2356	60	50	38	96	120	HCDA/4M2006-36****0
240	2.6	3.9	2394	57	48	36	96	140	HCDA/4M2406-38****0
320	1.5	3.3	2267	82	69	52	96	175	HCDA/4M3206-3C****0
230	1.5	5.4	1757	64	54	41	116	95	HCDA/4M2306-51****0
300	1.8	5	3534	61	51	39	116	120	HCDA/4M3006-53****0
360	2.2	4.9	3592	56	47	35	116	140	HCDA/4M3606-56****0
430	1.2	3.6	3563	88	74	56	116	160	HCDA/4M4306-58****0
500	1.4	3.4	3543	84	70	53	116	175	HCDA/4M5006-5A****0
630	1.2	2.7	5221	100	85	65	116	230	HCDA/4M6306-5H****0
1100	1.2	2	6873	100	95	70	136	295	HCDA/4M1107-6Q****0
U <sub>N</sub> =2000Vd.c.									
C <sub>N</sub> (μF)	ESR (mΩ(1kHz))	R <sub>th</sub> (K/W)	Ī (A)	I <sub>max</sub>			D (mm)	H (mm)	Ordering Information
				50°C	60°C	70°C			
110	3.5	4.5	1420	46	39	29	86	140	HCDA/3D1106-28****0
180	1.9	3.8	1930	68	57	43	86	225	HCDA/3D1806-2S****0
180	2.3	5	2744	54	45	34	116	120	HCDA/3D1806-53****0
220	2.4	4.9	2841	53	45	34	116	140	HCDA/3D2206-56****0
250	1.3	3.4	2553	87	73	55	116	175	HCDA/3D2506-5A****0
380	1.5	2.9	4075	88	74	56	116	225	HCDA/3D3806-5G****0
250	1.8	3	3811	79	66	50	136	120	HCDA/3D2506-63****0
310	2.0	2.8	4003	77	65	49	136	140	HCDA/3D3106-66****0
340	1.2	2.5	3472	100	90	65	136	175	HCDA/3D3406-6A****0
440	1.3	2.1	5255	100	90	70	136	225	HCDA/3D4406-6G****0
550	1.3	1.9	5237	100	95	75	136	265	HCDA/3D5506-6M****0

Note: (1) “-”=capacitance tolerance code, J=±5%,K=±10%;  
 (2) “\*\*\*\*”=terminal code(see table 3).

Outline Dimensions

UN=2200Vd.c.									
CN (μF)	ESR (mΩ(1kHz))	Rth (K/W)	Ī (A)	Imax			D (mm)	H (mm)	Ordering Information
				50°C	60°C	70°C			
90	3.7	4.5	1294	45	38	28	86	140	HCDA/2N9005-28****0
150	1.9	3.8	1791	68	57	43	86	225	HCDA/2N1506-2S****0
145	2.2	5	2462	55	46	35	116	120	HCDA/2N1456-53****0
170	2.5	4.9	2444	52	44	33	116	140	HCDA/2N1706-56****0
240	1.8	3.4	2451	74	62	47	116	175	HCDA/2N2406-5A****0
310	1.6	2.9	3702	85	71	54	116	225	HCDA/2N3106-5G****0
200	2.0	3	3396	75	63	47	136	120	HCDA/2N2006-63****0
240	2.2	2.8	3451	74	62	47	136	140	HCDA/2N2406-66****0
340	1.8	2.5	3472	86	72	55	136	175	HCDA/2N3406-6A****0
440	1.6	2.1	5255	100	84	63	136	225	HCDA/2N4406-6G****0
550	1.5	1.9	5237	100	90	69	136	265	HCDA/2N5506-6M****0
UN=2400Vd.c.									
CN (μF)	ESR (mΩ(1kHz))	Rth (K/W)	Ī (A)	Imax			D (mm)	H (mm)	Ordering Information
				50°C	60°C	70°C			
70	3.8	4.5	2319	44	37	28	86	140	HCDA/1N7005-28****0
140	2.4	3.8	2345	61	51	38	86	225	HCDA/1N1406-2S****0
120	2.3	5	2258	54	45	34	116	120	HCDA/1N1206-53****0
140	2.7	4.9	4639	50	42	32	116	140	HCDA/1N1406-56****0
195	2.0	3.4	4503	70	59	45	116	175	HCDA/1N1956-5A****0
270	1.6	2.9	4522	85	71	54	116	225	HCDA/1N2706-5G****0
170	2.1	3	3199	73	61	46	136	120	HCDA/1N1706-63****0
190	2.2	2.8	6296	74	62	47	136	140	HCDA/1N1906-66****0
270	1.8	2.5	6236	86	72	55	136	175	HCDA/1N2706-6A****0
380	1.6	2.1	6365	100	84	63	136	225	HCDA/1N3806-6G****0
450	1.5	1.9	9661	100	91	69	136	265	HCDA/1N4506-6M****0

Note: (1) "-"=capacitance tolerance code, J=±5%,K=±10%;  
 (2) "\*\*\*\*" =terminal code(see table 3).

Outline Dimensions

UN=2600Vd.c.									
CN (μF)	ESR (mΩ(1kHz))	Rth (K/W)	Ī (A)	Imax			D (mm)	H (mm)	Ordering Information
				50°C	60°C	70°C			
60	4.0	4.5	2175	43	36	27	86	140	HCDA/3N6005-28****0
115	2.2	3.8	2108	63	53	40	86	225	HCDA/3N1156-2S****0
100	2.3	5	2059	54	45	34	116	120	HCDA/3N1006-53****0
115	2.4	4.9	4170	53	45	34	116	140	HCDA/3N1156-56****0
165	1.4	3.4	4170	84	70	53	116	175	HCDA/3N1656-5A****0
220	1.7	2.9	4033	82	69	52	116	225	HCDA/3N2206-5G****0
140	2.1	3	2883	73	61	46	136	120	HCDA/3N1406-63****0
160	2.3	2.8	5802	72	60	46	136	140	HCDA/3N1606-66****0
230	1.4	2.5	5813	98	82	62	136	175	HCDA/3N2306-6A****0
320	1.5	2.1	5866	100	86	65	136	225	HCDA/3N3206-6G****0
380	1.4	1.9	8928	100	94	70	136	265	HCDA/3N3806-6M****0
UN=2800Vd.c.									
CN (μF)	ESR (mΩ(1kHz))	Rth (K/W)	Ī (A)	Imax			D (mm)	H (mm)	Ordering Information
				50°C	60°C	70°C			
50	4.2	4.5	1969	42	35	27	86	140	HCDA/6P5005-28****0
100	2.6	3.8	1991	58	49	37	86	225	HCDA/6P1006-2S****0
85	2.4	5	1901	53	44	34	116	120	HCDA/6P8505-53****0
95	2.9	4.9	3742	49	41	31	116	140	HCDA/6P9505-56****0
135	1.8	3.4	3706	74	62	47	116	175	HCDA/6P1356-5A****0
190	1.6	2.9	3783	85	71	54	116	225	HCDA/6P1906-5G****0
120	2.2	3	2684	71	60	45	136	120	HCDA/6P1206-63****0
140	2.4	2.8	5514	71	59	45	136	140	HCDA/6P1406-66****0
200	1.8	2.5	5490	86	72	55	136	175	HCDA/6P2006-6A****0
270	1.6	2.1	5376	100	84	63	136	225	HCDA/6P2706-6G****0
320	1.5	1.9	8166	100	90	65	136	265	HCDA/6P3206-6M****0

Note: (1) "-"=capacitance tolerance code, J=±5%,K=±10%;  
 (2) "\*\*\*\*" =terminal code(see table 3).



Outline Dimensions

UN=3000Vd.c.									
CN ( $\mu$ F)	ESR (m $\Omega$ (1kHz))	Rth (K/W)	$\hat{I}$ (A)	Imax			D (mm)	H (mm)	Ordering Information
				50°C	60°C	70°C			
40	4.5	4.5	1778	41	34	26	86	140	HCDA/4Q4005-28****0
80	2.4	3.8	1758	61	51	38	86	225	HCDA/4Q8005-2S****0
75	2.7	5	1801	50	42	32	116	120	HCDA/4Q7505-53****0
80	2.4	4.9	3556	53	45	34	116	140	HCDA/4Q8005-56****0
115	1.6	3.4	3514	78	66	50	116	175	HCDA/4Q1156-5A****0
160	1.6	2.9	3516	85	71	54	116	225	HCDA/4Q1606-5G****0
100	2.3	3	2475	70	58	44	136	120	HCDA/4Q1006-63****0
110	2.4	2.8	4889	71	59	45	136	140	HCDA/4Q1106-66****0
165	1.6	2.5	5042	92	77	58	136	175	HCDA/4Q1656-6A****0
230	1.5	2.1	5054	100	86	65	136	225	HCDA/4Q2306-6G****0
265	1.6	1.9	7511	100	88	67	136	265	HCDA/4Q2656-6M****0
UN=3200Vd.c.									
CN ( $\mu$ F)	ESR (m $\Omega$ (1kHz))	Rth (K/W)	$\hat{I}$ (A)	Imax			D (mm)	H (mm)	Ordering Information
				50°C	60°C	70°C			
35	4.6	4.5	1670	40	34	26	86	140	HCDA/6Q3505-28****0
70	2.5	3.8	1651	59	50	38	86	225	HCDA/6Q7005-2S****0
65	2.8	5	1675	49	41	31	116	120	HCDA/6Q6505-53****0
70	3.0	4.9	3340	48	40	30	116	140	HCDA/6Q7005-56****0
100	1.8	3.4	3280	74	62	47	116	175	HCDA/6Q1006-5A****0
140	1.5	2.9	3302	88	74	56	116	225	HCDA/6Q1406-5G****0
88	2.2	3	2338	71	60	45	136	120	HCDA/6Q8805-63****0
100	2.5	2.8	4771	69	58	44	136	140	HCDA/6Q1006-66****0
140	1.7	2.5	4592	89	74	56	136	175	HCDA/6Q1406-6A****0
200	1.5	2.1	4718	100	86	65	136	225	HCDA/6Q2006-6G****0
230	1.7	1.9	6998	100	85	65	136	265	HCDA/6Q2306-6M****0

Note: (1) "-"=capacitance tolerance code, J=±5%,K=±10%;  
 (2) "\*\*\*\*" =terminal code(see table 3).

Outline Dimensions

UN=3600Vd.c.									
CN ( $\mu$ F)	ESR (m $\Omega$ (1kHz))	Rth (K/W)	$\hat{I}$ (A)	Imax			D (mm)	H (mm)	Ordering Information
				50°C	60°C	70°C			
25	4.1	4.5	1438	43	36	27	86	140	HCDA/7R2505-28****0
50	2.7	3.8	1421	57	48	36	86	225	HCDA/7R5005-2S****0
43	2.6	5	1377	51	43	32	116	120	HCDA/7R4305-53****0
50	2.6	4.9	2876	51	43	33	116	140	HCDA/7R5005-56****0
95	1.8	2.9	2701	80	67	51	116	225	HCDA/7R9505-5G****0
110	1.7	2.6	4035	87	73	55	116	265	HCDA/7R1106-5M****0
60	2.3	3	1922	70	58	44	136	120	HCDA/7R6005-63****0
67	2.0	2.8	3854	77	65	49	136	140	HCDA/7R6705-66****0
135	1.6	2.1	3839	100	84	63	136	225	HCDA/7R1356-6G****0
160	1.5	1.9	5869	100	90	69	136	265	HCDA/7R1606-6M****0
UN=4000Vd.c.									
CN ( $\mu$ F)	ESR (m $\Omega$ (1kHz))	Rth (K/W)	$\hat{I}$ (A)	Imax			D (mm)	H (mm)	Ordering Information
				50°C	60°C	70°C			
20	4.5	4.5	1281	41	34	26	86	140	HCDA/3G2005-28****0
40	3.7	3.8	1266	49	41	31	86	225	HCDA/3G4005-2S****0
35	3.6	5	1248	43	36	27	116	120	HCDA/3G3505-53****0
40	3.2	4.9	2562	46	39	29	116	140	HCDA/3G4005-56****0
80	1.8	2.9	2533	80	67	51	116	225	HCDA/3G8005-5G****0
90	1.8	2.6	3676	85	71	54	116	265	HCDA/3G9005-5M****0
50	2.7	3	1783	64	54	41	136	120	HCDA/3G5005-63****0
55	2.6	2.8	3523	68	57	43	136	140	HCDA/3G5505-66****0
110	1.9	2.1	3483	92	77	58	136	225	HCDA/3G1106-6G****0
130	1.8	1.9	5310	99	83	63	136	265	HCDA/3G1306-6M****0

Note: (1) "-"=capacitance tolerance code, J=±5%,K=±10%;  
 (2) "\*\*\*\*" =terminal code(see table 3).

# HCDB



DC-Link Capacitor for PCB

## Features

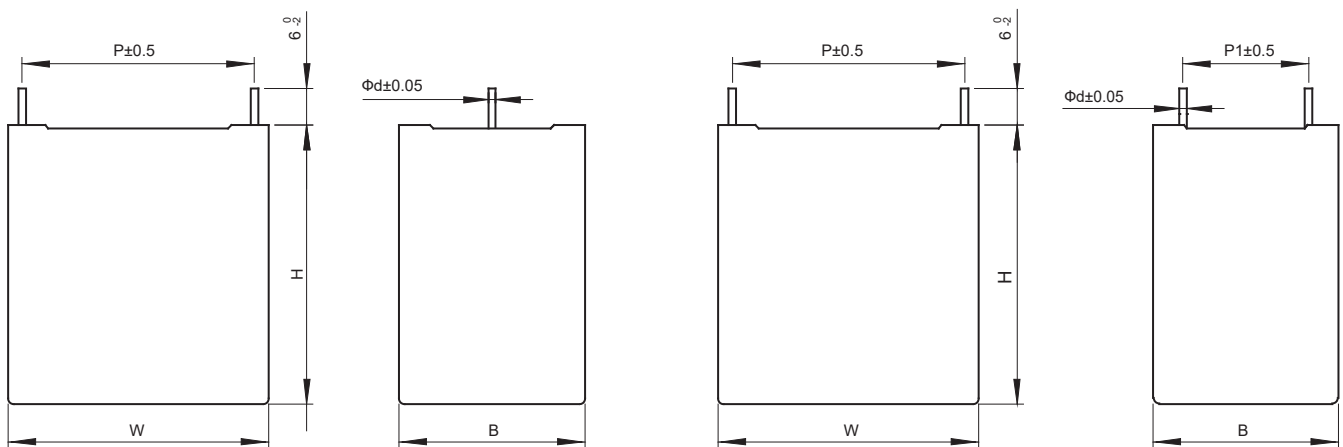
- DC-filter application
- Metallized polypropylene film structure
- Plastic case (UL94 V-0), filled with resin
- Excellent electric property



## Safety Approvals

	TUV	EN 61071:2017	0.6µF-140µF,±5%,±10%,500Vd.c.-1500Vd.c. 40/85/56,40/105/56 File No.: R 50516398
	UL	UL810	0.062µF-140µF,max 3000Vd.c. max 105°C File No.: E222132,CCN:CZDS2

## Outline Drawing



2pins

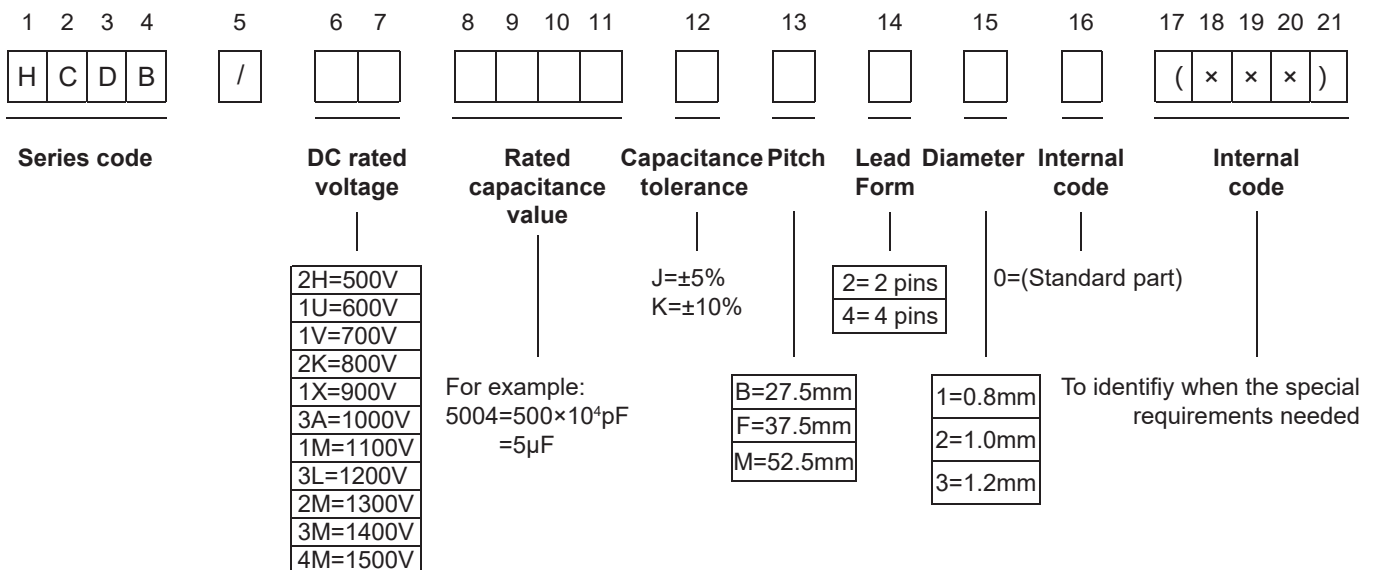
4pins

Note: The dimensions of the product are in mm units.  
Outline dimensions can be found in the Product Dimensions Table.

Specifications

Reference standard	GB/T 17702 (IEC 61071)
Rated voltage	500Vd.c.~1500Vd.c.
Capacitance range	0.6μF~140μF
Climatic category	40/85/56,40/105/56
Operating temperature	-40°C~105°C (85°C~105°C:decreasing factor 1.5% per °C for U <sub>N,85°C</sub> )
Capacitance tolerance	±5%(J),±10%(K)
Voltage proof	1.5U <sub>N</sub> (10s,20°C±5°C)
Insulation resistance (IR×C <sub>N</sub> )	≥10000s (20°C,100Vd.c.,60s)
Self inductance (L <sub>s</sub> )	<1nH/mm
Dielectric dissipation factor (tanδ <sub>d</sub> )	0.0002
Maximum peak current $\hat{I}$ (A)	$\hat{I}=C \times dv/dt$
Peak Non-Repetitive Current	1.4 $\hat{I}$ (1000times during the lifetime)
Over voltage	1.1U <sub>N</sub> (30% of on -load duration/d)
	1.15 U <sub>N</sub> (30min/d)
	1.2 U <sub>N</sub> (5min/d)
	1.3 U <sub>N</sub> (1min/d)
	1.5U <sub>N</sub> (An overvoltage equal to 1.5U <sub>N</sub> for 30ms is permitted 1000 times during the life of the capacitor)
Expected lifetime	100000h@U <sub>N,85°C</sub> ,Θ <sub>hs</sub> =85°C 8000h@U <sub>N,105°C</sub> ,Θ <sub>hs</sub> =105°C
Failure rate	≤300FIT@U <sub>N,85°C</sub> ,Θ <sub>hs</sub> =85°C

Ordering Information



Outline Dimensions

U <sub>N,85°C</sub> =500Vd.c.; U <sub>N,105°C</sub> =350Vd.c.													
C <sub>N</sub> (μF)	W±1 (mm)	H±1 (mm)	B±1 (mm)	P (mm)	P1 (mm)	d±0.05 (mm)	dv/dt (V/μs)	Î (A)	tanδ(×10 <sup>-4</sup> )		ESR@10kHz (mΩ)	I <sub>max</sub> (A)	Ordering Information
									1kHz	10kHz			
3	32	18	9	27.5	-	0.8	18	54	9	75	33.0	3.8	HCDB/2H3004*B210
4	32	20	11	27.5	-	0.8	18	72	9	75	24.7	4.6	HCDB/2H4004*B210
5	32	22	13	27.5	-	0.8	18	90	9	75	20.3	5.4	HCDB/2H5004*B210
6	32	22	13	27.5	-	0.8	18	108	9	80	18.0	5.8	HCDB/2H6004*B210
7	32	25	13	27.5	-	0.8	18	126	10	80	16.0	6.3	HCDB/2H7004*B210
8	32	25	13	27.5	-	0.8	18	144	10	85	14.4	6.7	HCDB/2H8004*B210
8	32	24	15	27.5	-	0.8	18	144	10	85	14.4	7.2	HCDB/2H8004*B210
9	32	28	14	27.5	-	1.0	18	162	9	80	12.5	7.4	HCDB/2H9004*B220
10	32	28	14	27.5	-	1.0	18	180	10	80	11.5	7.8	HCDB/2H1005*B220
12	32	30	16	27.5	-	1.0	18	216	10	85	10.0	9.1	HCDB/2H1205*B220
16	32	33	18	27.5	-	1.2	18	288	10	85	7.8	10.7	HCDB/2H1605*B230
20	32	37	22	27.5	-	1.2	18	360	10	85	6.8	13.3	HCDB/2H2005*B230
20	32	37	22	27.5	10.2	1.0	18	360	9	85	6.0	14.3	HCDB/2H2005*B420
24	32	37	22	27.5	10.2	1.0	18	432	9	85	6.0	14.3	HCDB/2H2405*B420
24	42	33	18	37.5	-	1.2	12	288	14	140	9.5	10.6	HCDB/2H2405*F230
30	42	40	20	37.5	-	1.2	12	360	15	145	8.3	12.1	HCDB/2H3005*F230
30	42	40	20	37.5	10.2	1.0	12	360	14	140	7.4	12.9	HCDB/2H3005*F420
35	42	36	24	37.5	-	1.2	12	420	16	150	7.5	12.5	HCDB/2H3505*F230
35	42	36	24	37.5	10.2	1.0	12	420	14	145	6.6	13.4	HCDB/2H3505*F420
40	42	44	24	37.5	-	1.2	12	480	16	155	6.9	14.7	HCDB/2H4005*F230
40	42	44	24	37.5	10.2	1.0	12	480	14	140	5.8	16.2	HCDB/2H4005*F420
45	42	44	24	37.5	-	1.2	12	540	16	160	6.4	15.3	HCDB/2H4505*F230
45	42	44	24	37.5	10.2	1.0	12	540	14	150	5.5	16.8	HCDB/2H4505*F420
50	42	45	30	37.5	20.3	1.0	12	600	14	155	5.1	18.2	HCDB/2H5005*F420
55	42	45	30	37.5	20.3	1.2	12	660	14	145	4.6	19.4	HCDB/2H5505*F430
60	42	45	30	37.5	20.3	1.2	12	720	14	150	4.3	20.1	HCDB/2H6005*F430
65	42	46	35	37.5	20.3	1.2	12	780	14	150	4.1	20.7	HCDB/2H6505*F430
70	42	50	35	37.5	20.3	1.2	12	840	15	155	3.9	24.0	HCDB/2H7005*F430
75	42	50	35	37.5	20.3	1.2	12	900	15	155	3.8	24.7	HCDB/2H7505*F430
80	42	55	40	37.5	20.3	1.2	12	960	15	165	3.7	27.6	HCDB/2H8005*F430

Note: (1)\*\*=capacitance tolerance code, J=±5%,K=±10%.

Outline Dimensions

UN,85°C=500Vd.c.; UN,105°C=350Vd.c.													
CN (μF)	W±1 (mm)	H±1 (mm)	B±1 (mm)	P (mm)	P1 (mm)	d±0.05 (mm)	dv/dt (V/μs)	Ī (A)	tanδ(×10 <sup>-4</sup> )		ESR@10kHz (mΩ)	I <sub>max</sub> (A)	Ordering Information
									1kHz	10kHz			
85	42	55	40	37.5	20.3	1.2	12	1020	15	165	3.5	28.3	HCDB/2H8505*F430
90	42	55	40	37.5	20.3	1.2	12	1080	15	170	3.4	28.9	HCDB/2H9005*F430
90	57.5	45	30	52.5	20.3	1.2	8	720	24	270	5.5	19.4	HCDB/2H9005*M430
95	57.5	50	35	52.5	20.3	1.2	8	760	24	275	5.3	21.8	HCDB/2H9505*M430
100	57.5	50	35	52.5	20.3	1.2	8	800	25	275	5.1	22.3	HCDB/2H1006*M430
110	57.5	50	35	52.5	20.3	1.2	8	880	25	280	4.7	23.3	HCDB/2H1106*M430
120	57.5	55	45	52.5	20.3	1.2	8	960	25	285	4.5	27.0	HCDB/2H1206*M430
130	57.5	55	45	52.5	20.3	1.2	8	1040	25	290	4.2	28.0	HCDB/2H1306*M430
140	57.5	55	45	52.5	20.3	1.2	8	1120	25	295	4.0	28.9	HCDB/2H1406*M430
UN,85°C=600Vd.c.; UN,105°C=420Vd.c.													
CN (μF)	W±1 (mm)	H±1 (mm)	B±1 (mm)	P (mm)	P1 (mm)	d±0.05 (mm)	dv/dt (V/μs)	Ī (A)	tanδ(×10 <sup>-4</sup> )		ESR@10kHz (mΩ)	I <sub>max</sub> (A)	Ordering Information
									1kHz	10kHz			
2	32	18	9	27.5	-	0.8	20	40	8	70	42.0	3.4	HCDB/1U2004*B210
3	32	20	11	27.5	-	0.8	20	60	8	70	28.9	4.3	HCDB/1U3004*B210
4	32	22	13	27.5	-	0.8	20	80	9	70	22.5	5.1	HCDB/1U4004*B210
5	32	25	13	27.5	-	0.8	20	100	9	70	18.8	5.8	HCDB/1U5004*B210
6	32	28	14	27.5	-	0.8	20	120	9	75	16.3	6.4	HCDB/1U6004*B210
7	32	30	16	27.5	-	1.0	20	140	9	75	13.8	7.6	HCDB/1U7004*B220
8	32	30	16	27.5	-	1.0	20	160	9	75	12.4	8.1	HCDB/1U8004*B220
9	32	33	18	27.5	-	1.0	20	180	9	75	11.3	8.7	HCDB/1U9004*B220
10	32	33	18	27.5	-	1.0	20	200	9	75	10.5	9.1	HCDB/1U1005*B220
11	32	33	18	27.5	-	1.0	20	220	9	75	9.8	9.4	HCDB/1U1105*B220
15	32	37	22	27.5	-	1.2	20	300	9	75	7.5	12.5	HCDB/1U1505*B230
15	32	37	22	27.5	10.2	1.0	20	300	9	75	6.7	13.4	HCDB/1U1505*B420
20	42	40	20	37.5	-	1.2	14	280	13	125	10.0	10.9	HCDB/1U2005*F230
20	42	40	20	37.5	10.2	1.0	14	280	12	115	9.0	11.5	HCDB/1U2005*F420
22	42	40	20	37.5	-	1.2	14	308	13	125	9.3	11.3	HCDB/1U2205*F230
25	42	44	24	37.5	-	1.2	14	350	13	125	8.4	13.1	HCDB/1U2505*F230
25	42	44	24	37.5	10.2	1.0	14	350	13	120	7.6	13.9	HCDB/1U2505*F420
25	42	37	28	37.5	-	1.2	14	350	13	125	8.4	12.7	HCDB/1U2505*F230

Note: (1)\*\*=capacitance tolerance code, J=±5%,K=±10%.



Outline Dimensions

U <sub>N,85°C</sub> =600Vd.c.; U <sub>N,105°C</sub> =420Vd.c.													
C <sub>N</sub> (μF)	W±1 (mm)	H±1 (mm)	B±1 (mm)	P (mm)	P1 (mm)	d±0.05 (mm)	dv/dt (V/μs)	Î (A)	tanδ(×10 <sup>-4</sup> )		ESR@10kHz (mΩ)	I <sub>max</sub> (A)	Ordering Information
									1kHz	10kHz			
25	42	37	28	37.5	10.2	1.0	14	350	13	120	7.6	13.4	HCDB/1U2505*F420
30	42	44	24	37.5	10.2	1.0	14	420	13	125	6.6	15.0	HCDB/1U3005*F420
30	42	37	28	37.5	10.2	1.0	14	420	13	125	6.6	14.6	HCDB/1U3005*F420
35	42	45	30	37.5	20.3	1.0	14	490	13	130	5.9	16.6	HCDB/1U3505*F420
40	42	45	30	37.5	20.3	1.0	14	560	13	135	5.4	17.6	HCDB/1U4005*F420
45	42	46	35	37.5	20.3	1.2	14	630	13	130	4.8	18.8	HCDB/1U4505*F430
48	42	46	35	37.5	20.3	1.2	14	672	13	130	4.6	19.4	HCDB/1U4805*F430
50	42	50	35	37.5	20.3	1.2	14	700	13	130	4.5	22.1	HCDB/1U5005*F430
55	42	50	35	37.5	20.3	1.2	14	770	13	135	4.2	23.0	HCDB/1U5505*F430
60	42	55	40	37.5	20.3	1.2	14	840	13	140	4.0	26.0	HCDB/1U6005*F430
65	42	55	40	37.5	20.3	1.2	14	910	13	140	3.8	26.9	HCDB/1U6505*F430
70	42	55	40	37.5	20.3	1.2	14	980	13	145	3.6	27.7	HCDB/1U7005*F430
75	42	60	45	37.5	20.3	1.2	14	1050	14	145	3.5	28.6	HCDB/1U7505*F430
80	42	60	45	37.5	20.3	1.2	14	1120	14	150	3.4	29.3	HCDB/1U8005*F430
85	42	60	45	37.5	20.3	1.2	14	1190	14	150	3.2	30.0	HCDB/1U8505*F430
50	57.5	45	25	52.5	20.3	1.2	10	500	21	225	7.7	14.7	HCDB/1U5005*M430
55	57.5	45	30	52.5	20.3	1.2	10	550	21	225	7.1	16.6	HCDB/1U5505*M430
60	57.5	45	30	52.5	20.3	1.2	10	600	21	225	6.6	17.3	HCDB/1U6005*M430
65	57.5	50	35	52.5	20.3	1.2	10	650	21	230	6.3	19.6	HCDB/1U6505*M430
70	57.5	50	35	52.5	20.3	1.2	10	700	21	235	5.9	20.3	HCDB/1U7005*M430
75	57.5	50	35	52.5	20.3	1.2	10	750	21	235	5.6	21.0	HCDB/1U7505*M430
80	57.5	55	45	52.5	20.3	1.2	10	800	22	240	5.3	24.1	HCDB/1U8005*M430
85	57.5	55	45	52.5	20.3	1.2	10	850	22	240	5.1	24.8	HCDB/1U8505*M430
90	57.5	55	45	52.5	20.3	1.2	10	900	22	240	4.9	25.5	HCDB/1U9005*M430
100	57.5	55	45	52.5	20.3	1.2	10	1000	22	245	4.6	26.7	HCDB/1U1006*M430
110	57.5	55	45	52.5	20.3	1.2	10	1100	22	250	4.3	27.8	HCDB/1U1106*M430
120	57.5	65	45	52.5	20.3	1.2	10	1200	22	255	4.0	30.9	HCDB/1U1206*M430
130	57.5	65	45	52.5	20.3	1.2	10	1300	23	260	3.8	32.0	HCDB/1U1306*M430

Note: (1)\*\*=capacitance tolerance code, J=±5%,K=±10%.

Outline Dimensions

U <sub>N,85°C</sub> =700Vd.c.; U <sub>N,105°C</sub> =500Vd.c.													
C <sub>N</sub> (μF)	W±1 (mm)	H±1 (mm)	B±1 (mm)	P (mm)	P1 (mm)	d±0.05 (mm)	dv/dt (V/μs)	Î (A)	tanδ(×10 <sup>-4</sup> )		ESR@10kHz (mΩ)	I <sub>max</sub> (A)	Ordering Information
									1kHz	10kHz			
2	32	18	9	27.5	-	0.8	20	40	8	70	42.0	3.4	HCDB/1V2004*B210
3	32	20	11	27.5	-	0.8	20	60	8	70	28.9	4.3	HCDB/1V3004*B210
4	32	22	13	27.5	-	0.8	20	80	9	70	22.5	5.1	HCDB/1V4004*B210
5	32	25	13	27.5	-	0.8	20	100	9	70	18.8	5.8	HCDB/1V5004*B210
6	32	28	14	27.5	-	0.8	20	120	9	75	16.3	6.4	HCDB/1V6004*B210
7	32	30	16	27.5	-	1.0	20	140	9	75	13.8	7.6	HCDB/1V7004*B220
8	32	30	16	27.5	-	1.0	20	160	9	75	12.4	8.1	HCDB/1V8004*B220
9	32	33	18	27.5	-	1.0	20	180	9	75	11.3	8.7	HCDB/1V9004*B220
10	32	33	18	27.5	-	1.0	20	200	9	75	10.5	9.1	HCDB/1V1005*B220
11	32	33	18	27.5	-	1.0	20	220	9	75	9.8	9.4	HCDB/1V1105*B220
15	32	37	22	27.5	-	1.2	20	300	9	75	7.5	12.5	HCDB/1V1505*B230
15	32	37	22	27.5	10.2	1.0	20	300	9	75	6.7	13.4	HCDB/1V1505*B420
20	42	40	20	37.5	-	1.2	14	280	13	125	10.0	10.9	HCDB/1V2005*F230
20	42	40	20	37.5	10.2	1.0	14	280	12	115	9.0	11.5	HCDB/1V2005*F420
22	42	40	20	37.5	-	1.2	14	308	13	125	9.3	11.3	HCDB/1V2205*F230
25	42	44	24	37.5	-	1.2	14	350	13	125	8.4	13.1	HCDB/1V2505*F230
25	42	44	24	37.5	10.2	1.0	14	350	13	120	7.6	13.9	HCDB/1V2505*F420
25	42	37	28	37.5	-	1.2	14	350	13	125	8.4	12.7	HCDB/1V2505*F230
25	42	37	28	37.5	10.2	1.0	14	350	13	120	7.6	13.4	HCDB/1V2505*F420
30	42	44	24	37.5	10.2	1.0	14	420	13	125	6.6	15.0	HCDB/1V3005*F420
30	42	37	28	37.5	10.2	1.0	14	420	13	125	6.6	14.6	HCDB/1V3005*F420
35	42	45	30	37.5	20.3	1.0	14	490	13	130	5.9	16.6	HCDB/1V3505*F420
40	42	45	30	37.5	20.3	1.0	14	560	13	135	5.4	17.6	HCDB/1V4005*F420
45	42	46	35	37.5	20.3	1.2	14	630	13	130	4.8	18.8	HCDB/1V4505*F430
48	42	46	35	37.5	20.3	1.2	14	672	13	130	4.6	19.4	HCDB/1V4805*F430
50	42	50	35	37.5	20.3	1.2	14	700	13	130	4.5	22.1	HCDB/1V5005*F430
55	42	50	35	37.5	20.3	1.2	14	770	13	135	4.2	23.0	HCDB/1V5505*F430
60	42	55	40	37.5	20.3	1.2	14	840	13	140	4.0	26.0	HCDB/1V6005*F430
65	42	55	40	37.5	20.3	1.2	14	910	13	140	3.8	26.9	HCDB/1V6505*F430
70	42	55	40	37.5	20.3	1.2	14	980	13	145	3.6	27.7	HCDB/1V7005*F430

Note: (1)\*\*=capacitance tolerance code, J=±5%,K=±10%.

Outline Dimensions

UN,85°C=700Vd.c.; UN,105°C=500Vd.c.													
CN (μF)	W±1 (mm)	H±1 (mm)	B±1 (mm)	P (mm)	P1 (mm)	d±0.05 (mm)	dv/dt (V/μs)	Ī (A)	tanδ(×10 <sup>-4</sup> )		ESR@10kHz (mΩ)	I <sub>max</sub> (A)	Ordering Information
									1kHz	10kHz			
75	42	60	45	37.5	20.3	1.2	14	1050	14	145	3.5	28.6	HCDB/1V7505*F430
80	42	60	45	37.5	20.3	1.2	14	1120	14	150	3.4	29.3	HCDB/1V8005*F430
85	42	60	45	37.5	20.3	1.2	14	1190	14	150	3.2	30.0	HCDB/1V8505*F430
50	57.5	45	25	52.5	20.3	1.2	10	500	21	225	7.7	14.7	HCDB/1V5005*M430
55	57.5	45	30	52.5	20.3	1.2	10	550	21	225	7.1	16.6	HCDB/1V5505*M430
60	57.5	45	30	52.5	20.3	1.2	10	600	21	225	6.6	17.3	HCDB/1V6005*M430
65	57.5	50	35	52.5	20.3	1.2	10	650	21	230	6.3	19.6	HCDB/1V6505*M430
70	57.5	50	35	52.5	20.3	1.2	10	700	21	235	5.9	20.3	HCDB/1V7005*M430
75	57.5	50	35	52.5	20.3	1.2	10	750	21	235	5.6	21.0	HCDB/1V7505*M430
80	57.5	55	45	52.5	20.3	1.2	10	800	22	240	5.3	24.1	HCDB/1V8005*M430
85	57.5	55	45	52.5	20.3	1.2	10	850	22	240	5.1	24.8	HCDB/1V8505*M430
90	57.5	55	45	52.5	20.3	1.2	10	900	22	240	4.9	25.5	HCDB/1V9005*M430
100	57.5	55	45	52.5	20.3	1.2	10	1000	22	245	4.6	26.7	HCDB/1V1006*M430
110	57.5	55	45	52.5	20.3	1.2	10	1100	22	250	4.3	27.8	HCDB/1V1106*M430
120	57.5	65	45	52.5	20.3	1.2	10	1200	22	255	4.0	30.9	HCDB/1V1206*M430
130	57.5	65	45	52.5	20.3	1.2	10	1300	23	260	3.8	32.0	HCDB/1V1306*M430
UN,85°C=800Vd.c.; UN,105°C=560Vd.c.													
CN (μF)	W±1 (mm)	H±1 (mm)	B±1 (mm)	P (mm)	P1 (mm)	d±0.05 (mm)	dv/dt (V/μs)	Ī (A)	tanδ(×10 <sup>-4</sup> )		ESR@10kHz (mΩ)	I <sub>max</sub> (A)	Ordering Information
									1kHz	10kHz			
1.5	32	18	9	27.5	-	0.8	30	45	8	65	48.9	3.1	HCDB/2K1504*B210
2	32	22	13	27.5	-	0.8	30	60	8	65	37.5	3.9	HCDB/2K2004*B210
3	32	22	13	27.5	-	0.8	30	90	8	65	26.0	4.7	HCDB/2K3004*B210
4	32	25	13	27.5	-	0.8	30	120	8	65	20.4	5.5	HCDB/2K4004*B210
5	32	28	14	27.5	-	0.8	30	150	8	65	17.1	6.3	HCDB/2K5004*B210
6	32	30	16	27.5	-	1.0	30	180	8	65	14.0	7.6	HCDB/2K6004*B220
7	32	33	18	27.5	-	1.0	30	210	8	65	12.3	8.3	HCDB/2K7004*B220
8	32	33	18	27.5	-	1.0	30	240	8	70	11.1	8.8	HCDB/2K8004*B220
9	32	37	22	27.5	-	1.2	30	270	8	65	9.9	10.7	HCDB/2K9004*B230
10	32	37	22	27.5	-	1.2	30	300	8	70	9.2	11.1	HCDB/2K1005*B230
12	32	37	22	27.5	-	1.2	30	360	8	70	8.0	12.0	HCDB/2K1205*B230

Note: (1)\*\*=capacitance tolerance code, J=±5%,K=±10%.

Outline Dimensions

UN,85°C=800Vd.c.; UN,105°C=560Vd.c.													
CN (μF)	W±1 (mm)	H±1 (mm)	B±1 (mm)	P (mm)	P1 (mm)	d±0.05 (mm)	dv/dt (V/μs)	Ī (A)	tanδ(×10 <sup>-4</sup> )		ESR@10kHz (mΩ)	I <sub>max</sub> (A)	Ordering Information
									1kHz	10kHz			
12	42	33	18	37.5	-	1.2	22	264	12	110	13.6	8.8	HCDB/2K1205*F230
15	42	40	20	37.5	-	1.2	22	330	12	110	11.3	10.2	HCDB/2K1505*F230
15	42	40	20	37.5	10.2	1.0	22	330	11	105	10.5	10.6	HCDB/2K1505*F420
18	42	36	24	37.5	-	1.2	22	396	12	115	9.9	10.7	HCDB/2K1805*F230
18	42	36	24	37.5	10.2	1.0	22	396	11	110	9.0	11.2	HCDB/2K1805*F420
25	42	44	24	37.5	-	1.2	22	550	13	120	7.8	13.6	HCDB/2K2505*F230
25	42	44	24	37.5	10.2	1.0	22	550	12	115	6.9	14.6	HCDB/2K2505*F420
30	42	45	30	37.5	20.3	1.0	22	660	12	115	6.0	16.4	HCDB/2K3005*F420
35	42	46	35	37.5	20.3	1.0	22	770	12	120	5.4	17.5	HCDB/2K3505*F420
40	42	50	35	37.5	20.3	1.2	22	880	12	115	4.8	21.2	HCDB/2K4005*F430
45	42	55	40	37.5	20.3	1.2	22	990	12	120	4.4	24.3	HCDB/2K4505*F430
50	42	55	40	37.5	20.3	1.2	22	1100	12	125	4.1	25.4	HCDB/2K5005*F430
55	42	55	40	37.5	20.3	1.2	22	1210	12	125	3.9	26.5	HCDB/2K5505*F430
60	42	60	45	37.5	20.3	1.2	22	1320	12	130	3.7	27.4	HCDB/2K6005*F430
65	42	60	45	37.5	20.3	1.2	22	1430	12	130	3.5	28.4	HCDB/2K6505*F430
50	57.5	45	30	52.5	20.3	1.2	14	700	19	200	6.9	16.9	HCDB/2K5005*M430
55	57.5	50	35	52.5	20.3	1.2	14	770	19	205	6.4	19.3	HCDB/2K5505*M430
60	57.5	50	35	52.5	20.3	1.2	14	840	19	205	6.0	20.1	HCDB/2K6005*M430
65	57.5	50	35	52.5	20.3	1.2	14	910	19	210	5.7	20.8	HCDB/2K6505*M430
70	57.5	55	45	52.5	20.3	1.2	14	980	19	210	5.4	24.1	HCDB/2K7005*M430
75	57.5	55	45	52.5	20.3	1.2	14	1050	20	215	5.1	24.9	HCDB/2K7505*M430
80	57.5	55	45	52.5	20.3	1.2	14	1120	20	215	4.9	25.6	HCDB/2K8005*M430
85	57.5	55	45	52.5	20.3	1.2	14	1190	20	220	4.7	26.3	HCDB/2K8505*M430
90	57.5	55	45	52.5	20.3	1.2	14	1260	20	220	4.5	27.0	HCDB/2K9005*M430
100	57.5	65	45	52.5	20.3	1.2	14	1400	20	225	4.2	30.2	HCDB/2K1006*M430
110	57.5	65	45	52.5	20.3	1.2	14	1540	20	230	3.9	31.5	HCDB/2K1106*M430

Note: (1)\*\*=capacitance tolerance code, J=±5%,K=±10%.

Outline Dimensions

U <sub>N,85°C</sub> =900Vd.c.; U <sub>N,105°C</sub> =630Vd.c.													
C <sub>N</sub> (μF)	W±1 (mm)	H±1 (mm)	B±1 (mm)	P (mm)	P1 (mm)	d±0.05 (mm)	dv/dt (V/μs)	Î (A)	tanδ(×10 <sup>-4</sup> )		ESR@10kHz (mΩ)	I <sub>max</sub> (A)	Ordering Information
									1kHz	10kHz			
1	32	18	9	27.5	-	0.8	34	34	8	60	64.9	2.7	HCDB/1X1004*B210
1.5	32	20	11	27.5	-	0.8	34	51	8	60	44.2	3.4	HCDB/1X1504*B210
2	32	22	13	27.5	-	0.8	34	68	8	60	34.0	4.1	HCDB/1X2004*B210
2.5	32	22	13	27.5	-	0.8	34	85	8	60	27.9	4.6	HCDB/1X2504*B210
3	32	28	14	27.5	-	0.8	34	102	8	60	24.0	5.2	HCDB/1X3004*B210
4	32	28	14	27.5	-	0.8	34	136	8	60	18.8	6.0	HCDB/1X4004*B210
5	32	30	16	27.5	-	1.0	34	170	8	60	15.1	7.3	HCDB/1X5004*B220
6	32	33	18	27.5	-	1.0	34	204	8	65	13.0	8.1	HCDB/1X6004*B220
7	32	33	18	27.5	-	1.0	34	238	8	65	11.5	8.6	HCDB/1X7004*B220
8	32	37	22	27.5	-	1.2	34	272	8	65	10.0	10.6	HCDB/1X8004*B230
9	32	37	22	27.5	-	1.2	34	306	8	65	9.1	11.2	HCDB/1X9004*B230
10	42	33	18	37.5	-	1.2	24	240	11	100	14.4	8.5	HCDB/1X1005*F230
12	42	40	20	37.5	-	1.2	24	288	11	100	12.4	9.7	HCDB/1X1205*F230
12	42	40	20	37.5	10.2	1.0	24	288	11	95	11.5	10.1	HCDB/1X1205*F420
15	42	36	24	37.5	-	1.2	24	360	11	105	10.5	10.3	HCDB/1X1505*F230
15	42	36	24	37.5	10.2	1.0	24	360	11	100	9.6	10.9	HCDB/1X1505*F420
18	42	44	24	37.5	-	1.2	24	432	12	105	9.1	12.5	HCDB/1X1805*F230
18	42	44	24	37.5	10.2	1.0	24	432	11	100	8.2	13.2	HCDB/1X1805*F420
20	42	45	30	37.5	10.2	1.0	24	480	11	100	7.6	14.4	HCDB/1X2005*F420
25	42	45	30	37.5	20.3	1.0	24	600	11	105	6.3	15.9	HCDB/1X2505*F420
30	42	46	35	37.5	20.3	1.2	24	720	11	105	5.4	17.5	HCDB/1X3005*F430
34	42	50	35	37.5	20.3	1.2	24	816	11	105	4.9	20.7	HCDB/1X3405*F430
40	42	55	40	37.5	20.3	1.2	24	960	11	110	4.5	24.2	HCDB/1X4005*F430
45	42	55	40	37.5	20.3	1.2	24	1080	11	115	4.1	25.5	HCDB/1X4505*F430
50	42	60	45	37.5	20.3	1.2	24	1200	11	115	3.8	26.7	HCDB/1X5005*F430
55	42	60	45	37.5	20.3	1.2	24	1320	12	120	3.6	27.7	HCDB/1X5505*F430
35	57.5	45	30	52.5	20.3	1.2	16	560	17	175	8.4	15.1	HCDB/1X3505*M430
40	57.5	50	35	52.5	20.3	1.2	16	640	17	180	7.6	17.5	HCDB/1X4005*M430
45	57.5	50	35	52.5	20.3	1.2	16	720	17	185	6.9	18.5	HCDB/1X4505*M430
50	57.5	50	35	52.5	20.3	1.2	16	800	18	185	6.3	19.5	HCDB/1X5005*M430

Note: (1)\*\*=capacitance tolerance code, J=±5%,K=±10%.

Outline Dimensions

UN,85°C=900Vd.c.; UN,105°C=630Vd.c.													
CN (μF)	W±1 (mm)	H±1 (mm)	B±1 (mm)	P (mm)	P1 (mm)	d±0.05 (mm)	dv/dt (V/μs)	Ī (A)	tanδ(×10 <sup>-4</sup> )		ESR@10kHz (mΩ)	Imax (A)	Ordering Information
									1kHz	10kHz			
55	57.5	55	45	52.5	20.3	1.2	16	880	18	185	5.9	22.8	HCDB/1X5505*M430
60	57.5	55	45	52.5	20.3	1.2	16	960	18	190	5.5	23.7	HCDB/1X6005*M430
65	57.5	55	45	52.5	20.3	1.2	16	1040	18	190	5.2	24.6	HCDB/1X6505*M430
70	57.5	55	45	52.5	20.3	1.2	16	1120	18	195	4.9	25.4	HCDB/1X7005*M430
75	57.5	65	45	52.5	20.3	1.2	16	1200	18	195	4.7	28.0	HCDB/1X7505*M430
80	57.5	65	45	52.5	20.3	1.2	16	1280	18	200	4.5	28.8	HCDB/1X8005*M430
85	57.5	65	45	52.5	20.3	1.2	16	1360	18	200	4.3	29.6	HCDB/1X8505*M430
UN,85°C=1000Vd.c.; UN,105°C=700Vd.c.													
CN (μF)	W±1 (mm)	H±1 (mm)	B±1 (mm)	P (mm)	P1 (mm)	d±0.05 (mm)	dv/dt (V/μs)	Ī (A)	tanδ(×10 <sup>-4</sup> )		ESR@10kHz (mΩ)	Imax (A)	Ordering Information
									1kHz	10kHz			
1	32	18	9	27.5	-	0.8	38	38	7	55	59.2	2.8	HCDB/3A1004*B210
1.5	32	20	11	27.5	-	0.8	38	57	7	55	40.4	3.6	HCDB/3A1504*B210
2	32	22	13	27.5	-	0.8	38	76	7	55	31.1	4.3	HCDB/3A2004*B210
2.5	32	25	13	27.5	-	0.8	38	95	7	55	25.7	4.9	HCDB/3A2504*B210
3	32	28	14	27.5	-	0.8	38	114	7	60	22.1	5.5	HCDB/3A3004*B210
4	32	30	16	27.5	-	1.0	38	152	7	55	16.6	6.9	HCDB/3A4004*B220
5	32	33	18	27.5	-	1.0	38	190	8	60	13.9	7.8	HCDB/3A5004*B220
5.5	32	33	18	27.5	-	1.0	38	209	8	60	12.9	8.1	HCDB/3A5504*B220
7	32	37	22	27.5	-	1.2	38	266	8	60	10.3	10.4	HCDB/3A7004*B230
8	32	37	22	27.5	-	1.2	38	304	8	60	9.3	11.1	HCDB/3A8004*B230
8	42	33	18	37.5	-	1.2	26	208	10	90	16.0	8.0	HCDB/3A8004*F230
10	42	40	20	37.5	-	1.2	26	260	10	90	13.2	9.3	HCDB/3A1005*F230
10	42	40	20	37.5	10.2	1.0	26	260	10	90	12.4	9.7	HCDB/3A1005*F420
15	42	44	24	37.5	-	1.2	26	390	11	95	9.7	12.1	HCDB/3A1505*F230
15	42	44	24	37.5	10.2	1.0	26	390	10	95	8.8	12.7	HCDB/3A1505*F420
20	42	45	30	37.5	10.2	1.0	26	520	10	95	7.0	15.0	HCDB/3A2005*F420
24	42	46	35	37.5	20.3	1.0	26	624	10	100	6.1	16.2	HCDB/3A2405*F420
25	42	50	35	37.5	20.3	1.0	26	650	10	100	5.9	18.5	HCDB/3A2505*F420
30	42	55	40	37.5	20.3	1.2	26	780	10	95	5.0	22.4	HCDB/3A3005*F430
35	42	55	40	37.5	20.3	1.2	26	910	10	100	4.5	24.0	HCDB/3A3505*F430

Note: (1)\*\*=capacitance tolerance code, J=±5%,K=±10%.



Outline Dimensions

UN,85°C=1000Vd.c.; UN,105°C=700Vd.c.													
CN (μF)	W±1 (mm)	H±1 (mm)	B±1 (mm)	P (mm)	P1 (mm)	d±0.05 (mm)	dv/dt (V/μs)	Ī (A)	tanδ(×10 <sup>-4</sup> )		ESR@10kHz (mΩ)	I <sub>max</sub> (A)	Ordering Information
									1kHz	10kHz			
40	42	60	45	37.5	20.3	1.2	26	1040	11	100	4.1	25.5	HCDB/3A4005*F430
30	57.5	45	30	52.5	20.3	1.2	18	540	16	160	8.8	14.7	HCDB/3A3005*M430
35	57.5	50	35	52.5	20.3	1.2	18	630	16	165	7.8	17.3	HCDB/3A3505*M430
40	57.5	50	35	52.5	20.3	1.2	18	720	16	165	7.0	18.4	HCDB/3A4005*M430
45	57.5	55	45	52.5	20.3	1.2	18	810	16	170	6.3	21.8	HCDB/3A4505*M430
50	57.5	55	45	52.5	20.3	1.2	18	900	16	170	5.9	22.8	HCDB/3A5005*M430
55	57.5	55	45	52.5	20.3	1.2	18	990	16	175	5.4	23.9	HCDB/3A5505*M430
60	57.5	65	45	52.5	20.3	1.2	18	1080	17	175	5.1	26.5	HCDB/3A6005*M430
65	57.5	65	45	52.5	20.3	1.2	18	1170	17	180	4.8	27.5	HCDB/3A6505*M430
UN,85°C=1100Vd.c.; UN,105°C=770Vd.c.													
CN (μF)	W±1 (mm)	H±1 (mm)	B±1 (mm)	P (mm)	P1 (mm)	d±0.05 (mm)	dv/dt (V/μs)	Ī (A)	tanδ(×10 <sup>-4</sup> )		ESR@10kHz (mΩ)	I <sub>max</sub> (A)	Ordering Information
									1kHz	10kHz			
1	32	20	11	27.5	-	0.8	42	42	7	50	52.6	3.1	HCDB/1M1004*B210
1.5	32	22	13	27.5	-	0.8	42	63	7	50	36.1	4.0	HCDB/1M1504*B210
2	32	25	13	27.5	-	0.8	42	84	7	50	28.0	4.7	HCDB/1M2004*B210
2.5	32	28	14	27.5	-	0.8	42	105	7	55	23.2	5.3	HCDB/1M2504*B210
3	32	30	16	27.5	-	1.0	42	126	7	50	19.1	6.4	HCDB/1M3004*B220
4	32	33	18	27.5	-	1.0	42	168	7	55	15.1	7.4	HCDB/1M4004*B220
5	32	37	22	27.5	-	1.0	42	210	7	55	12.7	9.3	HCDB/1M5004*B220
6	32	37	22	27.5	-	1.0	42	252	7	55	11.1	10.0	HCDB/1M6004*B220
6.5	42	33	18	37.5	-	1.0	30	195	10	85	17.8	7.6	HCDB/1M6504*F220
7	42	40	20	37.5	-	1.0	30	210	10	85	16.7	8.2	HCDB/1M7004*F220
7	42	40	20	37.5	-	1.0	30	210	10	85	16.7	8.2	HCDB/1M7004*F220
7	42	40	20	37.5	10.2	1.0	30	210	9	80	15.3	8.6	HCDB/1M7004*F420
8	42	40	20	37.5	-	1.2	30	240	10	85	14.4	8.9	HCDB/1M8004*F230
8	42	40	20	37.5	10.2	1.0	30	240	9	80	13.6	9.2	HCDB/1M8004*F420
9	42	36	24	37.5	-	1.2	30	270	10	85	13.1	9.2	HCDB/1M9004*F230
9	42	36	24	37.5	10.2	1.0	30	270	9	80	12.2	9.5	HCDB/1M9004*F420
10	42	44	24	37.5	-	1.2	30	300	10	85	12.1	10.7	HCDB/1M1005*F230
10	42	44	24	37.5	10.2	1.0	30	300	9	85	11.2	11.1	HCDB/1M1005*F420

Note: (1)\*\*=capacitance tolerance code, J=±5%,K=±10%.

Outline Dimensions

UN,85°C=1100Vd.c.; UN,105°C=770Vd.c.													
CN (μF)	W±1 (mm)	H±1 (mm)	B±1 (mm)	P (mm)	P1 (mm)	d±0.05 (mm)	dv/dt (V/μs)	Ī (A)	tanδ(×10 <sup>-4</sup> )		ESR@10kHz (mΩ)	Imax (A)	Ordering Information
									1kHz	10kHz			
12	42	44	24	37.5	-	1.2	30	360	10	85	10.5	11.5	HCDB/1M1205*F230
12	42	44	24	37.5	10.2	1.0	30	360	9	85	9.6	12.1	HCDB/1M1205*F420
15	42	45	30	37.5	20.3	1.0	30	450	10	85	8.0	13.9	HCDB/1M1505*F420
18	42	46	35	37.5	20.3	1.0	30	540	10	90	6.9	15.1	HCDB/1M1805*F420
20	42	50	35	37.5	20.3	1.2	30	600	10	85	6.2	17.9	HCDB/1M2005*F430
25	42	55	40	37.5	20.3	1.2	30	750	10	90	5.3	21.7	HCDB/1M2505*F430
28	42	55	40	37.5	20.3	1.2	30	840	10	90	4.9	22.8	HCDB/1M2805*F430
30	42	60	45	37.5	20.3	1.2	30	900	10	90	4.7	23.5	HCDB/1M3005*F430
35	42	60	45	37.5	20.3	1.2	30	1050	10	95	4.2	25.1	HCDB/1M3505*F430
25	57.5	45	30	52.5	20.3	1.2	20	500	15	145	9.3	14.2	HCDB/1M2505*M430
30	57.5	50	35	52.5	20.3	1.2	20	600	15	150	8.0	17.0	HCDB/1M3005*M430
35	57.5	55	45	52.5	20.3	1.2	20	700	15	150	7.1	20.4	HCDB/1M3505*M430
40	57.5	55	45	52.5	20.3	1.2	20	800	15	155	6.4	21.7	HCDB/1M4005*M430
45	57.5	55	45	52.5	20.3	1.2	20	900	15	155	5.8	22.9	HCDB/1M4505*M430
50	57.5	65	45	52.5	20.3	1.2	20	1000	15	160	5.4	25.7	HCDB/1M5005*M430
55	57.5	65	45	52.5	20.3	1.2	20	1100	15	160	5.0	26.8	HCDB/1M5505*M430
UN,85°C=1200Vd.c.; UN,105°C=850Vd.c.													
CN (μF)	W±1 (mm)	H±1 (mm)	B±1 (mm)	P (mm)	P1 (mm)	d±0.05 (mm)	dv/dt (V/μs)	Ī (A)	tanδ(×10 <sup>-4</sup> )		ESR@10kHz (mΩ)	Imax (A)	Ordering Information
									1kHz	10kHz			
1	32	20	11	27.5	-	0.8	48	48	7	50	48.9	3.3	HCDB/3L1004*B210
1.5	32	25	13	27.5	-	0.8	48	72	7	50	33.7	4.3	HCDB/3L1504*B210
2	32	28	14	27.5	-	0.8	48	96	7	50	26.3	5.0	HCDB/3L2004*B210
3	32	33	18	27.5	-	1.0	48	144	7	50	18.0	6.8	HCDB/3L3004*B220
3.5	32	33	18	27.5	-	1.0	48	168	7	50	15.8	7.3	HCDB/3L3504*B220
4	32	37	22	27.5	-	1.0	48	192	7	50	14.3	8.7	HCDB/3L4004*B220
5	32	37	22	27.5	-	1.0	48	240	7	55	12.0	9.6	HCDB/3L5004*B220
5	42	33	18	37.5	-	1.0	32	160	9	80	20.7	7.0	HCDB/3L5004*F220
6	42	40	20	37.5	-	1.0	32	192	9	80	17.8	8.0	HCDB/3L6004*F220
6	42	40	20	37.5	10.2	1.0	32	192	9	75	16.4	8.3	HCDB/3L6004*F420
7	42	40	20	37.5	-	1.0	32	224	9	80	15.6	8.5	HCDB/3L7004*F220

Note: (1)\*\*=capacitance tolerance code, J=±5%,K=±10%.

Outline Dimensions

U <sub>N,85°C</sub> =1200Vd.c.; U <sub>N,105°C</sub> =850Vd.c.													
C <sub>N</sub> (μF)	W±1 (mm)	H±1 (mm)	B±1 (mm)	P (mm)	P1 (mm)	d±0.05 (mm)	dv/dt (V/μs)	Î (A)	tanδ(×10 <sup>-4</sup> )		ESR@10kHz (mΩ)	I <sub>max</sub> (A)	Ordering Information
									1kHz	10kHz			
7	42	40	20	37.5	10.2	1.0	32	224	9	75	14.2	9.0	HCDB/3L7004*F420
8	42	44	24	37.5	-	1.0	32	256	10	80	14.0	9.8	HCDB/3L8004*F220
8	42	44	24	37.5	10.2	1.0	32	256	9	75	12.6	10.4	HCDB/3L8004*F420
9	42	44	24	37.5	-	1.2	32	288	9	80	12.3	10.6	HCDB/3L9004*F230
9	42	44	24	37.5	10.2	1.0	32	288	9	80	11.4	11.0	HCDB/3L9004*F420
10	42	44	24	37.5	-	1.2	32	320	9	80	11.3	11.1	HCDB/3L1005*F230
10	42	44	24	37.5	10.2	1.0	32	320	9	80	10.4	11.6	HCDB/3L1005*F420
10	42	37	28	37.5	-	1.2	32	320	9	80	11.2	10.8	HCDB/3L1005*F230
10	42	37	28	37.5	10.2	1.0	32	320	9	80	10.4	11.3	HCDB/3L1005*F420
12	42	45	30	37.5	10.2	1.0	32	384	9	80	9.0	13.0	HCDB/3L1205*F420
15	42	46	35	37.5	20.3	1.0	32	480	9	80	7.5	14.4	HCDB/3L1505*F420
18	42	50	35	37.5	20.3	1.0	32	576	9	85	6.5	17.5	HCDB/3L1805*F420
20	42	55	40	37.5	20.3	1.2	32	640	9	80	5.9	20.3	HCDB/3L2005*F430
25	42	60	45	37.5	20.3	1.2	32	800	9	85	5.0	22.5	HCDB/3L2505*F430
28	42	60	45	37.5	20.3	1.2	32	896	9	85	4.6	23.6	HCDB/3L2805*F430
20	57.5	45	30	52.5	20.3	1.2	22	440	14	135	10.5	13.3	HCDB/3L2005*M430
25	57.5	50	35	52.5	20.3	1.2	22	550	14	135	8.7	16.2	HCDB/3L2505*M430
30	57.5	55	45	52.5	20.3	1.2	22	660	14	140	7.5	19.7	HCDB/3L3005*M430
35	57.5	55	45	52.5	20.3	1.2	22	770	14	140	6.6	21.2	HCDB/3L3505*M430
40	57.5	65	45	52.5	20.3	1.2	22	880	14	145	6.0	24.1	HCDB/3L4005*M430
45	57.5	65	45	52.5	20.3	1.2	22	990	14	145	5.5	25.5	HCDB/3L4505*M430

Note: (1)\*\*=capacitance tolerance code, J=±5%,K=±10%.

Outline Dimensions

U <sub>N,85°C</sub> =1300Vd.c.; U <sub>N,105°C</sub> =910Vd.c.													
C <sub>N</sub> (μF)	W±1 (mm)	H±1 (mm)	B±1 (mm)	P (mm)	P1 (mm)	d±0.05 (mm)	dv/dt (V/μs)	Î (A)	tanδ(×10 <sup>-4</sup> )		ESR@10kHz (mΩ)	I <sub>max</sub> (A)	Ordering Information
									1kHz	10kHz			
0.6	32	20	11	27.5	-	0.8	56	33.6	6	45	69.9	2.7	HCDB/2M6003*B210
1.5	32	28	14	27.5	-	0.8	56	84	7	45	30.1	4.7	HCDB/2M1504*B210
2.5	32	33	18	27.5	-	1.0	56	140	7	45	18.7	6.6	HCDB/2M2504*B220
3.5	32	37	22	27.5	-	1.0	56	196	7	50	14.3	8.7	HCDB/2M3504*B220
4	42	33	18	37.5	-	1.0	38	152	9	70	22.2	6.7	HCDB/2M4004*F220
4.5	42	40	20	37.5	-	1.0	38	171	9	70	20.1	7.5	HCDB/2M4504*F220
4.5	42	40	20	37.5	10.2	1.0	38	171	8	70	18.7	7.8	HCDB/2M4504*F420
5	42	40	20	37.5	-	1.0	38	190	9	70	18.3	7.8	HCDB/2M5004*F220
5	42	40	20	37.5	10.2	1.0	38	190	8	70	16.9	8.2	HCDB/2M5004*F420
6	42	44	24	37.5	-	1.0	38	228	9	70	15.0	9.5	HCDB/2M6004*F220
6	42	44	24	37.5	10.2	1.0	38	228	8	70	14.2	9.8	HCDB/2M6004*F420
7	42	44	24	37.5	-	1.2	38	266	9	70	13.5	10.1	HCDB/2M7004*F230
7	42	44	24	37.5	10.2	1.0	38	266	8	70	12.6	10.5	HCDB/2M7004*F420
8	42	45	30	37.5	10.2	1.0	38	304	8	70	11.2	11.5	HCDB/2M8004*F420
9	42	45	30	37.5	20.3	1.0	38	342	8	70	10.1	12.2	HCDB/2M9004*F420
10	42	50	35	37.5	20.3	1.0	38	380	8	70	9.3	14.3	HCDB/2M1005*F420
11	42	50	35	37.5	20.3	1.0	38	418	8	75	8.6	14.9	HCDB/2M1105*F420
12	42	50	35	37.5	20.3	1.0	38	456	9	75	8.0	15.5	HCDB/2M1205*F420
13	42	50	35	37.5	20.3	1.0	38	494	9	75	7.5	16.1	HCDB/2M1305*F420
14	42	55	40	37.5	20.3	1.2	38	532	8	75	7.0	18.4	HCDB/2M1405*F430
15	42	55	40	37.5	20.3	1.2	38	570	8	75	6.6	19.0	HCDB/2M1505*F430
16	42	55	40	37.5	20.3	1.2	38	608	9	75	6.3	19.6	HCDB/2M1605*F430
17	42	55	40	37.5	20.3	1.2	38	646	9	75	6.0	20.2	HCDB/2M1705*F430
18	57.5	50	35	52.5	20.3	1.2	26	468	12	120	10.2	14.9	HCDB/2M1805*M430
20	57.5	50	35	52.5	20.3	1.2	26	520	13	120	9.3	15.6	HCDB/2M2005*M430
25	57.5	55	45	52.5	20.3	1.2	26	650	13	125	7.7	19.4	HCDB/2M2505*M430
28	57.5	55	45	52.5	20.3	1.2	26	728	13	125	7.0	20.5	HCDB/2M2805*M430
30	57.5	65	45	52.5	20.3	1.2	26	780	13	125	6.6	22.6	HCDB/2M3005*M430
35	57.5	65	45	52.5	20.3	1.2	26	910	13	125	5.9	24.3	HCDB/2M3505*M430

Note: (1)\*\*=capacitance tolerance code, J=±5%,K=±10%.

Outline Dimensions

U <sub>N,85°C</sub> =1400Vd.c.; U <sub>N,105°C</sub> =980Vd.c.													
C <sub>N</sub> (μF)	W±1 (mm)	H±1 (mm)	B±1 (mm)	P (mm)	P1 (mm)	d±0.05 (mm)	dv/dt (V/μs)	Î (A)	tanδ(×10 <sup>-4</sup> )		ESR@10kHz (mΩ)	I <sub>max</sub> (A)	Ordering Information
									1kHz	10kHz			
0.8	32	22	13	27.5	-	0.8	60	48	6	45	50.3	3.4	HCDB/3M8003*B210
1.2	32	28	14	27.5	-	0.8	60	72	6	45	34.9	4.3	HCDB/3M1204*B210
1.5	32	30	16	27.5	-	0.8	60	90	6	45	28.5	5.2	HCDB/3M1504*B210
2	32	33	18	27.5	-	1.0	60	120	6	45	21.6	6.1	HCDB/3M2004*B220
2.2	32	33	18	27.5	-	1.0	60	132	6	45	19.9	6.4	HCDB/3M2204*B220
3	32	37	22	27.5	-	1.0	60	180	6	45	15.4	8.4	HCDB/3M3004*B220
3.3	32	37	22	27.5	-	1.0	60	198	7	45	14.3	8.7	HCDB/3M3304*B220
4	42	40	20	37.5	-	1.0	40	160	8	65	21.0	7.3	HCDB/3M4004*F220
4	42	40	20	37.5	10.2	1.0	40	160	8	65	19.6	7.6	HCDB/3M4004*F420
4.5	42	40	20	37.5	-	1.0	40	180	8	70	19.0	7.7	HCDB/3M4504*F220
4.5	42	40	20	37.5	10.2	1.0	40	180	8	65	17.6	8.0	HCDB/3M4504*F420
5	42	44	24	37.5	-	1.2	40	200	8	65	16.9	8.9	HCDB/3M5004*F230
5	42	44	24	37.5	10.2	1.0	40	200	8	65	16.0	9.2	HCDB/3M5004*F420
5.5	42	44	24	37.5	-	1.2	40	220	8	65	15.6	9.3	HCDB/3M5504*F230
5.5	42	44	24	37.5	10.2	1.0	40	220	8	65	14.7	9.6	HCDB/3M5504*F420
6	42	44	24	37.5	-	1.2	40	240	8	70	14.5	9.7	HCDB/3M6004*F230
6	42	44	24	37.5	10.2	1.0	40	240	8	65	13.6	10.0	HCDB/3M6004*F420
7	42	45	30	37.5	10.2	1.0	40	280	8	65	11.9	11.1	HCDB/3M7004*F420
7.5	42	45	30	37.5	10.2	1.0	40	300	8	65	11.2	11.5	HCDB/3M7504*F420
8	42	45	30	37.5	10.2	1.0	40	320	8	70	10.6	11.9	HCDB/3M8004*F420
8.5	42	45	30	37.5	20.3	1.0	40	340	8	70	10.0	12.2	HCDB/3M8504*F420
9	42	46	35	37.5	20.3	1.0	40	360	8	70	9.6	12.5	HCDB/3M9004*F420
10	42	46	35	37.5	20.3	1.0	40	400	8	70	8.8	13.1	HCDB/3M1005*F420
11	42	50	35	37.5	20.3	1.0	40	440	8	70	8.2	15.4	HCDB/3M1105*F420
12	42	55	40	37.5	20.3	1.2	40	480	8	70	7.4	17.7	HCDB/3M1205*F430
15	42	60	45	37.5	20.3	1.2	40	600	8	70	6.2	19.7	HCDB/3M1505*F430
16	42	60	45	37.5	20.3	1.2	40	640	8	70	5.9	20.3	HCDB/3M1605*F430
18	42	60	45	37.5	20.3	1.2	40	720	8	70	5.4	21.4	HCDB/3M1805*F430
12	57.5	45	30	52.5	20.3	1.2	28	336	12	110	13.7	11.5	HCDB/3M1205*M430
16	57.5	50	35	52.5	20.3	1.2	28	448	12	115	10.6	14.5	HCDB/3M1605*M430

Note: (1)\*\*=capacitance tolerance code, J=±5%,K=±10%.

Outline Dimensions

UN,85°C=1400Vd.c.; UN,105°C=980Vd.c.													
CN (μF)	W±1 (mm)	H±1 (mm)	B±1 (mm)	P (mm)	P1 (mm)	d±0.05 (mm)	dv/dt (V/μs)	Ī (A)	tanδ(×10 <sup>-4</sup> )		ESR@10kHz (mΩ)	I <sub>max</sub> (A)	Ordering Information
									1kHz	10kHz			
20	57.5	55	45	52.5	20.3	1.2	28	560	12	115	8.8	18.1	HCDB/3M2005*M430
25	57.5	55	45	52.5	20.3	1.2	28	700	12	115	7.3	20.1	HCDB/3M2505*M430
30	57.5	65	45	52.5	20.3	1.2	28	840	12	120	6.3	23.3	HCDB/3M3005*M430
UN,85°C=1500Vd.c.; UN,105°C=1050Vd.c.													
CN (μF)	W±1 (mm)	H±1 (mm)	B±1 (mm)	P (mm)	P1 (mm)	d±0.05 (mm)	dv/dt (V/μs)	Ī (A)	tanδ(×10 <sup>-4</sup> )		ESR@10kHz (mΩ)	I <sub>max</sub> (A)	Ordering Information
									1kHz	10kHz			
0.8	32	22	13	27.5	-	0.8	62	49.6	6	45	47.8	3.5	HCDB/4M8003*B210
1	32	28	14	27.5	-	0.8	62	62	6	45	39.0	4.1	HCDB/4M1004*B210
1.5	32	33	18	27.5	-	0.8	62	93	6	45	27.5	5.4	HCDB/4M1504*B210
2	32	33	18	27.5	-	1.0	62	124	6	45	20.6	6.3	HCDB/4M2004*B220
2.5	32	37	22	27.5	-	1.0	62	155	6	45	17.1	7.9	HCDB/4M2504*B220
3	42	33	18	37.5	-	1.0	42	126	8	65	25.7	6.3	HCDB/4M3004*F220
4	42	40	20	37.5	-	1.0	42	168	8	65	20.0	7.5	HCDB/4M4004*F220
4	42	40	20	37.5	10.2	1.0	42	168	8	65	18.5	7.8	HCDB/4M4004*F420
5	42	44	24	37.5	10.2	1.2	42	210	8	65	15.0	9.5	HCDB/4M5004*F430
5	42	44	24	37.5	10.2	1.0	42	210	8	65	15.2	9.5	HCDB/4M5004*F420
5.5	42	44	24	37.5	-	1.2	42	231	8	65	14.8	9.6	HCDB/4M5504*F230
5.5	42	44	24	37.5	10.2	1.0	42	231	8	65	13.9	9.9	HCDB/4M5504*F420
5.5	42	37	28	37.5	-	1.2	42	231	8	65	14.7	9.3	HCDB/4M5504*F230
5.5	42	37	28	37.5	10.2	1.0	42	231	8	65	13.9	9.6	HCDB/4M5504*F420
6	42	45	30	37.5	10.2	1.0	42	252	8	65	12.9	10.7	HCDB/4M6004*F420
6.5	42	45	30	37.5	20.3	1.0	42	273	8	65	12.0	11.1	HCDB/4M6504*F420
7	42	45	30	37.5	20.3	1.0	42	294	8	65	11.3	11.5	HCDB/4M7004*F420
7.5	42	45	30	37.5	20.3	1.0	42	315	8	65	10.6	11.8	HCDB/4M7504*F420
8	42	46	35	37.5	20.3	1.2	42	336	8	65	9.9	12.3	HCDB/4M8004*F430
8.5	42	46	35	37.5	20.3	1.2	42	357	8	65	9.4	12.7	HCDB/4M8504*F430
9	42	55	40	37.5	20.3	1.2	42	378	8	65	9.0	15.9	HCDB/4M9004*F430
10	42	55	40	37.5	20.3	1.2	42	420	8	65	8.3	16.7	HCDB/4M1005*F430
12	42	55	40	37.5	20.3	1.2	42	504	8	65	7.1	18.2	HCDB/4M1205*F430
15	42	60	45	37.5	20.3	1.2	42	630	8	70	6.0	20.1	HCDB/4M1505*F430

Note: (1)\*\*=capacitance tolerance code, J=±5%,K=±10%.



Outline Dimensions

U <sub>N,85°C</sub> =1500Vd.c.; U <sub>N,105°C</sub> =1050Vd.c.													
C <sub>N</sub> (μF)	W±1 (mm)	H±1 (mm)	B±1 (mm)	P (mm)	P1 (mm)	d±0.05 (mm)	dv/dt (V/μs)	Ī (A)	tanδ(×10 <sup>-4</sup> )		ESR@10kHz (mΩ)	I <sub>max</sub> (A)	Ordering Information
									1kHz	10kHz			
10	57.5	45	30	52.5	20.3	1.2	30	300	11	105	15.2	10.9	HCDB/4M1005*M430
11	57.5	45	30	52.5	20.3	1.2	30	330	11	105	14.0	11.4	HCDB/4M1105*M430
12	57.5	50	35	52.5	20.3	1.2	30	360	11	105	12.9	13.0	HCDB/4M1205*M430
15	57.5	50	35	52.5	20.3	1.2	30	450	11	105	10.6	14.5	HCDB/4M1505*M430
18	57.5	55	45	52.5	20.3	1.2	30	540	12	110	9.1	17.7	HCDB/4M1805*M430
20	57.5	55	45	52.5	20.3	1.2	30	600	12	110	8.3	18.6	HCDB/4M2005*M430
25	57.5	65	45	52.5	20.3	1.2	30	750	12	110	6.9	22.1	HCDB/4M2505*M430

Note: (1)\*\*=capacitance tolerance code, J=±5%,K=±10%.

# HCSA

Snubber capacitor for IGBT (Axial-type)

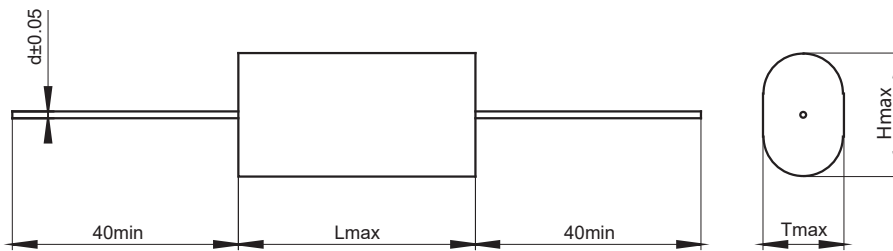


## Features

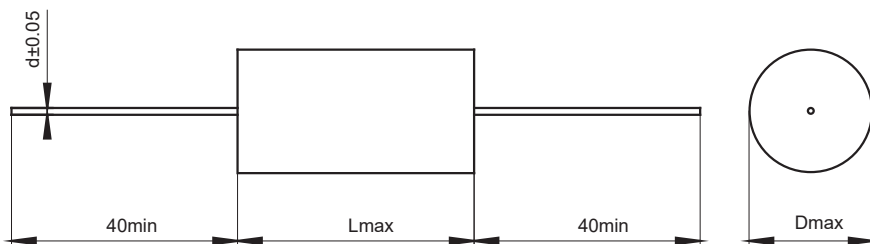
- Metallized polypropylene film, axial-type
- Excellent self-healing property
- Low Loss and small inherent temperature rise
- Wrapped with polyester adhesive tape and ends filled with flame retardant epoxy resin (UL94 V-0)

## Outline Drawing

Axial flat:



Axial:

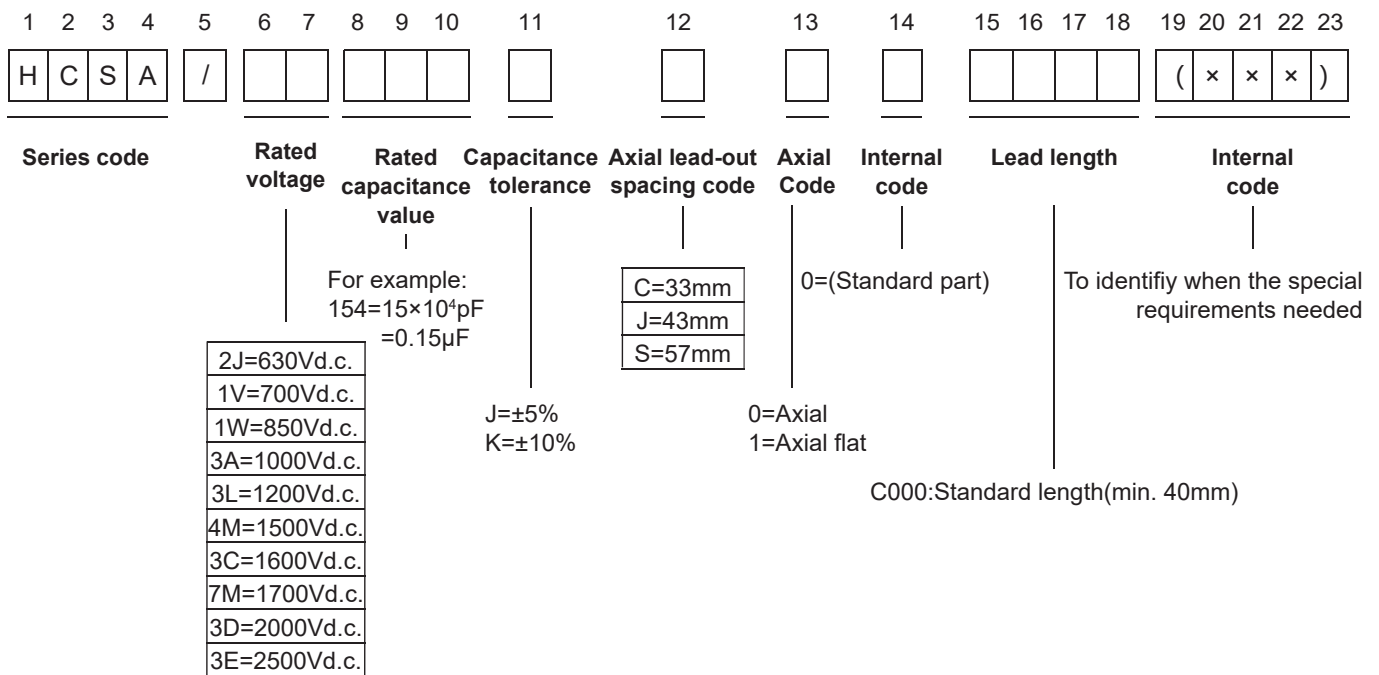


Note: The dimensions of the product are in mm units.  
Outline dimensions can be found in the Product Dimensions Table.

## Specifications

Reference standard	GB/T 17702 (IEC 61071)	
Climatic category	40/85/56	
Operating temperature range	-40°C~105°C (85°C~105°C: decreasing factor 2.5% per °C for U <sub>N</sub> )	
Rated voltage	630Vd.c.~2500Vd.c.	
Capacitance range	0.047μF ~ 10μF	
Capacitance tolerance	±5%(J),±10%(K)	
Voltage proof	1.5U <sub>N</sub> (10s)	
Dissipation factor	≤0.0005 (1kHz,20°C)	
Insulation Resistance (IR×C <sub>N</sub> )	IR ≥ 100000MΩ, C <sub>N</sub> ≤ 0.33μF IR×C <sub>N</sub> ≥ 30000s, C <sub>N</sub> > 0.33μF	(20°C, 100Vd.c., 1min)
Expected lifetime	≥ 100,000h@U <sub>N</sub> , Θ <sub>hs</sub> = 70°C	

## Ordering Information



Outline Dimensions

630Vd.c./700Vd.c.(420Va.c.)#												
C <sub>N</sub> (μF)	Axial		Axial Flat			d	dv/dt (V/μs)	Ī (A)	ESR @100kHz	I <sub>max</sub> (A)	L <sub>s</sub> (nH)	Ordering Information
	L max	D max	L max	H max	T max							
0.22	34.0	10.8	34.0	14.7	6.8	0.8	700	154	9.5	4.5	17	HCSA/2J224-C*0C000(+++)
0.33	34.0	12.7	34.0	15.5	9.3	0.8	700	231	7.5	5.8	17	HCSA/2J334-C*0C000(+++)
0.47	34.0	14.7	34.0	18.4	10.6	0.8	700	329	6.0	7.5	17	HCSA/2J474-C*0C000(+++)
0.68	34.0	17.2	34.0	20.9	13.1	1.0	700	476	5.0	9.0	17	HCSA/2J684-C*0C000(+++)
0.82	34.0	18.7	34.0	22.4	14.6	1.0	700	574	4.5	9.1	17	HCSA/2J824-C*0C000(+++)
1.0	34.0	20.4	34.0	24.2	16.3	1.0	700	700	4.3	10.5	18	HCSA/2J105-C*0C000(+++)
1.2	34.0	22.1	34.0	25.9	18.1	1.2	700	840	4.2	10.9	19	HCSA/2J125-C*0C000(+++)
1.5	34.0	24.5	34.0	28.3	20.5	1.2	700	1050	4.0	12.5	19	HCSA/2J155-C*0C000(+++)
2.0	34.0	28.0	34.0	31.9	24.0	1.2	700	1400	4.0	13.5	20	HCSA/2J205-C*0C000(+++)
0.82	44.0	15.8	44.0	19.2	11.3	1.0	475	389.5	5.2	8.4	20	HCSA/2J824-J*0C000(+++)
1.0	44.0	17.1	44.0	20.5	12.7	1.0	475	475	5.0	10.0	21	HCSA/2J105-J*0C000(+++)
1.2	44.0	18.5	44.0	21.9	14.1	1.2	475	570	4.8	10.3	21	HCSA/2J125-J*0C000(+++)
1.5	44.0	20.4	44.0	23.8	16.0	1.2	475	712.5	4.5	12.0	21	HCSA/2J155-J*0C000(+++)
2.0	44.0	23.2	44.0	26.6	18.8	1.2	475	950	4.3	14.0	22	HCSA/2J205-J*0C000(+++)
2.2	44.0	24.2	44.0	27.7	19.8	1.2	475	1045	4.0	14.0	23	HCSA/2J225-J*0C000(+++)
2.5	44.0	25.7	44.0	29.1	21.3	1.2	475	1187.5	4.0	14.0	23	HCSA/2J255-J*0C000(+++)
3.0	44.0	27.9	44.0	31.4	23.5	1.2	475	1425	4.0	14.0	24	HCSA/2J305-J*0C000(+++)
3.3	44.0	29.2	44.0	32.7	24.8	1.2	475	1567.5	4.0	14.0	25	HCSA/2J335-J*0C000(+++)
4.0	44.0	31.9	44.0	35.4	27.6	1.2	475	1900	4.0	14.0	26	HCSA/2J405-J*0C000(+++)
4.7	44.0	34.4	44.0	38.0	30.1	1.2	475	2232.5	4.0	14.0	26	HCSA/2J475-J*0C000(+++)
5.0	44.0	35.4	44.0	39.0	31.1	1.2	475	2375	3.6	14.0	27	HCSA/2J505-J*0C000(+++)
3.3	58.0	24.5	58.0	28.2	20.4	1.2	300	990	4.5	14.0	27	HCSA/2J335-S*0C000(+++)
4.0	58.0	26.7	58.0	30.5	22.7	1.2	300	1200	4.0	14.0	28	HCSA/2J405-S*0C000(+++)
4.7	58.0	28.7	58.0	32.6	24.8	1.2	300	1410	3.8	14.0	29	HCSA/2J475-S*0C000(+++)
5.0	58.0	29.5	58.0	33.5	25.6	1.2	300	1500	3.6	14.0	29	HCSA/2J505-S*0C000(+++)
5.6	58.0	31.1	58.0	35.1	27.3	1.2	300	1680	3.5	14.0	29	HCSA/2J565-S*0C000(+++)
6.0	58.0	32.1	58.0	36.2	28.3	1.2	300	1800	3.5	14.0	31	HCSA/2J605-S*0C000(+++)
6.8	58.0	34.0	58.0	38.2	30.3	1.2	300	2040	3.5	14.0	31	HCSA/2J685-S*0C000(+++)
8.2	58.0	37.0	58.0	41.4	33.6	1.2	300	2460	3.5	14.0	33	HCSA/2J825-S*0C000(+++)
10.0	58.0	40.6	58.0	46.6	35.6	1.2	300	3000	3.5	14.0	34	HCSA/2J106-S*0C000(+++)

Note: (1) The above are normal types, for the special types, please contact with relative person;  
 (2) "#”when the rated voltage is 700Vd.c.,the digit 6~7 is 1V;  
 (3) "ESR", "Ls" are typical values.

Outline Dimensions

850Vd.c.(450Va.c.)												
C <sub>N</sub> (μF)	Axial		Axial Flat			d	dv/dt (V/μs)	İ (A)	ESR @100kHz	I <sub>max</sub> (A)	L <sub>s</sub> (nH)	Ordering Information
	L max	D max	L max	H max	T max							
0.1	-	-	34.0	11.6	5.3	0.8	900	90	13.5	3.5	16	HCSA/1W104-C*0C000(+++)
0.15	34.0	10.2	34.0	12.9	6.6	0.8	900	135	10.5	4.5	16	HCSA/1W154-C*0C000(+++)
0.22	34.0	11.8	34.0	14.4	8.1	0.8	900	198	8.0	5.0	16	HCSA/1W224-C*0C000(+++)
0.33	34.0	13.9	34.0	16.5	10.2	0.8	900	297	6.5	6.3	17	HCSA/1W334-C*0C000(+++)
0.47	34.0	16.2	34.0	19.6	11.7	1.0	900	423	5.5	7.8	17	HCSA/1W474-C*0C000(+++)
0.68	34.0	19.0	34.0	22.3	14.4	1.0	900	612	4.5	9.9	18	HCSA/1W684-C*0C000(+++)
0.82	34.0	20.7	34.0	23.9	16.1	1.2	900	738	4.2	11.4	19	HCSA/1W824-C*0C000(+++)
1.0	34.0	22.6	34.0	25.8	18.0	1.2	900	900	4.0	12.9	19	HCSA/1W105-C*0C000(+++)
1.2	34.0	24.6	34.0	27.8	19.9	1.2	900	1080	3.5	13.6	20	HCSA/1W125-C*0C000(+++)
1.5	34.0	27.2	34.0	30.4	22.5	1.2	900	1350	3.5	14.0	20	HCSA/1W155-C*0C000(+++)
0.33	44.0	12.1	44.0	15.3	7.5	0.8	600	198	7	6.1	20	HCSA/1W334-J*0C000(+++)
0.47	44.0	13.8	44.0	17.0	9.2	1.0	600	282	5.5	7.9	20	HCSA/1W474-J*0C000(+++)
0.68	44.0	16.0	44.0	19.2	11.3	1.0	600	408	5.5	9.5	21	HCSA/1W684-J*0C000(+++)
0.82	44.0	17.3	44.0	20.5	12.6	1.0	600	492	5.0	10.5	22	HCSA/1W824-J*0C000(+++)
1.0	44.0	18.9	44.0	22.0	14.1	1.0	600	600	4.5	11.5	22	HCSA/1W105-J*0C000(+++)
1.2	44.0	20.5	44.0	23.5	15.7	1.2	600	720	4.3	13.5	22	HCSA/1W125-J*0C000(+++)
1.5	44.0	22.6	44.0	25.7	17.8	1.2	600	900	4.0	14.0	22	HCSA/1W155-J*0C000(+++)
2.0	44.0	25.7	44.0	29.6	20.1	1.2	600	1200	4.0	14.0	24	HCSA/1W205-J*0C000(+++)
2.2	44.0	26.9	44.0	30.7	21.3	1.2	600	1320	4.0	14.0	24	HCSA/1W225-J*0C000(+++)
2.5	44.0	28.5	44.0	32.3	22.9	1.2	600	1500	4.0	14.0	25	HCSA/1W255-J*0C000(+++)
3.0	44.0	31.0	44.0	35.6	24.6	1.2	600	1800	4.0	14.0	26	HCSA/1W305-J*0C000(+++)
2.0	58.0	21.8	58.0	25.3	17.5	1.2	375	750	4.3	14.0	26	HCSA/1W205-S*0C000(+++)
2.2	58.0	22.7	58.0	26.3	18.4	1.2	375	825	4.3	14.0	27	HCSA/1W225-S*0C000(+++)
2.5	58.0	24.0	58.0	27.6	19.8	1.2	375	938	4.0	14.0	27	HCSA/1W255-S*0C000(+++)
3.0	58.0	26.0	58.0	29.8	21.9	1.2	375	1125	4.0	14.0	28	HCSA/1W305-S*0C000(+++)
3.3	58.0	27.1	58.0	31.7	22.3	1.2	375	1238	4.0	14.0	29	HCSA/1W335-S*0C000(+++)
4.0	58.0	29.6	58.0	35.1	24.1	1.2	375	1500	4.0	14.0	30	HCSA/1W405-S*0C000(+++)
4.7	58.0	31.8	58.0	37.4	26.4	1.2	375	1763	4.0	14.0	31	HCSA/1W475-S*0C000(+++)

Note: (1) The above are normal types, for the special types, please contact with relative person;  
 (2) "ESR", "Ls" are typical values.

Outline Dimensions

850Vd.c.(450Va.c.)												
C <sub>N</sub> (μF)	Axial		Flat			d	dv/dt (V/μs)	I <sup>∧</sup> (A)	ESR @100kHz	I <sub>max</sub> (A)	L <sub>s</sub> (nH)	Ordering Information
	L max	D max	L max	H max	T max							
5.0	58.0	32.7	58.0	38.4	27.4	1.2	375	1875	4.0	14.0	31	HCSA/1W505-S*0C000(+++)
5.6	58.0	34.5	58.0	38.7	30.9	1.2	375	2100	4.0	14.0	33	HCSA/1W565-S*0C000(+++)
6.0	58.0	35.6	58.0	39.9	32.0	1.2	375	2250	4.0	14.0	33	HCSA/1W605-S*0C000(+++)
6.8	58.0	37.7	58.0	43.6	32.6	1.2	375	2550	4.0	14.0	34	HCSA/1W685-S*0C000(+++)
8.2	58.0	41.2	58.0	48.7	34.6	1.2	375	3075	4.0	14.0	36	HCSA/1W825-S*0C000(+++)
1000Vd.c.(500Va.c.)												
C <sub>N</sub> (μF)	Axial		Axial Flat			d	dv/dt (V/μs)	I <sup>∧</sup> (A)	ESR @100kHz	I <sub>max</sub> (A)	L <sub>s</sub> (nH)	Ordering Information
	L max	D max	L max	H max	T max							
0.1	34.0	9.9	34.0	13.7	5.8	0.8	1050	105	12.5	4.2	16	HCSA/3A104-C*0C000(+++)
0.15	34.0	11.5	34.0	14.2	7.9	0.8	1050	158	10.0	5.0	16	HCSA/3A154-C*0C000(+++)
0.22	34.0	13.5	34.0	16.0	9.8	0.8	1050	231	7.5	7.0	17	HCSA/3A224-C*0C000(+++)
0.33	34.0	16.0	34.0	19.4	11.5	1.0	1050	347	6.0	8.5	17	HCSA/3A334-C*0C000(+++)
0.47	34.0	18.7	34.0	22.0	14.1	1.0	1050	494	5.0	10.0	18	HCSA/3A474-C*0C000(+++)
0.68	34.0	22.0	34.0	25.3	17.4	1.2	1050	714	4.0	12.1	18	HCSA/3A684-C*0C000(+++)
0.82	34.0	24.0	34.0	27.2	19.3	1.2	1050	861	4.0	12.5	19	HCSA/3A824-C*0C000(+++)
1.0	34.0	26.3	34.0	29.4	21.6	1.2	1050	1050	3.5	13.7	20	HCSA/3A105-C*0C000(+++)
0.33	44.0	13.7	44.0	16.9	9.0	1.0	780	257	5.0	9.0	20	HCSA/3A334-J*0C000(+++)
0.47	44.0	15.8	44.0	18.9	11.1	1.0	780	367	6.0	9.2	21	HCSA/3A474-J*0C000(+++)
0.68	44.0	18.4	44.0	21.5	13.7	1.0	780	530	5.0	10.1	21	HCSA/3A684-J*0C000(+++)
0.82	44.0	20.0	44.0	23.1	15.2	1.2	780	640	4.5	11.4	22	HCSA/3A824-J*0C000(+++)
1.0	44.0	21.8	44.0	24.9	17.0	1.2	780	780	4.0	12.8	22	HCSA/3A105-J*0C000(+++)
1.2	44.0	23.7	44.0	26.7	18.9	1.2	780	936	4.0	13.2	23	HCSA/3A125-J*0C000(+++)
1.5	44.0	26.2	44.0	29.2	21.4	1.2	780	1170	4.0	14.0	23	HCSA/3A155-J*0C000(+++)
2.0	44.0	29.9	44.0	34.5	23.5	1.2	780	1560	4.0	14.0	25	HCSA/3A205-J*0C000(+++)
2.2	44.0	31.3	44.0	34.3	26.4	1.2	780	1716	4.0	14.0	26	HCSA/3A225-J*0C000(+++)
1.5	58.0	22.2	58.0	25.7	17.9	1.2	425	638	5.0	14.0	26	HCSA/3A155-S*0C000(+++)
2.0	58.0	25.1	58.0	29.6	20.2	1.2	425	850	4.5	14.0	27	HCSA/3A205-S*0C000(+++)
2.2	58.0	26.2	58.0	31.6	20.6	1.2	425	935	4.0	14.0	28	HCSA/3A225-S*0C000(+++)

Note: (1) The above are normal types, for the special types, please contact with relative person;  
(2) "ESR", "Ls" are typical values.

Outline Dimensions

1000Vd.c.(500Va.c.)												
C <sub>N</sub> (μF)	Axial		Axial Flat			d	dv/dt (V/μs)	Ĵ (A)	ESR @100kHz	I <sub>max</sub> (A)	L <sub>s</sub> (nH)	Ordering Information
	L max	D max	L max	H max	T max							
2.5	58.0	27.7	58.0	33.2	22.2	1.2	425	1063	4.0	14.0	28	HCSA/3A255-S*0C000(+++)
3.0	58.0	30.1	58.0	35.7	24.7	1.2	425	1275	4.0	14.0	29	HCSA/3A305-S*0C000(+++)
3.3	58.0	31.4	58.0	37.0	26.0	1.2	425	1403	4.0	14.0	30	HCSA/3A335-S*0C000(+++)
4.0	58.0	34.3	58.0	40.1	29.1	1.2	425	1700	4.0	14.0	31	HCSA/3A405-S*0C000(+++)
4.7	58.0	37.0	58.0	42.8	31.9	1.2	425	1998	4.0	14.0	32	HCSA/3A475-S*0C000(+++)
5.0	58.0	38.1	58.0	45.5	31.4	1.2	425	2125	4.0	14.0	33	HCSA/3A505-S*0C000(+++)
1200Vd.c.(600Va.c.)												
C <sub>N</sub> (μF)	Axial		Axial Flat			d	dv/dt (V/μs)	Ĵ (A)	ESR @100kHz	I <sub>max</sub> (A)	L <sub>s</sub> (nH)	Ordering Information
	L max	D max	L max	H max	T max							
0.1	34.0	11.4	34.0	14.0	7.7	0.8	1350	135	13.5	5.5	17	HCSA/3L104-C*0C000(+++)
0.15	34.0	13.4	34.0	15.9	9.7	0.8	1350	203	10.0	6.5	17	HCSA/3L154-C*0C000(+++)
0.22	34.0	15.7	34.0	18.2	11.9	0.8	1350	297	6.8	9.0	18	HCSA/3L224-C*0C000(+++)
0.33	34.0	18.7	34.0	22.0	14.2	0.8	1350	446	5.5	9.4	18	HCSA/3L334-C*0C000(+++)
0.47	34.0	21.9	34.0	25.2	17.3	0.8	1350	635	4.0	11.9	18	HCSA/3L474-C*0C000(+++)
0.68	34.0	26.0	34.0	29.2	21.3	1.0	1350	918	4.0	13.0	19	HCSA/3L684-C*0C000(+++)
0.82	34.0	28.4	34.0	31.5	23.6	1.2	1350	1107	4.0	13.6	19	HCSA/3L824-C*0C000(+++)
0.1	44.0	10.2	34.0	13.6	5.7	1.2	1000	100	11.5	6.6	20	HCSA/3L104-J*0C000(+++)
0.22	44.0	13.6	34.0	16.8	9.0	1.2	1000	220	7.5	7.7	20	HCSA/3L224-J*0C000(+++)
0.33	44.0	16.0	44.0	18.3	12.0	0.8	1000	330	6.7	9.0	21	HCSA/3L334-J*0C000(+++)
0.47	44.0	18.6	44.0	21.7	13.9	0.8	1000	470	5.5	9.8	21	HCSA/3L474-J*0C000(+++)
0.68	44.0	21.9	44.0	25.0	17.1	0.8	1000	680	5.0	11.7	21	HCSA/3L684-J*0C000(+++)
0.82	44.0	23.8	44.0	26.9	19.0	1.0	1000	820	4.5	13.2	22	HCSA/3L824-J*0C000(+++)
1.0	44.0	26.1	44.0	29.9	20.5	1.2	1000	1000	4.5	14.0	22	HCSA/3L105-J*0C000(+++)
1.2	44.0	28.3	44.0	32.1	22.7	1.2	1000	1200	4.0	14.0	23	HCSA/3L125-J*0C000(+++)
1.5	44.0	31.4	44.0	36.0	25.0	1.2	1000	1500	4.0	14.0	25	HCSA/3L155-J*0C000(+++)
2.0	44.0	36.0	44.0	39.0	31.1	1.2	1000	2000	4.0	14.0	27	HCSA/3L205-J*0C000(+++)
1.5	58.0	26.6	44.0	30.0	20.6	1.2	600	900	5.0	14.0	28	HCSA/3L155-S*0C000(+++)
2.0	58.0	30.2	44.0	33.6	24.2	1.2	600	1200	4.5	14.0	29	HCSA/3L205-S*0C000(+++)

Note: (1) The above are normal types, for the special types, please contact with relative person;  
 (2) "ESR", "Ls" are typical values.



Outline Dimensions

1200Vd.c.(600Va.c.)												
C <sub>N</sub> (μF)	Axial		Axial Flat			d	dv/dt (V/μs)	Ĵ (A)	ESR @100kHz	I <sub>max</sub> (A)	L <sub>s</sub> (nH)	Ordering Information
	L max	D max	L max	H max	T max							
2.2	58.0	31.5	58.0	35.8	24.8	1.2	600	1320	4.0	14.0	29	HCSA/3L225-S*0C000(+++)
2.5	58.0	33.4	58.0	37.6	26.6	1.2	600	1500	4.0	14.0	30	HCSA/3L255-S*0C000(+++)
3.0	58.0	36.4	58.0	41.3	28.8	1.2	600	1800	4.0	14.0	31	HCSA/3L305-S*0C000(+++)
3.3	58.0	38.0	58.0	43.0	30.4	1.2	600	1980	4.0	14.0	32	HCSA/3L335-S*0C000(+++)
4.0	58.0	41.6	58.0	47.3	33.2	1.2	600	2400	4.0	14.0	33	HCSA/3L405-S*0C000(+++)
1500Vd.c.(650Va.c.)												
C <sub>N</sub> (μF)	Axial		Axial Flat			d	dv/dt (V/μs)	Ĵ (A)	ESR @100kHz	I <sub>max</sub> (A)	L <sub>s</sub> (nH)	Ordering Information
	L max	D max	L max	H max	T max							
0.068	34.0	11.9	34.0	14.4	8.1	0.8	1750	119	16.0	4.1	17	HCSA/4M683-C*0C000(+++)
0.082	34.0	12.9	34.0	15.3	9.0	0.8	1750	144	13.7	4.8	17	HCSA/4M823-C*0C000(+++)
0.1	34.0	14.0	34.0	16.4	10.1	0.8	1750	175	12.0	5.8	17	HCSA/4M104-C*0C000(+++)
0.22	34.0	19.6	34.0	22.7	14.8	1.0	1750	385	6.7	8.4	19	HCSA/4M224-C*0C000(+++)
0.33	34.0	23.6	34.0	26.5	18.6	1.2	1750	578	4.5	11.1	19	HCSA/4M334-C*0C000(+++)
0.47	34.0	27.8	34.0	30.5	22.7	1.2	1750	823	4.0	13.0	20	HCSA/4M474-C*0C000(+++)
0.22	44.0	16.4	44.0	19.4	11.5	1.0	1200	264	8.5	8.0	21	HCSA/4M224-J*0C000(+++)
0.33	44.0	19.5	44.0	22.4	14.5	1.0	1200	396	6.5	10.2	22	HCSA/4M334-J*0C000(+++)
0.47	44.0	22.8	44.0	25.6	17.7	1.2	1200	564	5.2	12.7	22	HCSA/4M474-J*0C000(+++)
0.68	44.0	27.0	44.0	30.5	21.0	1.2	1200	816	4.5	14.0	24	HCSA/4M684-J*0C000(+++)
0.82	44.0	29.4	44.0	32.8	23.4	1.2	1200	984	4.0	14.0	25	HCSA/4M824-J*0C000(+++)
1.0	44.0	32.3	44.0	36.4	25.4	1.2	1200	1200	4.0	14.0	26	HCSA/4M105-J*0C000(+++)
1.0	58.0	26.8	58.0	29.9	20.5	1.2	750	750	5.0	14.0	28	HCSA/4M105-S*0C000(+++)
1.2	58.0	29.1	58.0	32.1	22.7	1.2	750	900	4.5	14.0	29	HCSA/4M125-S*0C000(+++)
1.5	58.0	32.2	58.0	36.0	25.0	1.2	750	1125	4.3	14.0	30	HCSA/4M155-S*0C000(+++)
2.0	58.0	36.8	58.0	40.4	29.5	1.2	750	1500	4.0	14.0	32	HCSA/4M205-S*0C000(+++)
2.2	58.0	38.4	58.0	42.9	30.3	1.2	750	1650	4.0	14.0	33	HCSA/4M225-S*0C000(+++)
2.5	58.0	40.8	58.0	46.0	31.8	1.2	750	1875	4.0	14.0	34	HCSA/4M255-S*0C000(+++)

Note: (1) The above are normal types, for the special types, please contact with relative person;  
 (2) "ESR", "Ls" are typical values.

Outline Dimensions

1600Vd.c./1700Vd.c.(675Va.c.)												
C <sub>N</sub> (μF)	Axial		Axial Flat			d	dv/dt (V/μs)	I <sup>∧</sup> (A)	ESR @100kHz	I <sub>max</sub> (A)	L <sub>s</sub> (nH)	Ordering Information
	L max	D max	L max	H max	T max							
0.033	-	-	34.0	11.2	6.5	0.8	1900	63	29	3.9	16	HCSA/3C333-C*0C000(+++)
0.047	34.0	10.8	34.0	12.5	7.8	0.8	1900	89	23	5.2	16	HCSA/3C473-C*0C000(+++)
0.068	34.0	12.5	34.0	15.1	8.8	0.8	1900	129	17.9	5.3	17	HCSA/3C683-C*0C000(+++)
0.082	34.0	13.5	34.0	17.0	9.2	1.0	1900	156	15	6.2	17	HCSA/3C823-C*0C000(+++)
0.1	34.0	14.7	34.0	18.1	10.3	1.0	1900	190	12.5	7.5	17	HCSA/3C104-C*0C000(+++)
0.15	34.0	17.5	34.0	20.8	13.0	1.0	1900	285	8.5	8.6	18	HCSA/3C154-C*0C000(+++)
0.22	34.0	20.7	34.0	24.0	16.1	1.2	1900	418	6.0	10.0	18	HCSA/3C224-C*0C000(+++)
0.33	34.0	24.9	34.0	29.7	18.7	1.2	1900	627	5.5	12.5	20	HCSA/3C334-C*0C000(+++)
0.47	34.0	29.3	34.0	33.3	23.8	1.2	1900	893	4.0	14.0	20	HCSA/3C474-C*0C000(+++)
0.15	44.0	14.7	44.0	17.9	10.1	1.0	1400	210	11.5	7.9	21	HCSA/3C154-J*0C000(+++)
0.22	44.0	17.3	44.0	20.4	12.5	1.0	1400	308	9.5	8.6	21	HCSA/3C224-J*0C000(+++)
0.33	44.0	20.6	44.0	23.7	15.8	1.2	1400	462	6.5	11.0	21	HCSA/3C334-J*0C000(+++)
0.47	44.0	24.1	44.0	27.1	19.3	1.2	1400	658	5.0	13.2	22	HCSA/3C474-J*0C000(+++)
0.68	44.0	28.5	44.0	32.3	22.9	1.2	1400	952	4.5	14.0	24	HCSA/3C684-J*0C000(+++)
0.82	44.0	31.1	44.0	34.9	25.4	1.2	1400	1148	4.0	14.0	26	HCSA/3C824-J*0C000(+++)
1.0	44.0	34.1	44.0	42.9	24.0	1.2	1400	1400	4.0	14.0	27	HCSA/3C105-J*0C000(+++)
1.2	44.0	37.2	44.0	44.9	27.6	1.2	1400	1680	4.0	14.0	30	HCSA/3C125-J*0C000(+++)
1.5	44.0	41.3	44.0	48.9	31.6	1.2	1400	2100	4.0	14.0	31	HCSA/3C155-J*0C000(+++)
1.0	58.0	28.3	58.0	31.7	22.3	1.2	780	780	5.0	14.0	29	HCSA/3C105-S*0C000(+++)
1.2	58.0	30.7	58.0	36.6	22.5	1.2	780	936	4.5	14.0	30	HCSA/3C125-S*0C000(+++)
1.5	58.0	34.0	58.0	40.7	25.0	1.2	780	1170	4.2	14.0	31	HCSA/3C155-S*0C000(+++)
2.0	58.0	38.9	58.0	46.3	29.0	1.2	780	1560	4.0	14.0	34	HCSA/3C205-S*0C000(+++)
2.2	58.0	40.6	58.0	48.8	30.0	1.2	780	1716	4.0	14.0	35	HCSA/3C225-S*0C000(+++)
2.5	58.0	43.1	58.0	51.3	32.4	1.2	780	1950	4.0	14.0	36	HCSA/3C255-S*0C000(+++)

Note: (1) The above are normal types, for the special types, please contact with relative person;  
 (2) "#"when the rated voltage is 1700dc,the digit 6~7 is 7M;  
 (3) "ESR", "Ls" are typical values.

Outline Dimensions

2000Vd.c.(700Va.c.)												
C <sub>N</sub> (μF)	Axial		Axial Flat			d	dv/dt (V/μs)	İ (A)	ESR @100kHz	I <sub>max</sub> (A)	L <sub>s</sub> (nH)	Ordering Information
	L max	D max	L max	H max	T max							
0.022	-	-	34.0	10.8	6.1	0.8	2100	46	37	3.5	16	HCSA/3D223-C*0C000(+++)
0.033	-	-	34.0	12.2	7.5	0.8	2100	69	26.8	4.2	16	HCSA/3D333-C*0C000(+++)
0.047	34.0	12.0	34.0	14.6	8.3	0.8	2100	99	22.5	5.1	17	HCSA/3D473-C*0C000(+++)
0.068	34.0	14.0	34.0	16.5	10.2	0.8	2100	143	16	6.7	17	HCSA/3D683-C*0C000(+++)
0.082	34.0	15.1	34.0	18.5	10.7	1.0	2100	172	13.2	7.5	17	HCSA/3D823-C*0C000(+++)
0.1	34.0	16.4	34.0	19.8	12.0	1.0	2100	210	11.1	8.4	17	HCSA/3D104-C*0C000(+++)
0.15	34.0	19.7	34.0	23.0	15.1	1.0	2100	315	7.6	10.1	18	HCSA/3D154-C*0C000(+++)
0.22	34.0	23.4	34.0	26.6	18.7	1.2	2100	462	5.5	11.0	19	HCSA/3D224-C*0C000(+++)
0.1	44.0	13.9	44.0	16.2	9.9	1.0	1650	165	18.0	6.4	21	HCSA/3D104-J*0C000(+++)
0.15	44.0	16.4	44.0	19.6	11.7	1.0	1650	248	12.3	8.9	20	HCSA/3D154-J*0C000(+++)
0.22	44.0	19.4	44.0	22.5	14.6	1.0	1650	363	8.5	10.1	21	HCSA/3D224-J*0C000(+++)
0.33	44.0	23.2	44.0	26.2	18.4	1.2	1650	545	5.8	13.0	22	HCSA/3D334-J*0C000(+++)
0.47	44.0	27.2	44.0	31.0	21.6	1.2	1650	776	4.1	14.0	23	HCSA/3D474-J*0C000(+++)
0.68	44.0	32.3	44.0	37.6	25.0	1.2	1650	1122	4.0	14.0	26	HCSA/3D684-J*0C000(+++)
0.68	58.0	26.8	58.0	30.2	20.8	1.2	850	578	5.0	14.0	28	HCSA/3D684-S*0C000(+++)
0.82	58.0	29.2	58.0	33.4	22.4	1.2	850	697	4.5	14.0	30	HCSA/3D824-S*0C000(+++)
1	58.0	31.9	58.0	37.8	23.6	1.2	850	850	4.0	14.0	32	HCSA/3D105-S*0C000(+++)
1.2	58.0	34.7	58.0	40.5	26.4	1.2	850	1020	4.0	14.0	32	HCSA/3D125-S*0C000(+++)
1.5	58.0	38.5	58.0	45.0	29.3	1.2	850	1275	4.0	14.0	34	HCSA/3D155-S*0C000(+++)
2500Vd.c.(725Va.c.)												
C <sub>N</sub> (μF)	Axial		Axial Flat			d	dv/dt (V/μs)	İ (A)	ESR @100kHz	I <sub>max</sub> (A)	L <sub>s</sub> (nH)	Ordering Information
	L max	D max	L max	H max	T max							
0.015	-	-	34.0	11.0	6.3	0.8	2600	39	44.6	2.0	16	HCSA/3E153-C*0C000(+++)
0.022	34.0	10.6	34.0	14.3	6.5	0.8	2600	57	33.7	2.6	16	HCSA/3E223-C*0C000(+++)
0.033	34.0	12.5	34.0	15.1	8.8	0.8	2600	86	25.4	3.9	17	HCSA/3E333-C*0C000(+++)
0.047	34.0	14.4	34.0	17.0	10.7	1.0	2600	122	18.3	5.3	17	HCSA/3E473-C*0C000(+++)
0.068	34.0	16.9	34.0	20.3	12.4	1.0	2600	177	13.0	7.0	18	HCSA/3E683-C*0C000(+++)
0.082	34.0	18.3	34.0	21.7	13.8	1.2	2600	213	11.2	6.6	18	HCSA/3E823-C*0C000(+++)

Note: (1) The above are normal types, for the special types, please contact with relative person;  
 (2) "ESR", "Ls" are typical values.

Outline Dimensions

2500Vd.c.(725Va.c.)												
C <sub>N</sub> (μF)	Axial		Axial Flat			d	dv/dt (V/μs)	Ī (A)	ESR @100kHz	I <sub>max</sub> (A)	L <sub>s</sub> (nH)	Ordering Information
	L max	D max	L max	H max	T max							
0.1	34.0	20.0	34.0	23.3	15.5	1.2	2600	260	9.0	8.6	18	HCSA/3E104-C*0C000(+++)
0.15	34.0	24.1	34.0	27.3	19.4	1.2	2600	390	6.1	10.5	20	HCSA/3E154-C*0C000(+++)
0.082	44.0	15.4	44.0	18.6	10.7	1.0	1950	160	17.3	4.6	20	HCSA/3E823-J*0C000(+++)
0.1	44.0	16.7	44.0	19.9	12.0	1.0	1950	195	14.9	6.8	21	HCSA/3E104-J*0C000(+++)
0.15	44.0	19.9	44.0	23.0	15.1	1.2	1950	293	10.1	9.2	21	HCSA/3E154-J*0C000(+++)
0.22	44.0	23.6	44.0	26.6	18.8	1.2	1950	429	7.0	10.4	22	HCSA/3E224-J*0C000(+++)
0.33	44.0	28.4	44.0	32.2	22.8	1.2	1950	644	4.8	14.0	25	HCSA/3E334-J*0C000(+++)
0.47	44.0	33.5	44.0	38.0	27.0	1.2	1950	917	4.0	14.0	27	HCSA/3E474-J*0C000(+++)
0.68	44.0	39.8	44.0	45.8	31.7	1.2	1950	1326	4.0	14.0	31	HCSA/3E684-J*0C000(+++)
0.22	58.0	20.0	58.0	22.6	14.7	1.2	925	204	10.5	8.6	27	HCSA/3E224-S*0C000(+++)
0.33	58.0	23.8	58.0	26.4	18.5	1.2	925	305	8.5	10.6	27	HCSA/3E334-S*0C000(+++)
0.47	58.0	27.8	58.0	30.4	22.5	1.2	925	435	6.0	13.2	29	HCSA/3E474-S*0C000(+++)
0.68	58.0	32.8	58.0	37.0	26.0	1.2	925	629	4.2	14.0	31	HCSA/3E684-S*0C000(+++)
0.82	58.0	35.8	58.0	39.9	29.0	1.2	925	759	4.0	14.0	32	HCSA/3E824-S*0C000(+++)
1	58.0	39.2	58.0	45.0	30.8	1.2	925	925	4.0	14.0	34	HCSA/3E105-S*0C000(+++)

Note: (1) The above are normal types, for the special types, please contact with relative person;  
 (2) "ESR", "Ls" are typical values.

# HCSB

Snubber capacitor for IGBT (PCB)



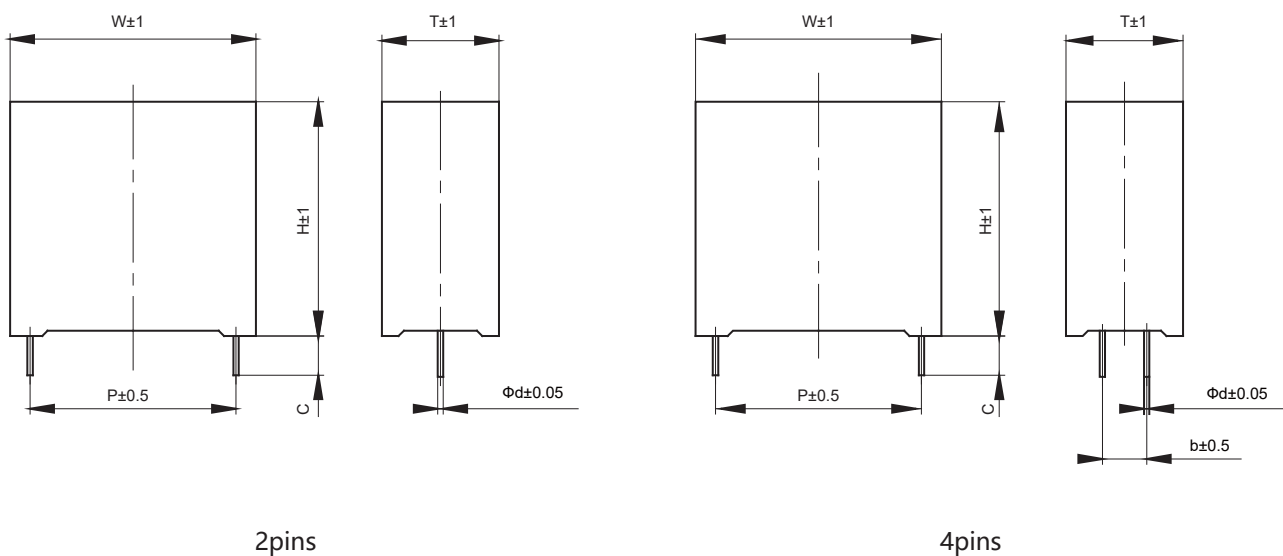
## Features

- Excellent active and passive flame resistance abilities
- Low loss and small inherent temperature rise
- Square plastic case, sealed with epoxy resin (UL94 V-0)
- Excellent electrical performance

## Safety Approvals

	UL	UL810	0.01μF-10μF, max 3000Vd.c. max 105°C File No.: E222132,CCN:CZDS2
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## Outline Drawing



Note: The dimensions of the product are in mm units.  
 Outline dimensions can be found in the Product Dimensions Table.

## Specifications

Reference standard	GB/T 17702 (IEC 61071)	
Climatic category	40/85/56	
Operating temperature range	-40°C~85°C	
Rated voltage	630Vd.c.~2500Vd.c.	
Capacitance range	0.047μF~10μF	
Capacitance tolerance	±5%(J),±10%(K)	
Voltage proof	1.5U <sub>n</sub> (10s)	
Dissipation factor	≤0.0005 (1kHz,20°C)	
Insulation resistance (IR×C <sub>N</sub> )	IR ≥ 100000MΩ, C <sub>N</sub> ≤ 0.33μF IR×C <sub>N</sub> ≥ 30000s, C <sub>N</sub> > 0.33μF	(20°C, 100Vd.c., 1min)
Expected lifetime	≥ 100,000h@U <sub>N</sub> , Θ <sub>hs</sub> =70°C	

## Ordering Information

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
H	C	S	B	/											(	x	x	x	)
<b>Series code</b>				<b>DC Rated voltage</b>	<b>Rated capacitance value</b>			<b>Capacitance tolerance</b>		<b>Pitch</b>	<b>Lead Form</b>	<b>Lead Diameter</b>	<b>Internal code</b>	<b>Internal code</b>					
					For example: 154=15×10 <sup>4</sup> pF =0.15μF			J=±5% K=±10%			2=2pins 4=4pins			To identify when the special requirements needed					
				2J=630V 1V=700V 1W=850V 3A=1000V 3L=1200V 3C=1600V 7M=1700V 3D=2000V 3E=2500V						B=27.5mm D=32.5mm F=37.5mm M=52.5mm		1=0.8mm 2=1.0mm 3=1.2mm							

Outline Dimensions

630Vd.c./700Vd.c.(420Va.c.)#												
C <sub>N</sub> (μF)	W (mm)	H (mm)	T (mm)	P (mm)	b (mm)	d (mm)	dv/dt (V/μs)	İ (A)	ESR @100kHz	I <sub>max</sub> (A)	L <sub>s</sub> (nH)	Ordering Information
0.15	32.0	20.0	11.0	27.5	-	0.8	1200	180	11.5	3	19	HCSB/2J154*B210(+++)
0.22	32.0	20.0	11.0	27.5	-	0.8	1200	264	9.5	4	19	HCSB/2J224*B210(+++)
0.33	32.0	22.0	13.0	27.5	-	1.0	1200	396	7.5	5.5	19	HCSB/2J334*B220(+++)
0.47	32.0	24.0	15.0	27.5	-	1.0	1200	564	6.0	7	19	HCSB/2J474*B220(+++)
0.56	32.0	24.0	15.0	27.5	-	1.0	1200	672	6.0	7.5	19	HCSB/2J564*B220(+++)
0.68	37.0	25.0	15.0	32.5	-	1.2	900	612	6.0	6	23	HCSB/2J684*D230(+++)
0.68	37.0	25.0	15.0	32.5	5.1	1.0	900	612	5.0	8	23	HCSB/2J684*D420(+++)
1.0	37.0	30.0	16.0	32.5	-	1.2	900	900	6.0	9	23	HCSB/2J105*D230(+++)
1.0	37.0	30.0	16.0	32.5	5.1	1.0	900	900	5.0	11	23	HCSB/2J105*D420(+++)
1.2	37.0	30.0	16.0	32.5	-	1.2	900	1080	5.5	11	23	HCSB/2J125*D230(+++)
1.2	37.0	30.0	16.0	32.5	5.1	1.0	900	1080	4.5	13	23	HCSB/2J125*D420(+++)
1.5	37.0	34.0	20.0	32.5	-	1.2	900	1350	5.5	14	23	HCSB/2J155*D230(+++)
1.5	37.0	34.0	20.0	32.5	10.2	1.0	900	1350	4.5	17	23	HCSB/2J155*D420(+++)
1.8	37.0	34.0	20.0	32.5	-	1.2	900	1620	5.5	14	23	HCSB/2J185*D230(+++)
1.8	37.0	34.0	20.0	32.5	10.2	1.0	900	1620	4.5	18	23	HCSB/2J185*D420(+++)
2.0	42.0	40.0	20.0	37.5	-	1.2	600	1200	5.0	14	29	HCSB/2J205*F230(+++)
2.0	42.0	40.0	20.0	37.5	10.2	1.2	600	1200	4.0	18	29	HCSB/2J205*F430(+++)
2.2	42.0	40.0	20.0	37.5	-	1.2	600	1320	5.0	14	29	HCSB/2J225*F230(+++)
2.2	42.0	40.0	20.0	37.5	10.2	1.2	600	1320	4.0	18.5	29	HCSB/2J225*F430(+++)
2.5	42.0	40.0	20.0	37.5	-	1.2	600	1500	5.0	14	29	HCSB/2J255*F230(+++)
2.5	42.0	40.0	20.0	37.5	10.2	1.2	600	1500	4.0	19	29	HCSB/2J255*F430(+++)
3.0	42.0	44.0	24.0	37.5	-	1.2	600	1800	5.0	14	29	HCSB/2J305*F230(+++)
3.0	42.0	44.0	24.0	37.5	10.2	1.2	600	1800	4.0	20	29	HCSB/2J305*F430(+++)
3.3	42.0	44.0	24.0	37.5	-	1.2	600	1980	4.5	14	29	HCSB/2J335*F230(+++)
3.3	42.0	44.0	24.0	37.5	10.2	1.2	600	1980	3.5	20	29	HCSB/2J335*F430(+++)
4.0	42.0	44.0	24.0	37.5	-	1.2	600	2400	4.5	14	29	HCSB/2J405*F230(+++)
4.0	42.0	44.0	24.0	37.5	10.2	1.2	600	2400	3.5	21	29	HCSB/2J405*F430(+++)
4.7	42.0	45.0	30.0	37.5	20.3	1.2	600	2820	3.5	23	29	HCSB/2J475*F430(+++)
5.0	42.0	45.0	30.0	37.5	20.3	1.2	600	3000	3.0	23.5	29	HCSB/2J505*F430(+++)
6.0	57.5	45.0	25.0	52.5	20.3	1.2	360	2160	3.0	23.5	33	HCSB/2J655*M430(+++)

Note: (1) "# when the rated voltage is 700Vd.c., the digit 6~7 is 1V;  
 (2) "ESR", "Ls" are typical values.



Outline Dimensions

630Vd.c./700Vd.c.(420Va.c.)#												
C <sub>N</sub> (μF)	W (mm)	H (mm)	T (mm)	P (mm)	b (mm)	d (mm)	dv/dt (V/μs)	Î (A)	ESR @100kHz	I <sub>max</sub> (A)	L <sub>s</sub> (nH)	Ordering Information
6.5	57.5	45.0	30.0	52.5	20.3	1.2	360	2340	3.0	23.5	33	HCSB/2J655*M430(+++)
6.8	57.5	45.0	30.0	52.5	20.3	1.2	360	2448	2.5	24	33	HCSB/2J685*M430(+++)
7.0	57.5	45.0	30.0	52.5	20.3	1.2	360	2520	2.5	25	33	HCSB/2J705*M430(+++)
8.0	57.5	50.0	35.0	52.5	20.3	1.2	360	2880	2.5	27	33	HCSB/2J805*M430(+++)
8.2	57.5	50.0	35.0	52.5	20.3	1.2	360	2952	2.5	27	33	HCSB/2J825*M430(+++)
9.0	57.5	50.0	35.0	52.5	20.3	1.2	360	3240	2.5	28	33	HCSB/2J905*M430(+++)
10.0	57.5	50.0	35.0	52.5	20.3	1.2	360	3600	2.5	28.5	33	HCSB/2J106*M430(+++)
850Vd.c.(450Va.c.)												
C <sub>N</sub> (μF)	W (mm)	H (mm)	T (mm)	P (mm)	b (mm)	d (mm)	dv/dt (V/μs)	Î (A)	ESR @100kHz	I <sub>max</sub> (A)	L <sub>s</sub> (nH)	Ordering Information
0.10	32	18	9	27.5	-	0.8	1400	140	13.5	3	19	HCSB/1W104*B210(+++)
0.15	32	20	11	27.5	-	0.8	1400	210	10.5	4.5	19	HCSB/1W154*B210(+++)
0.22	32	20	11	27.5	-	1	1400	308	8.0	5	19	HCSB/1W224*B220(+++)
0.33	32	22	13	27.5	-	1	1400	462	6.5	6	19	HCSB/1W334*B220(+++)
0.47	37	25	15	32.5	-	1.2	1200	564	6.0	6	23	HCSB/1W474*D230(+++)
0.47	37	25	15	32.5	5.1	1	1200	564	5.0	8	23	HCSB/1W474*D420(+++)
0.68	37	30	16	32.5	-	1.2	1200	816	6.0	9	23	HCSB/1W684*D230(+++)
0.68	37	30	16	32.5	5.1	1	1200	816	5.0	11	23	HCSB/1W684*D420(+++)
1.0	37	34	20	32.5	-	1.2	1200	1200	6.0	11	23	HCSB/1W105*D230(+++)
1.0	37	34	20	32.5	10.2	1	1200	1200	5.0	13	23	HCSB/1W105*D420(+++)
1.2	37	34	20	32.5	-	1.2	1200	1440	6.0	13	23	HCSB/1W125*D230(+++)
1.2	37	34	20	32.5	10.2	1	1200	1440	5.0	15	23	HCSB/1W125*D420(+++)
1.5	37	34	20	32.5	-	1.2	1200	1800	6.0	14	23	HCSB/1W155*D230(+++)
1.5	37	34	20	32.5	10.2	1	1200	1800	5.0	18	23	HCSB/1W155*D420(+++)
1.5	42	40	20	37.5	-	1.2	750	1125	5.5	14	29	HCSB/1W155*F230(+++)
1.5	42	40	20	37.5	10.2	1.2	750	1125	4.5	18.5	29	HCSB/1W155*F430(+++)
2.0	42	40	20	37.5	-	1.2	750	1500	5.5	14	29	HCSB/1W205*F230(+++)
2.0	42	40	20	37.5	10.2	1.2	750	1500	4.5	19	29	HCSB/1W205*F430(+++)
2.2	42	40	20	37.5	-	1.2	750	1650	5.5	14	29	HCSB/1W225*F230(+++)
2.2	42	40	20	37.5	10.2	1.2	750	1650	4.5	19.5	29	HCSB/1W225*F430(+++)

Note: (1) The above are normal types, for the special types, please contact with relative person;  
 (2) "ESR", "Ls" are typical values.

Outline Dimensions

850Vd.c.(450Va.c.)												
C <sub>N</sub> (μF)	W (mm)	H (mm)	T (mm)	P (mm)	b (mm)	d (mm)	dv/dt (V/μs)	İ (A)	ESR @100kHz	I <sub>max</sub> (A)	L <sub>s</sub> (nH)	Ordering Information
2.5	42	44	24	37.5	-	1.2	750	1875	5.5	14	29	HCSB/1W255*F230(+++)
2.5	42	44	24	37.5	10.2	1.2	750	1875	4.5	20	29	HCSB/1W255*F430(+++)
3.0	42	44	24	37.5	-	1.2	750	2250	5.5	14	29	HCSB/1W305*F230(+++)
3.0	42	44	24	37.5	10.2	1.2	750	2250	4.5	21	29	HCSB/1W305*F430(+++)
3.3	42	45	30	37.5	20.3	1.2	750	2475	4.5	21.5	29	HCSB/1W335*F430(+++)
4.0	42	46	35	37.5	20.3	1.2	750	3000	4.5	22	29	HCSB/1W405*F430(+++)
4.7	42	50	35	37.5	20.3	1.2	750	3525	4.5	23	29	HCSB/1W475*F430(+++)
3.3	57.5	45	25	52.5	20.3	1.2	450	1485	4.0	17	33	HCSB/1W335*M430(+++)
4.0	57.5	45	25	52.5	20.3	1.2	450	1800	4.0	23	33	HCSB/1W405*M430(+++)
4.7	57.5	45	30	52.5	20.3	1.2	450	2115	4.0	24.5	33	HCSB/1W475*M430(+++)
5.0	57.5	45	30	52.5	20.3	1.2	450	2250	4.0	25	33	HCSB/1W505*M430(+++)
5.6	57.5	50	35	52.5	20.3	1.2	450	2520	4.0	25.5	33	HCSB/1W565*M430(+++)
6.0	57.5	50	35	52.5	20.3	1.2	450	2700	4.0	26	33	HCSB/1W605*M430(+++)
6.5	57.5	50	35	52.5	20.3	1.2	450	2925	4.0	27	33	HCSB/1W655*M430(+++)
6.8	57.5	50	35	52.5	20.3	1.2	450	3060	4.0	27.5	33	HCSB/1W685*M430(+++)
1000Vd.c.(500Va.c.)												
C <sub>N</sub> (μF)	W (mm)	H (mm)	T (mm)	P (mm)	b (mm)	d (mm)	dv/dt (V/μs)	İ (A)	ESR @100kHz	I <sub>max</sub> (A)	L <sub>s</sub> (nH)	Ordering Information
0.068	32	18	9	27.5	-	0.8	1600	108.8	17.0	3	19	HCSB/3A683*B210(+++)
0.10	32	20	11	27.5	-	0.8	1600	160	12.5	4	19	HCSB/3A104*B210(+++)
0.15	32	20	11	27.5	-	0.8	1600	240	10.0	5	19	HCSB/3A154*B210(+++)
0.22	32	22	13	27.5	-	1	1600	352	7.5	7	19	HCSB/3A224*B220(+++)
0.33	32	24	15	27.5	-	1	1600	528	6.0	8.5	19	HCSB/3A334*B220(+++)
0.47	37	25	15	32.5	-	1.2	1300	611	6.0	6	23	HCSB/3A474*D230(+++)
0.47	37	25	15	32.5	5.1	1	1300	611	5.0	8	23	HCSB/3A474*D420(+++)
0.68	37	30	16	32.5	-	1.2	1300	884	6.0	7	23	HCSB/3A684*D230(+++)
0.68	37	30	16	32.5	5.1	1	1300	884	5.0	9	23	HCSB/3A684*D420(+++)
0.82	37	30	16	32.5	-	1.2	1300	1066	6.0	9	23	HCSB/3A824*D230(+++)
0.82	37	30	16	32.5	5.1	1	1300	1066	5.0	11	23	HCSB/3A824*D420(+++)
1.0	37	34	20	32.5	-	1.2	1300	1300	5.5	12	23	HCSB/3A105*D230(+++)

Note: (1) The above are normal types, for the special types, please contact with relative person;  
 (2) "ESR", "Ls" are typical values.

Outline Dimensions

1000Vd.c.(500Va.c.)												
C <sub>N</sub> (μF)	W (mm)	H (mm)	T (mm)	P (mm)	b (mm)	d (mm)	dv/dt (V/μs)	İ (A)	ESR @100kHz	I <sub>max</sub> (A)	L <sub>s</sub> (nH)	Ordering Information
1.0	37	34	20	32.5	10.2	1	1300	1300	4.5	14	23	HCSB/3A105*D420(+++)
1.2	37	34	20	32.5	-	1.2	1300	1560	5.5	14	23	HCSB/3A125*D230(+++)
1.2	37	34	20	32.5	10.2	1	1300	1560	4.5	17	23	HCSB/3A125*D420(+++)
1.2	42	40	20	37.5	-	1.2	850	1020	5.5	14	29	HCSB/3A125*F230(+++)
1.2	42	40	20	37.5	10.2	1.2	850	1020	4.5	16	29	HCSB/3A125*F430(+++)
1.5	42	40	20	37.5	-	1.2	850	1275	5.5	14	29	HCSB/3A155*F230(+++)
1.5	42	40	20	37.5	10.2	1.2	850	1275	4.5	16	29	HCSB/3A155*F430(+++)
2.0	42	44	24	37.5	-	1.2	850	1700	5.5	14	29	HCSB/3A205*F230(+++)
2.0	42	44	24	37.5	10.2	1.2	850	1700	4.5	17	29	HCSB/3A205*F430(+++)
2.2	42	44	24	37.5	-	1.2	850	1870	5.0	14	29	HCSB/3A225*F230(+++)
2.2	42	44	24	37.5	10.2	1.2	850	1870	4.0	20	29	HCSB/3A225*F430(+++)
2.5	42	45	30	37.5	20.3	1.2	850	2125	4.0	21	29	HCSB/3A255*F430(+++)
3.0	42	45	30	37.5	20.3	1.2	850	2550	4.0	21.5	29	HCSB/3A305*F430(+++)
3.3	42	50	35	37.5	20.3	1.2	850	2805	4.0	22	29	HCSB/3A335*F430(+++)
3.0	57.5	45	25	52.5	20.3	1.2	500	1500	4.0	19	33	HCSB/3A305*M430(+++)
3.3	57.5	45	30	52.5	20.3	1.2	500	1650	4.0	20	33	HCSB/3A335*M430(+++)
4.0	57.5	45	30	52.5	20.3	1.2	500	2000	4.0	21	33	HCSB/3A405*M430(+++)
4.7	57.5	50	35	52.5	20.3	1.2	500	2350	4.0	22	33	HCSB/3A475*M430(+++)
5.0	57.5	50	35	52.5	20.3	1.2	500	2500	4.0	23	33	HCSB/3A505*M430(+++)
1200Vd.c.(600Va.c.)												
C <sub>N</sub> (μF)	W (mm)	H (mm)	T (mm)	P (mm)	b (mm)	d (mm)	dv/dt (V/μs)	İ (A)	ESR @100kHz	I <sub>max</sub> (A)	L <sub>s</sub> (nH)	Ordering Information
0.047	32	18	9	27.5	-	0.8	1700	79.9	21.0	3	19	HCSB/3L473*B210(+++)
0.068	32	18	9	27.5	-	0.8	1700	115.6	17.0	4	19	HCSB/3L683*B210(+++)
0.10	32	20	11	27.5	-	0.8	1700	170	13.5	5.5	19	HCSB/3L104*B210(+++)
0.15	32	22	13	27.5	-	1	1700	255	10.0	6.5	19	HCSB/3L154*B220(+++)
0.22	32	24	15	27.5	-	1	1700	374	7.0	9.0	19	HCSB/3L224*B220(+++)
0.33	37	25	15	32.5	-	1.2	1500	495	6.5	6	23	HCSB/3L334*D230(+++)
0.33	37	25	15	32.5	5.1	1	1500	495	5.5	8	23	HCSB/3L334*D420(+++)
0.47	37	30	16	32.5	-	1.2	1500	705	6.5	8	23	HCSB/3L474*D230(+++)

Note: (1) The above are normal types, for the special types, please contact with relative person;  
 (2) "ESR", "Ls" are typical values.

Outline Dimensions

1200Vd.c.(600Va.c.)												
C <sub>N</sub> (μF)	W (mm)	H (mm)	T (mm)	P (mm)	b (mm)	d (mm)	dv/dt (V/μs)	İ (A)	ESR @100kHz	I <sub>max</sub> (A)	L <sub>s</sub> (nH)	Ordering Information
0.47	37	30	16	32.5	5.1	1	1500	705	5.5	10	23	HCSB/3L474*D420(+++)
0.68	37	34	20	32.5	-	1.2	1500	1020	6.5	9	23	HCSB/3L684*D230(+++)
0.68	37	34	20	32.5	10.2	1	1500	1020	5.5	11	23	HCSB/3L684*D420(+++)
0.75	37	34	20	32.5	-	1.2	1500	1125	6.5	10	23	HCSB/3L754*D230(+++)
0.75	37	34	20	32.5	10.2	1	1500	1125	5.5	12	23	HCSB/3L754*D420(+++)
0.82	42	40	20	37.5	-	1.2	950	779	6.0	11	29	HCSB/3L824*F230(+++)
0.82	42	40	20	37.5	10.2	1.2	950	779	5.0	13	29	HCSB/3L824*F430(+++)
1.0	42	40	20	37.5	-	1.2	950	950	6.0	13	29	HCSB/3L105*F230(+++)
1.0	42	40	20	37.5	10.2	1.2	950	950	5.0	15	29	HCSB/3L105*F430(+++)
1.2	42	44	24	37.5	-	1.2	950	1140	5.5	14	29	HCSB/3L125*F230(+++)
1.2	42	44	24	37.5	10.2	1.2	950	1140	4.5	17	29	HCSB/3L125*F430(+++)
1.5	42	44	24	37.5	-	1.2	950	1425	5.5	14	29	HCSB/3L155*F230(+++)
1.5	42	44	24	37.5	10.2	1.2	950	1425	4.5	17.5	29	HCSB/3L155*F430(+++)
2.0	42	45	30	37.5	20.3	1.2	950	1900	4.5	18	29	HCSB/3L205*F430(+++)
2.2	42	46	35	37.5	20.3	1.2	950	2090	4.5	19	29	HCSB/3L225*F430(+++)
2.2	57.5	45	30	52.5	20.3	1.2	600	1320	4.0	18	33	HCSB/3L225*M430(+++)
2.5	57.5	45	30	52.5	20.3	1.2	600	1500	4.0	19	33	HCSB/3L255*M430(+++)
3.0	57.5	45	30	52.5	20.3	1.2	600	1800	4.0	20	33	HCSB/3L305*M430(+++)
3.3	57.5	50	35	52.5	20.3	1.2	600	1980	4.0	21	33	HCSB/3L335*M430(+++)
3.5	57.5	50	35	52.5	20.3	1.2	600	2100	4.0	22	33	HCSB/3L355*M430(+++)
1600Vd.c.(650Va.c.)												
C <sub>N</sub> (μF)	W (mm)	H (mm)	T (mm)	P (mm)	b (mm)	d (mm)	dv/dt (V/μs)	İ (A)	ESR @100kHz	I <sub>max</sub> (A)	L <sub>s</sub> (nH)	Ordering Information
0.033	32	18	9	27.5	-	0.8	2100	69.3	29.5	2	19	HCSB/3C333*B210(+++)
0.047	32	18	9	27.5	-	0.8	2100	98.7	22.5	2.5	19	HCSB/3C473*B210(+++)
0.068	32	20	11	27.5	-	0.8	2100	142.8	16.0	4	19	HCSB/3C683*B210(+++)
0.10	32	22	13	27.5	-	1	2100	210	12.0	6	19	HCSB/3C104*B220(+++)
0.15	32	30	16	27.5	-	1	2100	315	8.5	6.5	19	HCSB/3C154*B220(+++)
0.22	37	25	15	32.5	-	1.2	1900	418	7.5	6	23	HCSB/3C224*D230(+++)
0.22	37	25	15	32.5	5.1	1	1900	418	6.5	7	23	HCSB/3C224*D420(+++)

Note: (1) The above are normal types, for the special types, please contact with relative person;  
 (2) "ESR", "Ls" are typical values.

Outline Dimensions

1600Vd.c.(650Va.c.)												
C <sub>N</sub> (μF)	W (mm)	H (mm)	T (mm)	P (mm)	b (mm)	d (mm)	dv/dt (V/μs)	Î (A)	ESR @100kHz	I <sub>max</sub> (A)	L <sub>s</sub> (nH)	Ordering Information
0.33	37	30	16	32.5	-	1.2	1900	627	7.5	7.5	23	HCSB/3C334*D230(+++)
0.33	37	30	16	32.5	5.1	1	1900	627	6.5	9	23	HCSB/3C334*D420(+++)
0.39	37	34	20	32.5	-	1.2	1900	741	7.0	9	23	HCSB/3C394*D230(+++)
0.39	37	34	20	32.5	5.1	1	1900	741	6.0	11	23	HCSB/3C394*D420(+++)
0.47	37	34	20	32.5	-	1.2	1900	893	7.0	11	23	HCSB/3C474*D230(+++)
0.47	37	34	20	32.5	10.2	1	1900	893	6.0	13	23	HCSB/3C474*D420(+++)
0.68	42	40	20	37.5	-	1.2	1250	850	4.0	14	29	HCSB/3C684*F230(+++)
0.68	42	40	20	37.5	10.2	1.2	1250	850	4.0	16	29	HCSB/3C684*F430(+++)
0.82	42	44	24	37.5	-	1.2	1250	1025	4.0	14	29	HCSB/3C824*F230(+++)
0.82	42	44	24	37.5	10.2	1.2	1250	1025	4.0	17	29	HCSB/3C824*F430(+++)
1.0	42	45	30	37.5	20.3	1.2	1250	1250	4.0	17.5	29	HCSB/3C105*F430(+++)
1.2	42	45	30	37.5	20.3	1.2	1250	1500	4.0	18	29	HCSB/3C125*F430(+++)
1.5	42	43	42	37.5	20.3	1.2	1250	1875	4.0	19	29	HCSB/3C155*F430(+++)
1.5	57.5	45	25	52.5	20.3	1.2	750	1125	4.0	20	33	HCSB/3C155*M430(+++)
2.0	57.5	50	35	52.5	20.3	1.2	750	1500	4.0	22	33	HCSB/3C205*M430(+++)
1700Vd.c.(675Va.c.)												
C <sub>N</sub> (μF)	W (mm)	H (mm)	T (mm)	P (mm)	b (mm)	d (mm)	dv/dt (V/μs)	Î (A)	ESR @100kHz	I <sub>max</sub> (A)	L <sub>s</sub> (nH)	Ordering Information
0.033	32	18	9	27.5	-	0.8	2300	75.9	29.5	3	19	HCSB/7M333*B210(+++)
0.047	32	18	9	27.5	-	0.8	2300	108.1	22.5	4.5	19	HCSB/7M473*B210(+++)
0.068	32	20	11	27.5	-	0.8	2300	156.4	18.0	5.0	19	HCSB/7M683*B210(+++)
0.10	32	22	13	27.5	-	1	2300	230	12.5	7.5	19	HCSB/7M104*B220(+++)
0.15	37	25	15	32.5	-	1.2	2000	300	8.5	5	23	HCSB/7M154*D230(+++)
0.15	37	25	15	32.5	5.1	1	2000	300	7.5	6	23	HCSB/7M154*D420(+++)
0.22	37	30	16	32.5	-	1.2	2000	440	7.5	6	23	HCSB/7M224*D230(+++)
0.22	37	30	16	32.5	5.1	1	2000	440	6.5	8	23	HCSB/7M224*D420(+++)
0.33	37	34	20	32.5	-	1.2	2000	660	7.0	9	23	HCSB/7M334*D230(+++)
0.33	37	34	20	32.5	10.2	1	2000	660	6.0	10.5	23	HCSB/7M334*D420(+++)
0.39	37	34	20	32.5	-	1.2	2000	780	7.0	10	23	HCSB/7M394*D230(+++)
0.39	37	34	20	32.5	10.2	1	2000	780	6.0	12	23	HCSB/7M394*D420(+++)

Note: (1) The above are normal types, for the special types, please contact with relative person;  
 (2) "ESR", "Ls" are typical values.

Outline Dimensions

1700Vd.c.(675Va.c.)												
C <sub>N</sub> (μF)	W (mm)	H (mm)	T (mm)	P (mm)	b (mm)	d (mm)	dv/dt (V/μs)	Î (A)	ESR @100kHz	I <sub>max</sub> (A)	L <sub>s</sub> (nH)	Ordering Information
0.47	42	36	24	37.5	-	1.2	1250	587.5	6.0	12	29	HCSB/7M474*F230(+++)
0.47	42	36	24	37.5	10.2	1.2	1250	587.5	5.0	14	29	HCSB/7M474*F430(+++)
0.56	42	36	24	37.5	-	1.2	1250	700	6.0	13	29	HCSB/7M564*F230(+++)
0.56	42	36	24	37.5	10.2	1.2	1250	700	5.0	15	29	HCSB/7M564*F430(+++)
0.68	42	44	24	37.5	-	1.2	1250	850	6.0	14	29	HCSB/7M684*F230(+++)
0.68	42	44	24	37.5	10.2	1.2	1250	850	5.0	16	29	HCSB/7M684*F430(+++)
0.82	42	44	24	37.5	-	1.2	1250	1025	5.5	14	29	HCSB/7M824*F230(+++)
0.82	42	44	24	37.5	10.2	1.2	1250	1025	4.5	17	29	HCSB/7M824*F430(+++)
1.0	42	45	30	37.5	20.3	1.2	1250	1250	4.5	18	29	HCSB/7M105*F430(+++)
1.0	57.5	45	25	52.5	20.3	1.2	780	780	4.0	16	33	HCSB/7M105*M430(+++)
1.2	57.5	45	30	52.5	20.3	1.2	780	936	4.0	17	33	HCSB/7M125*M430(+++)
1.5	57.5	45	30	52.5	20.3	1.2	780	1170	4.0	20	33	HCSB/7M155*M430(+++)
2.0	57.5	50	35	52.5	20.3	1.2	780	1560	4.0	22	33	HCSB/7M205*M430(+++)
2000Vd.c.(700Va.c.)												
C <sub>N</sub> (μF)	W (mm)	H (mm)	T (mm)	P (mm)	b (mm)	d (mm)	dv/dt (V/μs)	Î (A)	ESR @100kHz	I <sub>max</sub> (A)	L <sub>s</sub> (nH)	Ordering Information
0.022	32	18	9	27.5	-	0.8	2500	55	37.5	2	19	HCSB/3D223*B210(+++)
0.033	32	20	11	27.5	-	0.8	2500	82.5	27.5	3	19	HCSB/3D333*B210(+++)
0.047	32	20	11	27.5	-	0.8	2500	117.5	22.5	5	19	HCSB/3D473*B210(+++)
0.068	32	20	11	27.5	-	1	2500	170	16.0	6.5	19	HCSB/3D683*B220(+++)
0.10	37	25	15	32.5	-	1.2	2200	220	9.5	5	23	HCSB/3D104*D230(+++)
0.10	37	25	15	32.5	5.1	1	2200	220	8.5	6	23	HCSB/3D104*D420(+++)
0.15	37	25	15	32.5	-	1.2	2200	330	9.5	6	23	HCSB/3D154*D230(+++)
0.15	37	25	15	32.5	5.1	1	2200	330	8.5	8	23	HCSB/3D154*D420(+++)
0.22	37	30	16	32.5	-	1.2	2200	484	7.5	7.5	23	HCSB/3D224*D230(+++)
0.22	37	30	16	32.5	5.1	1	2200	484	6.5	9	23	HCSB/3D224*D420(+++)
0.33	37	34	20	32.5	-	1.2	2200	726	7.5	10	23	HCSB/3D334*D230(+++)
0.33	37	34	20	32.5	10.2	1	2200	726	6.5	12	23	HCSB/3D334*D420(+++)
0.47	42	40	20	37.5	-	1.2	1300	611	6.0	13	29	HCSB/3D474*F230(+++)
0.47	42	40	20	37.5	10.2	1.2	1300	611	5.0	15	29	HCSB/3D474*F430(+++)

Note: (1) The above are normal types, for the special types, please contact with relative person;  
 (2) "ESR", "Ls" are typical values.

Outline Dimensions

2000Vd.c.(700Va.c.)												
C <sub>N</sub> (μF)	W (mm)	H (mm)	T (mm)	P (mm)	b (mm)	d (mm)	dv/dt (V/μs)	Î (A)	ESR @100kHz	I <sub>max</sub> (A)	L <sub>s</sub> (nH)	Ordering Information
0.56	42	44	24	37.5	-	1.2	1300	728	6.0	14	29	HCSB/3D564*F230(+++)
0.56	42	44	24	37.5	10.2	1.2	1300	728	5.0	16	29	HCSB/3D564*F430(+++)
0.68	42	44	24	37.5	-	1.2	1300	884	5.5	14	29	HCSB/3D684*F230(+++)
0.68	42	44	24	37.5	10.2	1.2	1300	884	4.5	16.5	29	HCSB/3D684*F430(+++)
0.82	42	45	30	37.5	20.3	1.2	1300	1066	4.5	17	29	HCSB/3D824*F430(+++)
1.0	42	50	35	37.5	20.3	1.2	1300	1300	4.5	19	29	HCSB/3D105*F430(+++)
1.0	57.5	45	30	52.5	20.3	1.2	850	850	4.5	20	33	HCSB/3D105*M430(+++)
1.2	57.5	45	30	52.5	20.3	1.2	850	1020	4.5	21	33	HCSB/3D125*M430(+++)
1.5	57.5	50	35	52.5	20.3	1.2	850	1275	4.5	22	33	HCSB/3D155*M430(+++)
2500Vd.c.(725Va.c.)												
C <sub>N</sub> (μF)	W (mm)	H (mm)	T (mm)	P (mm)	b (mm)	d (mm)	dv/dt (V/μs)	Î (A)	ESR @100kHz	I <sub>max</sub> (A)	L <sub>s</sub> (nH)	Ordering Information
0.010	32	18	9	27.5	-	0.8	3500	35	60.0	1.5	19	HCSB/3E103*B210(+++)
0.015	32	18	9	27.5	-	0.8	3500	52.5	44.0	2	19	HCSB/3E153*B210(+++)
0.022	32	18	9	27.5	-	0.8	3500	77	34.0	3	19	HCSB/3E223*B210(+++)
0.033	32	20	11	27.5	-	0.8	3500	115.5	25.5	3.5	19	HCSB/3E333*B210(+++)
0.047	32	22	13	27.5	-	1	3500	164.5	18.5	4.5	19	HCSB/3E473*B220(+++)
0.068	37	25	15	32.5	-	1.2	3200	217.6	10.0	5	23	HCSB/3E683*D230(+++)
0.068	37	25	15	32.5	5.1	1	3200	217.6	9.0	6	23	HCSB/3E683*D420(+++)
0.10	37	30	16	32.5	-	1.2	3200	320	10.0	6	23	HCSB/3E104*D230(+++)
0.10	37	30	16	32.5	5.1	1	3200	320	9.0	7	23	HCSB/3E104*D420(+++)
0.15	37	34	20	32.5	-	1.2	3200	480	9.5	8	23	HCSB/3E154*D230(+++)
0.15	37	34	20	32.5	10.2	1	3200	480	8.5	10	23	HCSB/3E154*D420(+++)
0.18	37	34	20	32.5	-	1.2	3200	576	9.0	10.5	23	HCSB/3E184*D230(+++)
0.18	37	34	20	32.5	10.2	1	3200	576	8.0	12	23	HCSB/3E184*D420(+++)
0.22	42	40	20	37.5	-	1.2	2100	462	5.5	11	29	HCSB/3E224*F230(+++)
0.22	42	40	20	37.5	10.2	1.2	2100	462	4.5	13	29	HCSB/3E224*F430(+++)
0.33	42	44	24	37.5	-	1.2	2100	693	5.5	13	29	HCSB/3E334*F230(+++)
0.33	42	44	24	37.5	10.2	1.2	2100	693	4.5	15.2	29	HCSB/3E334*F430(+++)
0.47	42	45	30	37.5	20.3	1.2	2100	987	4.0	16	2	HCSB/3E474*F430(+++)

Note: (1) The above are normal types, for the special types, please contact with relative person;  
 (2) "ESR", "Ls" are typical values.



Outline Dimensions

2500Vd.c.(725Va.c.)												
C <sub>N</sub> (μF)	W (mm)	H (mm)	T (mm)	P (mm)	b (mm)	d (mm)	dv/dt (V/μs)	Î (A)	ESR @100kHz	I <sub>max</sub> (A)	L <sub>s</sub> (nH)	Ordering Information
0.68	42	50	35	37.5	20.3	1.2	2100	1428	4.0	16.5	29	HCSB/3E684*F430(+++)
0.68	57.5	45	30	52.5	20.3	1.2	1200	816	4.0	17	33	HCSB/3E684*M430(+++)
1.0	57.5	50	35	52.5	20.3	1.2	1200	1200	4.0	17.5	33	HCSB/3E105*M430(+++)

Note: (1) The above are normal types, for the special types, please contact with relative person;  
 (2) "ESR", "Ls" are typical values.

# HCSC

Snubber capacitor for IGBT (Lug terminals)



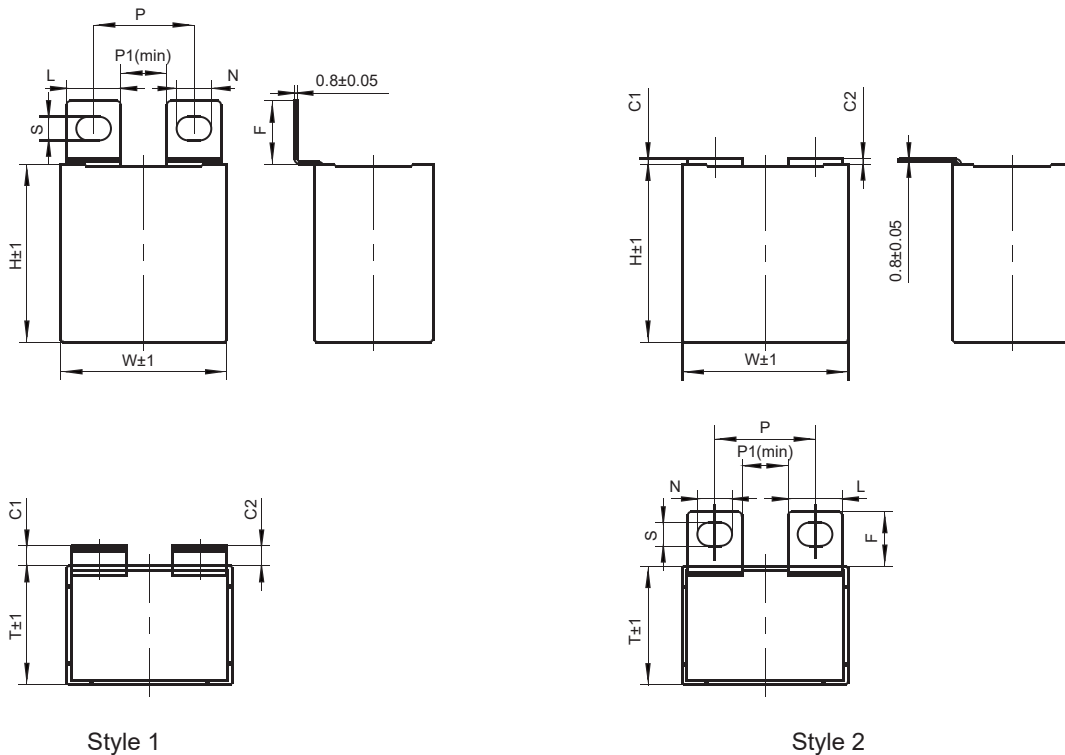
## Features

- Excellent active and passive flame resistan abilities
- Low loss and small inherent temperature rise
- Excellent electrical performance
- Square plastic case,sealed with epoxy resin (UL94 V-0)

## Safety Approvals

	UL	UL810	0.047μF-10μF,max 3000Vd.c. max 105°C File No.: E222132,CCN:CZDS2
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## Outline Drawing



Style 1

Style 2

Note: The dimensions of the product are in mm units.  
Outline dimensions can be found in the Product Dimensions Table.

## Specifications

Reference standard	GB/T 17702 (IEC 61071)	
Climatic category	40/85/56	
Operating temperature range	-40°C~+85°C	
Rated voltage	630Vd.c.~2500Vd.c.	
Capacitance range	0.047μF~10μF	
Capacitance tolerance	±5%(J),±10%(K)	
Voltage proof	1.6U <sub>N</sub> (10s)	
Dissipation factor	≤0.0005(1kHz,20°C)	
Insulation resistance (IR×C <sub>N</sub> )	IR≥100000MΩ,C <sub>N</sub> ≤0.33μF IR×C <sub>N</sub> ≥30000s,C <sub>N</sub> >0.33μF	(20°C,100Vd.c,1min)
Expected lifetime	≥100,000h@U <sub>N</sub> ,θ <sub>hs</sub> =70°C	

## Ordering Information

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
H	C	S	A	/													(	x	x	x	)

Series code

AC  
rated  
voltage

Rated  
capacitance  
value

Capacitance  
tolerance

Installation  
hole

Internal  
code

Width  
of  
case

Terminal  
code

Style  
of  
solder  
slice

Size  
of  
solder  
slice

Special  
code

For example:  
154=15×10<sup>4</sup>pF  
=0.15μF

See table 1

See table 2

To identify when the special requirements needed

2J=630V
1V=700V
1W=850V
3A=1000V
3L=1200V
3C=1600V
7M=1700V
3D=2000V
3E=2500V

J=±5%  
K=±10%

2=37mm
3=42mm
5=57.5mm

**Table 1 Installation Pitch Code**

Digit 12			
Width of case	Distance of hole for fixing		The distance of solder slice
W (mm)	P (mm)	Code	P1 (mm)
37/42	16 ~ 24	1	6
	21 ~ 29	4	11
57.5	31 ~ 39	9	21
	36 ~ 44	B	26

**Table 2 Terminal Code**

Digit 15			Digit 16		Digit 17	
Terminal height			Connector style		Connector size	
C1	C2	Code	Outline Dimensions	Code	LxFxNxS	Code
(C1=C2)<3mm		0	Style1	1	14.0mmx16.0mmx10.2mmx6.2mm	0
C1=C2=6mm		1	Style2	2		

**Outline Dimensions**

630Vd.c./700Vd.c.(420Va.c.)#									
C <sub>N</sub> (μF)	W (mm)	H (mm)	T (mm)	dv/dt (V/μs)	İ (A)	ESR @100kHz	I <sub>max</sub> (A)	L <sub>s</sub> (nH)	Ordering Information
0.68	37.0	25.0	15.0	900	612	5.0	9	23	HCSC/2J684-*02***(+++)
1.0	37.0	30.0	16.0	900	900	5.0	12	23	HCSC/2J105-*02***(+++)
1.2	37.0	30.0	16.0	900	1080	4.5	14	23	HCSC/2J125-*02***(+++)
1.5	37.0	34.0	20.0	900	1350	4.5	17	23	HCSC/2J155-*02***(+++)
1.8	37.0	34.0	20.0	900	1620	4.5	18	23	HCSC/2J185-*02***(+++)
1.2	42.0	33.0	18.0	600	720	4.5	12	29	HCSC/2J125-*03***(+++)
1.5	42.0	33.0	18.0	600	900	4.5	14	29	HCSC/2J155-*03***(+++)
2.0	42.0	40.0	20.0	600	1200	4.0	18	29	HCSC/2J205-*03***(+++)
2.2	42.0	40.0	20.0	600	1320	4.0	18.5	29	HCSC/2J225-*03***(+++)

Note: (1) "#"when the rated voltage is 700Vd.c.,the digit 6~7 is 1V;  
 (2) "ESR","Ls" are typical values.

Outline Dimensions

630Vd.c./700Vd.c.(420Va.c.)#									
C <sub>N</sub> (μF)	W (mm)	H (mm)	T (mm)	dv/dt (V/μs)	Î (A)	ESR @100kHz	I <sub>max</sub> (A)	L <sub>s</sub> (nH)	Ordering Information
2.5	42.0	40.0	20.0	600	1500	4.0	19	29	HCSC/2J255-*03***(+++)
3.0	42.0	44.0	24.0	600	1800	4.0	20	29	HCSC/2J305-*03***(+++)
3.3	42.0	44.0	24.0	600	1980	3.5	20	29	HCSC/2J335-*03***(+++)
4.0	42.0	44.0	24.0	600	2400	3.5	21	29	HCSC/2J405-*03***(+++)
4.7	42.0	45.0	30.0	600	2820	3.5	23	29	HCSC/2J475-*03***(+++)
5.0	42.0	45.0	30.0	600	3000	3.0	23.5	29	HCSC/2J505-*03***(+++)
6.0	57.5	45.0	25.0	360	2160	2.5	22.5	33	HCSC/2J605-*05***(+++)
6.5	57.5	45.0	30.0	360	2340	2.5	24	33	HCSC/2J655-*05***(+++)
6.8	57.5	45.0	30.0	360	2448	2.5	24.5	33	HCSC/2J685-*05***(+++)
7.0	57.5	45.0	30.0	360	2520	2.5	25	33	HCSC/2J705-*05***(+++)
8.0	57.5	50.0	35.0	360	2880	2.5	27	33	HCSC/2J805-*05***(+++)
8.2	57.5	50.0	35.0	360	2952	2.5	27	33	HCSC/2J825-*05***(+++)
9.0	57.5	50.0	35.0	360	3240	2.5	29	33	HCSC/2J905-*05***(+++)
10.0	57.5	50.0	35.0	360	3600	2.5	30	34	HCSC/2J106-*05***(+++)
850Vd.c.(450Va.c.)									
C <sub>N</sub> (μF)	W (mm)	H (mm)	T (mm)	dv/dt (V/μs)	Î (A)	ESR @100kHz	I <sub>max</sub> (A)	L <sub>s</sub> (nH)	Ordering Information
0.47	37.0	25.0	15.0	1200	564	5.0	9	23	HCSC/1W474-*02***(+++)
0.68	37.0	30.0	16.0	1200	816	5.0	12	23	HCSC/1W684-*02***(+++)
1.0	37.0	34.0	20.0	1200	1200	5.0	14	23	HCSC/1W105-*02***(+++)
1.2	37.0	34.0	20.0	1200	1440	5.0	16	23	HCSC/1W125-*02***(+++)
1.5	37.0	34.0	20.0	1200	1800	5.0	18	23	HCSC/1W155-*02***(+++)
1.0	42.0	33.0	18.0	750	750	5.0	12.5	29	HCSC/1W105-*03***(+++)
1.2	42.0	33.0	18.0	750	900	5.0	14.5	29	HCSC/1W125-*03***(+++)
1.5	42.0	40.0	20.0	750	1125	4.5	18.5	29	HCSC/1W155-*03***(+++)
2.0	42.0	40.0	20.0	750	1500	4.5	19	29	HCSC/1W205-*03***(+++)
2.2	42.0	40.0	20.0	750	1650	4.5	19.5	29	HCSC/1W225-*03***(+++)
2.5	42.0	44.0	24.0	750	1875	4.5	20	29	HCSC/1W255-*03***(+++)
3.0	42.0	44.0	24.0	750	2250	4.5	21	29	HCSC/1W305-*03***(+++)
3.3	42.0	45.0	30.0	750	2475	4.5	21.5	29	HCSC/1W335-*03***(+++)

Note: (1) The above are normal types, for the special types, please contact with relative person;  
 (2) "ESR","Ls" are typical values.

Outline Dimensions

850Vd.c.(450Va.c.)									
C <sub>N</sub> (μF)	W (mm)	H (mm)	T (mm)	dv/dt (V/μs)	İ (A)	ESR @100kHz	I <sub>max</sub> (A)	L <sub>s</sub> (nH)	Ordering Information
4.0	42.0	46.0	35.0	750	3000	4.5	22	29	HCSC/1W405-*03***(+++)
4.7	42.0	50.0	35.0	750	3525	4.5	23.5	29	HCSC/1W475-*03***(+++)
3.3	57.5	45.0	25.0	450	1485	4.0	19	33	HCSC/1W335-*05***(+++)
4.0	57.5	45.0	25.0	450	1800	4.0	23	33	HCSC/1W405-*05***(+++)
4.7	57.5	45.0	30.0	450	2115	4.0	24.5	33	HCSC/1W475-*05***(+++)
5.0	57.5	45.0	30.0	450	2250	4.0	25	33	HCSC/1W505-*05***(+++)
5.6	57.5	50.0	35.0	450	2520	4.0	25	33	HCSC/1W565-*05***(+++)
6.0	57.5	50.0	35.0	450	2700	4.0	26	33	HCSC/1W605-*05***(+++)
6.5	57.5	50.0	35.0	450	2925	4.0	27	33	HCSC/1W655-*05***(+++)
6.8	57.5	50.0	35.0	450	3060	4.0	28	33	HCSC/1W685-*05***(+++)
8.2	57.5	55.0	45.0	450	3690	4.0	33	33	HCSC/1W825-*05***(+++)
1000Vd.c.(500Va.c.)									
C <sub>N</sub> (μF)	W (mm)	H (mm)	T (mm)	dv/dt (V/μs)	İ (A)	ESR @100kHz	I <sub>max</sub> (A)	L <sub>s</sub> (nH)	Ordering Information
0.47	37.0	25.0	15.0	1300	611	5.0	9	23	HCSC/3A474-*02***(+++)
0.68	37.0	30.0	16.0	1300	884	5.0	10.5	23	HCSC/3A684-*02***(+++)
0.82	37.0	30.0	16.0	1300	1066	5.0	12	23	HCSC/3A824-*02***(+++)
1.0	37.0	34.0	20.0	1300	1300	4.5	15	23	HCSC/3A105-*02***(+++)
1.2	37.0	34.0	20.0	1300	1560	4.5	17	23	HCSC/3A125-*02***(+++)
0.82	42.0	33.0	18.0	850	697	5.0	11	29	HCSC/3A824-*03***(+++)
1.0	42.0	33.0	18.0	850	850	5.0	13	29	HCSC/3A105-*03***(+++)
1.2	42.0	40.0	20.0	850	1020	4.5	16	29	HCSC/3A125-*03***(+++)
1.5	42.0	40.0	20.0	850	1275	4.5	16	29	HCSC/3A155-*03***(+++)
2.0	42.0	44.0	24.0	850	1700	4.5	17	29	HCSC/3A205-*03***(+++)
2.2	42.0	44.0	24.0	850	1870	4.0	20	29	HCSC/3A225-*03***(+++)
2.5	42.0	45.0	30.0	850	2125	4.0	21	29	HCSC/3A255-*03***(+++)
3.0	42.0	45.0	30.0	850	2550	4.0	21.5	29	HCSC/3A305-*03***(+++)
3.3	42.0	50.0	35.0	850	2805	4.0	22	29	HCSC/3A335-*03***(+++)
3.0	57.5	45.0	25.0	500	1500	4.0	18	33	HCSC/3A305-*05***(+++)
3.3	57.5	45.0	30.0	500	1650	4.0	20	33	HCSC/3A335-*05***(+++)

Note: (1) The above are normal types, for the special types, please contact with relative person;  
 (2) "ESR","Ls" are typical values.

Outline Dimensions

1000Vd.c.(500Va.c.)									
C <sub>N</sub> (μF)	W (mm)	H (mm)	T (mm)	dv/dt (V/μs)	I <sup>∧</sup> (A)	ESR @100kHz	I <sub>max</sub> (A)	L <sub>s</sub> (nH)	Ordering Information
4.0	57.5	45.0	30.0	500	2000	4.0	21	33	HCSC/3A405-*05***(+++)
4.7	57.5	50.0	35.0	500	2350	4.0	22	33	HCSC/3A475-*05***(+++)
5.0	57.5	50.0	35.0	500	2500	4.0	23	33	HCSC/3A505-*05***(+++)
5.6	57.5	55.0	45.0	500	2800	4.0	24	33	HCSC/3A565-*05***(+++)
1200Vd.c.(600Va.c.)									
C <sub>N</sub> (μF)	W (mm)	H (mm)	T (mm)	dv/dt (V/μs)	I <sup>∧</sup> (A)	ESR @100kHz	I <sub>max</sub> (A)	L <sub>s</sub> (nH)	Ordering Information
0.33	37.0	25.0	15.0	1500	495	4.5	9	23	HCSC/3L334-*02***(+++)
0.47	37.0	30.0	16.0	1500	705	4.5	11	23	HCSC/3L474-*02***(+++)
0.68	37.0	34.0	20.0	1500	1020	4.5	12.5	23	HCSC/3L684-*02***(+++)
0.75	37.0	34.0	20.0	1500	1125	4.5	13	23	HCSC/3L754-*02***(+++)
0.82	42.0	40.0	20.0	950	779	4.0	14.5	29	HCSC/3L824-*03***(+++)
1.0	42.0	40.0	20.0	950	950	4.0	16	29	HCSC/3L105-*03***(+++)
1.2	42.0	44.0	24.0	950	1140	4.0	19	29	HCSC/3L125-*03***(+++)
1.5	42.0	44.0	24.0	950	1425	4.0	19.5	29	HCSC/3L155-*03***(+++)
2.0	42.0	45.0	30.0	950	1900	4.0	20	29	HCSC/3L205-*03***(+++)
2.2	42.0	46.0	35.0	950	2090	4.0	21	29	HCSC/3L225-*03***(+++)
2.2	57.5	45.0	30.0	600	1320	3.8	20	33	HCSC/3L225-*05***(+++)
2.5	57.5	45.0	30.0	600	1500	3.8	21	33	HCSC/3L255-*05***(+++)
3.0	57.5	45.0	30.0	600	1800	3.8	22	33	HCSC/3L305-*05***(+++)
3.3	57.5	50.0	35.0	600	1980	3.8	23	33	HCSC/3L335-*05***(+++)
4.0	57.5	50.0	35.0	600	2400	3.8	24	33	HCSC/3L405-*05***(+++)
1600Vd.c.(650Va.c.)									
C <sub>N</sub> (μF)	W (mm)	H (mm)	T (mm)	dv/dt (V/μs)	I <sup>∧</sup> (A)	ESR @100kHz	I <sub>max</sub> (A)	L <sub>s</sub> (nH)	Ordering Information
0.22	37.0	25.0	15.0	1900	418	6.0	8	23	HCSC/3C224-*02***(+++)
0.33	37.0	30.0	16.0	1900	627	6.0	10	23	HCSC/3C334-*02***(+++)
0.39	37.0	34.0	20.0	1900	741	5.5	12	23	HCSC/3C394-*02***(+++)
0.47	37.0	34.0	20.0	1900	893	5.5	14	23	HCSC/3C474-*02***(+++)
0.68	42.0	40.0	20.0	1250	850	4.0	16	29	HCSC/3C684-*03***(+++)

Note: (1) The above are normal types, for the special types, please contact with relative person;  
 (2) "ESR", "Ls" are typical values.

Outline Dimensions

1600Vd.c.(650Va.c.)									
C <sub>N</sub> (μF)	W (mm)	H (mm)	T (mm)	dv/dt (V/μs)	İ (A)	ESR @100kHz	I <sub>max</sub> (A)	L <sub>s</sub> (nH)	Ordering Information
0.82	42.0	44.0	24.0	1250	1025	4.0	19	29	HCSC/3C824-*03***(+++)
1.0	42.0	45.0	30.0	1250	1250	4.0	19.5	29	HCSC/3C105-*03***(+++)
1.2	42.0	45.0	30.0	1250	1500	4.0	20	29	HCSC/3C125-*03***(+++)
1.5	42.0	43.0	42.0	1250	1875	4.0	21	29	HCSC/3C155-*03***(+++)
1.5	57.5	45.0	25.0	750	1125	3.5	22	33	HCSC/3C155-*05***(+++)
2.0	57.5	50.0	35.0	750	1500	3.5	24	33	HCSC/3C205-*05***(+++)
2.5	57.5	50.0	35.0	750	1875	3.5	30	33	HCSC/3C255-*05***(+++)
1700Vd.c.(675Va.c.)									
C <sub>N</sub> (μF)	W (mm)	H (mm)	T (mm)	dv/dt (V/μs)	İ (A)	ESR @100kHz	I <sub>max</sub> (A)	L <sub>s</sub> (nH)	Ordering Information
0.15	37.0	25.0	15.0	2000	300	7.0	7	23	HCSC/7M154-*02***(+++)
0.22	37.0	30.0	16.0	2000	440	6.0	9	23	HCSC/7M224-*02***(+++)
0.33	37.0	34.0	20.0	2000	660	5.5	11.5	23	HCSC/7M334-*02***(+++)
0.39	37.0	34.0	20.0	2000	780	5.5	13	23	HCSC/7M394-*02***(+++)
0.47	42.0	36.0	24.0	1260	592	4.0	14	29	HCSC/7M474-*03***(+++)
0.56	42.0	36.0	24.0	1260	706	4.0	15.5	29	HCSC/7M564-*03***(+++)
0.68	42.0	44.0	24.0	1260	857	3.5	18	29	HCSC/7M684-*03***(+++)
0.82	42.0	44.0	24.0	1260	1033	3.5	19	29	HCSC/7M824-*03***(+++)
1.0	42.0	45.0	30.0	1260	1260	3.5	20	29	HCSC/7M105-*03***(+++)
1.0	57.5	45.0	25.0	780	780	3.5	18	33	HCSC/7M105-*05***(+++)
1.2	57.5	45.0	30.0	780	936	3.5	19	33	HCSC/7M125-*05***(+++)
1.5	57.5	45.0	30.0	780	1170	3.0	22	33	HCSC/7M155-*05***(+++)
2.0	57.5	50.0	35.0	780	1560	3.0	24	33	HCSC/7M205-*05***(+++)
2.5	57.5	55.0	45.0	780	1950	3.0	25	33	HCSC/7M255-*05***(+++)
3.0	57.5	55.0	45.0	780	2340	3.0	28	33	HCSC/7M305-*05***(+++)

Note: (1) The above are normal types, for the special types, please contact with relative person;  
 (2) "ESR", "Ls" are typical values.



Outline Dimensions

2000Vd.c.(700Va.c.)									
C <sub>N</sub> (μF)	W (mm)	H (mm)	T (mm)	dv/dt (V/μs)	Î (A)	ESR @100kHz	I <sub>max</sub> (A)	L <sub>s</sub> (nH)	Ordering Information
0.10	37.0	25.0	15.0	2241	224.1	8.0	7	23	HCSC/3D104-*02***(+++)
0.15	37.0	25.0	15.0	2241	336.15	8.0	8.5	23	HCSC/3D154-*02***(+++)
0.22	37.0	30.0	16.0	2241	493.02	6.0	10	23	HCSC/3D224-*02***(+++)
0.33	37.0	34.0	20.0	2241	739.53	6.0	13	23	HCSC/3D334-*02***(+++)
0.47	42.0	40.0	20.0	1300	611	4.0	15.5	29	HCSC/3D474-*03***(+++)
0.56	42.0	44.0	24.0	1300	728	4.0	18	29	HCSC/3D564-*03***(+++)
0.68	42.0	44.0	24.0	1300	884	3.5	18.5	29	HCSC/3D684-*03***(+++)
0.82	42.0	45.0	30.0	1300	1066	3.5	19	29	HCSC/3D824-*03***(+++)
1.0	42.0	50.0	35.0	1300	1300	3.5	21	29	HCSC/3D105-*03***(+++)
1.0	57.5	45.0	30.0	850	850	4.0	24	33	HCSC/3D105-*05***(+++)
1.2	57.5	45.0	30.0	850	1020	4.0	23	33	HCSC/3D125-*05***(+++)
1.5	57.5	50.0	35.0	850	1275	4.0	24	33	HCSC/3D155-*05***(+++)
2.0	57.5	55.0	45.0	850	1700	4.0	28	33	HCSC/3D205-*05***(+++)
2500Vd.c.(725Va.c.)									
C <sub>N</sub> (μF)	W (mm)	H (mm)	T (mm)	dv/dt (V/μs)	Î (A)	ESR @100kHz	I <sub>max</sub> (A)	L <sub>s</sub> (nH)	Ordering Information
0.068	37.0	25.0	15.0	3230	220	8.5	6.5	23	HCSC/3E683-*02***(+++)
0.10	37.0	30.0	16.0	3230	323	8.5	8	23	HCSC/3E104-*02***(+++)
0.15	37.0	34.0	20.0	3230	485	8.0	11	23	HCSC/3E154-*02***(+++)
0.18	37.0	34.0	20.0	3230	581	7.5	12.5	23	HCSC/3E184-*02***(+++)
0.22	42.0	40.0	20.0	2100	462	4.0	14	29	HCSC/3E224-*03***(+++)
0.33	42.0	44.0	24.0	2100	693	4.0	15.5	29	HCSC/3E334-*03***(+++)
0.47	42.0	45.0	30.0	2100	987	3.5	18	29	HCSC/3E474-*03***(+++)
0.68	42.0	50.0	35.0	2100	1428	3.5	18.5	29	HCSC/3E684-*03***(+++)
0.68	57.5	45.0	30.0	1200	816	3.5	19	33	HCSC/3E684-*05***(+++)
1.0	57.5	50.0	35.0	1200	1200	3.5	19.5	33	HCSC/3E105-*05***(+++)

Note: (1) The above are normal types, for the special types, please contact with relative person;  
 (2) "ESR", "Ls" are typical values.

# HCAA

AC filter capacitor (Dry-type)



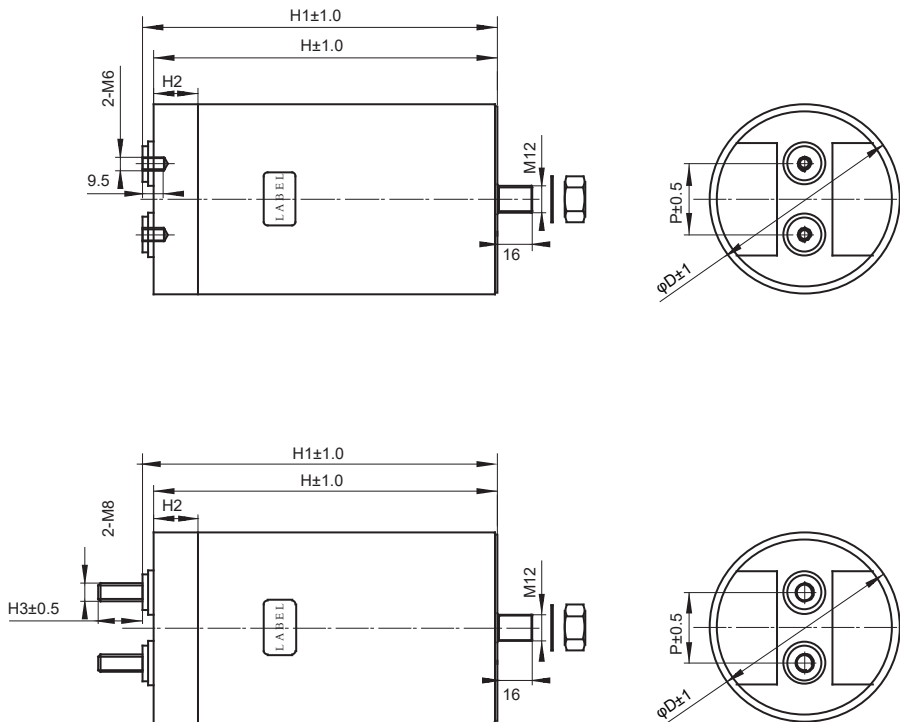
## Features

- Particularly suit for AC filter circuit in power electric equipment
- Low ESR and ESL, have ability to withstand high r.m.s current and high peak voltage
- Self-healing property
- Excellent stable performance and reliability
- Dry type design, installation is more flexible

## Safety Approvals

	UL/CUL	UL810 CSA C22.2 NO.190	15µF-600µF,max 690Va.c. max 90°C File No.: E222132,CCN:CZDS2/8
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## Outline Drawing



Note: The dimensions of the product are in mm units.  
 Outline dimensions can be found in the Product Dimensions Table.

## Specifications

Reference standard		GB/T 17702 (IEC 61071)
Rated RMS voltage ( $U_{rms}$ )		250Va.c.~600Va.c.
Rated frequency ( $f_N$ )		50/60Hz
Operating Temperature Range		-40°C ~ 85°C ( $\Theta_{hs} \leq 85^\circ\text{C}$ )
Climate category		40/70/56
Capacitance tolerance		$\pm 5\%$ (J), $\pm 10\%$ (K)
Voltage Proof	Between terminals	$2.15U_{rms}$ or $1.5U_N$ (10s, $20^\circ\text{C} \pm 5^\circ\text{C}$ )
	Between terminals and case	3000Va.c. (10s, 50Hz, $20^\circ\text{C} \pm 5^\circ\text{C}$ )
Insulation resistance( $IR \times C_N$ )		$\geq 3000s$ ( $20^\circ\text{C}$ , 500Vdc, 60s)
$\tan\delta_d$		0.0002
$\tan\delta$		$\leq 0.0045$ (1kHz, $20^\circ\text{C} \pm 5^\circ\text{C}$ )
Max. Altitude		2000m
Max. Torque of terminals		M6:5N.m M8:6N.m
Installation		Any Position
Expected lifetime		60,000h@ $U_{rms}$ , $\Theta_{hs} \leq 70^\circ\text{C}$

## Ordering Information

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
H	C	A	A	/															(	x	x	x	)
<b>Series code</b>					<b>Rated voltage</b>		<b>Rated capacitance value</b>		<b>Capacitance tolerance</b>		<b>Outline dimension code</b>		<b>Terminal code</b>		<b>Internal code</b>		<b>Special code</b>						
					E2=250V Q1=300V R2=350V S2=450V H2=500V U1=600V		For example: 5004=500×10 <sup>4</sup> pF =5μF		J=±5% K=±10%		See table 1		See table 2		0=(Standard part)		To identify when the special requirements needed						

**Table 1: Outline Dimension Code**

Code	ΦD	Code	*h	H
1	76	1	55	75
2	86	3	80	100
3	96	6	100	120
4	106	7	116	136
□	□	A	135	155
□	□	B	145	165

**Table 2: Outline Dimension Code**

Digit 15		Digit 16		Digit 17		Digit 18	
Code	Terminal form	Code	Fixed style	Code	Length of lead wire	Code	Terminal specification
M	Bolt	1	Bottom-bolt M12 (D≤96)	0	20mm	0	M8(P=32, D≤86)
		2	Bottom-bolt M16 (D≥106)			1	M8(P=45, D=96)
T	Screw	1	Bottom-screw M12(D≤96)	1	9.5mm	2	M8(P=50, D≥106)
			Bottom-screw M16(D≥106)			3	M6(P=32, D≤86)
		4	M6(P=45, D=96)				
						5	M6(P=50, D≥106)

**Outline Dimensions**

UN=350Va.c. Urms=250Va.c.					
CN (μF)	D (mm)	H (mm)	I <sub>max</sub> (A)	î (A)	Ordering Information
100	76	75	14	890	HCAA/E21006-11****
120	76	75	17	1070	HCAA/E21206-11****
140	76	75	20	1250	HCAA/E21406-11****
150	76	100	32	1920	HCAA/E21506-13****
200	76	100	42	2560	HCAA/E22006-13****
250	76	100	53	3210	HCAA/E22506-13****
300	86	136	44	2690	HCAA/E23006-27****
350	86	136	52	3140	HCAA/E23506-27****
400	86	155	49	2990	HCAA/E24006-2A****
450	96	136	67	4040	HCAA/E24506-37****

Note: (1) “-”=capacitance tolerance code, J=±5%,K=±10%;  
 (2) “\*\*\*\*”=terminal code(see table 2)

Outline Dimensions

U <sub>N</sub> =350Va.c. U <sub>rms</sub> =250Va.c.					
C <sub>N</sub> (μF)	D (mm)	H (mm)	I <sub>max</sub> (A)	Î (A)	Ordering Information
500	96	155	62	3740	HCAA/E25006-3A****
550	96	155	68	4110	HCAA/E25506-3A****
600	96	155	66	3980	HCAA/E26006-3A****
U <sub>N</sub> =420Va.c. U <sub>rms</sub> =300Va.c.					
C <sub>N</sub> (μF)	D (mm)	H (mm)	I <sub>max</sub> (A)	Î (A)	Ordering Information
80	76	75	14	860	HCAA/Q18005-11****
90	76	75	16	970	HCAA/Q19005-11****
100	76	100	25	1540	HCAA/Q11006-13****
120	76	100	30	1840	HCAA/Q11206-13****
150	86	100	38	2310	HCAA/Q11506-23****
200	86	136	35	2150	HCAA/Q12006-27****
250	86	136	44	2690	HCAA/Q12506-27****
300	96	136	53	3230	HCAA/Q13006-37****
350	96	155	52	3140	HCAA/Q13506-3A****
400	96	165	55	3310	HCAA/Q14006-3B****
U <sub>N</sub> =490Va.c. U <sub>rms</sub> =350Va.c.					
C <sub>N</sub> (μF)	D (mm)	H (mm)	I <sub>max</sub> (A)	Î (A)	Ordering Information
80	76	75	15	930	HCAA/R28005-11****
100	86	75	19	1160	HCAA/R21006-21****
150	86	100	40	2450	HCAA/R21506-23****
200	86	136	38	2330	HCAA/R22006-27****
250	86	155	40	2430	HCAA/R22506-2A****
260	96	136	50	3030	HCAA/R22606-37****
300	96	155	48	2920	HCAA/R23006-3A****
350	96	165	52	3140	HCAA/R23506-3B****

Note: (1) "-"=capacitance tolerance code, J=±5%,K=±10%;  
 (2) "\*\*\*\*" =terminal code(see table 2)

Outline Dimensions

UN=630Va.c. Urms=450Va.c.					
C <sub>N</sub> (μF)	D (mm)	H (mm)	I <sub>max</sub> (A)	Î (A)	Ordering Information
60	76	75	12	750	HCAA/S26005-11****
70	76	75	14	880	HCAA/S27005-11****
100	76	100	29	1790	HCAA/S21006-13****
150	86	120	34	2090	HCAA/S21506-26****
200	86	155	34	2090	HCAA/S22006-2A****
220	96	136	46	2760	HCAA/S22206-37****
270	96	155	47	2830	HCAA/S22706-3A****
300	96	165	48	2900	HCAA/S23006-3B****
UN=700Va.c. Urms=500Va.c.					
C <sub>N</sub> (μF)	D (mm)	H (mm)	I <sub>max</sub> (A)	Î (A)	Ordering Information
50	76	75	11	710	HCAA/H25005-11****
70	76	100	23	1430	HCAA/H27005-13****
100	86	100	34	2050	HCAA/H21006-23****
140	86	136	33	2010	HCAA/H21406-27****
160	86	155	31	1910	HCAA/H21606-2A****
200	96	155	39	2390	HCAA/H22006-3A****
220	96	155	40	2430	HCAA/H22206-3A****
UN=840Va.c. Urms=600Va.c.					
C <sub>N</sub> (μF)	D (mm)	H (mm)	I <sub>max</sub> (A)	Î (A)	Ordering Information
20	76	75	9	1100	HCAA/U12005-11****
40	76	120	18	2200	HCAA/U14005-16****
30	86	75	13	1650	HCAA/U13005-21****
60	86	120	27	3300	HCAA/U16005-26****
90	86	165	27	3330	HCAA/U19005-2B****
75	96	120	34	4130	HCAA/U17505-36****
100	96	165	30	3700	HCAA/U11006-3B****
110	96	165	33	4070	HCAA/U11106-3B****

Note: (1) "-"=capacitance tolerance code, J=±5%,K=±10%;  
 (2) "\*\*\*\*" =terminal code(see table 2)

# HCAB

AC filter capacitor for PCB

## Features

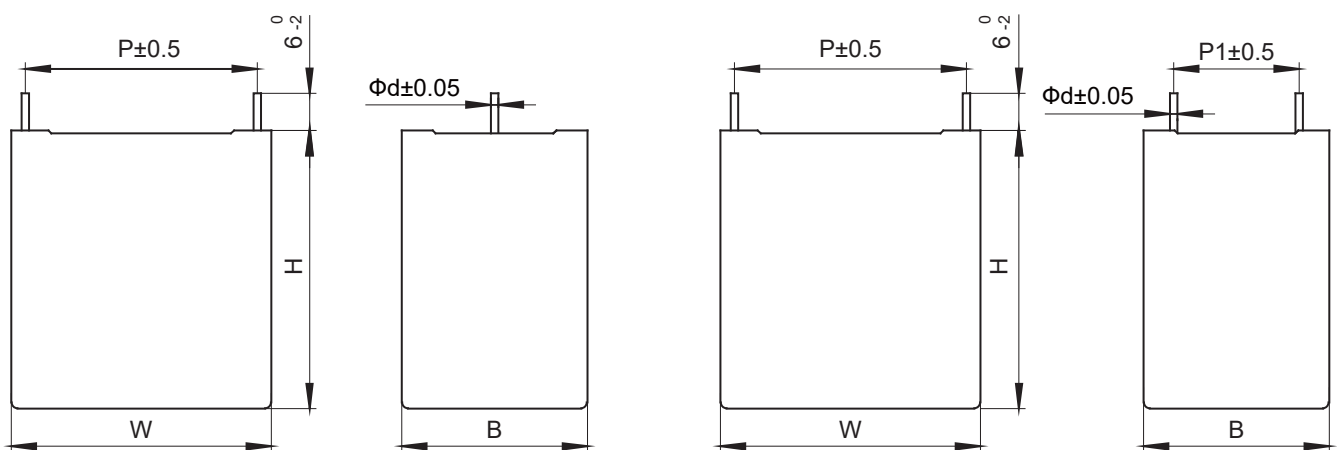
- Applied in AC filter circuits
- Metallized polypropylene film structure
- Filled with resin
- Excellent electrical performance



## Safety Approvals

	TUV	EN 61071:2017	0.33µF-60µF,±5%,±10%,250Va.c.-600Va.c. 40/85/56,40/105/56 File No.: R 50516396
	UL/CUL	UL810 CSA C22.2 NO.190	0.22µF-60µF,max 660Va.c. max 105°C File No.: E222132,CCN:CZDS2/8

## Outline Drawing



2pins

4pins

Note: The dimensions of the product are in mm units.  
Outline dimensions can be found in the Product Dimensions Table.

## Specifications

Reference Standard	GB/T 17702 (IEC 61071)
Rated RMS Voltage @85°C	250Va.c.~600Va.c.
Capacitance Range	0.33μF~60μF
Climatic Category	40/85/56,40/105/56
Operating temperature	-40°C~105°C(85°C~105°C: decreasing factor 1.5% per 1°C for U <sub>N</sub> )
Capacitance Tolerance	±5%(J),±10%(K)
Voltage Proof	2.15U <sub>rms</sub> or 1.5U <sub>N</sub> (10s, 20°C±5°C)
Insulation resistance (IR×C <sub>N</sub> )	≥3000s (20°C,100Vd.c.,60s)
Self inductance (L <sub>s</sub> )	<1nH per mm of lead space
tanδ <sub>d</sub>	0.0002
Maximum peak current $\hat{I}$ (A)	$\hat{I}=C \cdot dv/dt$
Peak Non-Repetitive Current	1.4 $\hat{I}$ (1000 times is permitted during the life of the capacitor)
Expected lifetime	100000h@U <sub>rms,85°C,Θ<sub>hs</sub></sub> =85°C
	8000h@U <sub>N,105°C,Θ<sub>hs</sub></sub> =105°C
Failure rate	≤300FIT@U <sub>rms,85°C,Θ<sub>hs</sub></sub> =85°C

## Ordering Information

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
H	C	A	B	/												(	x	x	x	)
<b>Series code</b>				<b>AC rated voltage</b>		<b>Rated capacitance value</b>		<b>Capacitance tolerance</b>		<b>Pitch</b>	<b>Lead Form</b>		<b>Diameter</b>		<b>Internal code</b>	<b>Special code</b>				
				E2=250V Q3=310V R2=350V G2=400V H2=500V U1=600V		For example: 5004=500×10 <sup>4</sup> pF =5μF		J=±5% K=±10%		B=27.5 F=37.5 M=52.5	2: 2pins 4: 4pins		1=0.8mm 2=1.0mm 3=1.2mm		0=Standard part  To identify when the special requirements needed					



Outline Dimensions

U <sub>N</sub> =350V U <sub>rms</sub> =250V											
C <sub>N</sub> (μF)	W±1 (mm)	H±1 (mm)	B±1 (mm)	P (mm)	P1 (mm)	d±0.05 (mm)	ESR @10kHz	dv/dt (V/μs)	I <sub>max</sub> (A)	Ī (A)	Ordering Information
1	32	18	9	27.5	-	0.8	26.5	40	4.2	40	HCAB/E21004*B210
1.5	32	20	11	27.5	-	0.8	18.5	40	5.3	60	HCAB/E21504*B210
2	32	22	13	27.5	-	0.8	14.6	40	6.3	80	HCAB/E22004*B210
2.5	32	25	13	27.5	-	0.8	12.5	40	7.1	100	HCAB/E22504*B210
3	32	28	14	27.5	-	0.8	11.1	40	7.8	120	HCAB/E23004*B210
3.5	32	28	14	27.5	-	0.8	9.9	40	8.2	140	HCAB/E23504*B210
3	32	24	15	27.5	-	0.8	10.8	40	8.3	120	HCAB/E23004*B210
4	32	30	16	27.5	-	0.8	9.2	40	9.4	160	HCAB/E24004*B210
4.5	32	33	18	27.5	-	0.8	8.8	40	9.8	180	HCAB/E24504*B210
5	32	33	18	27.5	-	0.8	8.3	40	10.2	200	HCAB/E25004*B210
5.5	32	33	18	27.5	-	1	6.9	40	11.0	220	HCAB/E25504*B220
6	32	37	22	27.5	-	1.2	6.2	40	13.3	240	HCAB/E26004*B230
6.5	32	37	22	27.5	-	1.2	5.8	40	13.7	260	HCAB/E26504*B230
7	32	37	22	27.5	-	1.2	5.6	40	14.0	280	HCAB/E27004*B230
7.5	32	37	22	27.5	-	1.2	5.4	40	14.3	300	HCAB/E27504*B230
8	42	33	18	37.5	-	1.2	8.1	30	11.8	240	HCAB/E28004*F230
8.5	42	40	20	37.5	-	1.2	8.0	30	12.5	255	HCAB/E28504*F230
8.5	42	40	20	37.5	10.2	1	6.5	30	13.7	255	HCAB/E28504*F420
9	42	40	20	37.5	-	1.2	7.7	30	12.7	270	HCAB/E29004*F230
9	42	40	20	37.5	10.2	1	6.2	30	14.0	270	HCAB/E29004*F420
10	42	40	20	37.5	-	1.2	7.2	30	13.2	300	HCAB/E21005*F230
10	42	40	20	37.5	10.2	1	5.6	30	14.6	300	HCAB/E21005*F420
11	42	44	24	37.5	-	1.2	6.9	30	14.7	330	HCAB/E21105*F230
11	42	44	24	37.5	10.2	1	5.2	30	16.6	330	HCAB/E21105*F420
12	42	44	24	37.5	10.2	1.2	4.7	30	17.4	360	HCAB/E21205*F430
12	42	44	24	37.5	10.2	1	4.9	30	17.2	360	HCAB/E21205*F420
13	42	44	24	37.5	10.2	1	4.5	30	17.7	390	HCAB/E21305*F420
14	42	44	24	37.5	10.2	1.2	4.1	30	18.5	420	HCAB/E21405*F430
14	42	37	28	37.5	10.2	1.2	4.0	30	18.0	420	HCAB/E21405*F430
15	42	44	24	37.5	10.2	1.2	3.9	30	19.0	450	HCAB/E21505*F430

Note: (1) "-"=capacitance tolerance code, J=±5%,K=±10%;  
 (2) "I<sub>max</sub>" is the max. current effective value@f=10kHz Θ<sub>amb</sub>=55°C,ΔT ≤30°C.

Outline Dimensions

UN=350V Urms=250V											
C <sub>N</sub> (μF)	W±1 (mm)	H±1 (mm)	B±1 (mm)	P (mm)	P1 (mm)	d±0.05 (mm)	ESR @10kHz	dv/dt (V/μs)	I <sub>max</sub> (A)	Ĥ (A)	Ordering Information
16	42	45	30	37.5	10.2	1.2	3.7	30	20.1	480	HCAB/E21605*F430
18	42	45	30	37.5	10.2	1.2	3.3	30	21.0	540	HCAB/E21805*F430
20	42	45	30	37.5	10.2	1.2	3.1	30	21.8	600	HCAB/E22005*F430
22	42	50	35	37.5	20.3	1.2	2.9	30	25.4	660	HCAB/E22205*F430
25	42	50	35	37.5	20.3	1.2	2.6	30	26.4	750	HCAB/E22505*F430
28	42	55	40	37.5	20.3	1.2	2.5	30	30.1	840	HCAB/E22805*F430
30	42	55	40	37.5	20.3	1.2	2.4	30	30.7	900	HCAB/E23005*F430
32	42	55	40	37.5	20.3	1.2	2.3	30	31.2	960	HCAB/E23205*F430
35	42	60	45	37.5	20.3	1.2	2.2	30	31.6	1050	HCAB/E23505*F430
40	42	60	45	37.5	20.3	1.2	2.0	30	32.6	1200	HCAB/E24005*F430
24	57.5	45	25	52.5	10.2	1.2	4.9	18	18.3	432	HCAB/E22405*M430
25	57.5	45	30	52.5	20.3	1.2	4.7	18	20.3	450	HCAB/E22505*M430
28	57.5	45	30	52.5	20.3	1.2	4.3	18	21.2	504	HCAB/E22805*M430
30	57.5	50	35	52.5	20.3	1.2	4.1	18	24.0	540	HCAB/E23005*M430
35	57.5	50	35	52.5	20.3	1.2	3.6	18	25.2	630	HCAB/E23505*M430
40	57.5	55	45	52.5	20.3	1.2	3.3	18	29.7	720	HCAB/E24005*M430
45	57.5	55	45	52.5	20.3	1.2	3.0	18	30.8	810	HCAB/E24505*M430
50	57.5	55	45	52.5	20.3	1.2	2.8	18	31.6	900	HCAB/E25005*M430
55	57.5	55	45	52.5	20.3	1.2	2.6	18	32.4	990	HCAB/E25505*M430
60	57.5	65	45	52.5	20.3	1.2	2.5	18	35.3	1080	HCAB/E26005*M430
UN=435V Urms=310V											
C <sub>N</sub> (μF)	W±1 (mm)	H±1 (mm)	B±1 (mm)	P (mm)	P1 (mm)	d±0.05 (mm)	ESR @10kHz	dv/dt (V/μs)	I <sub>max</sub> (A)	Ĥ (A)	Ordering Information
0.68	32	18	9	27.5	-	0.8	31.8	45	3.7	30	HCAB/Q36803*B210
1	32	20	11	27.5	-	0.8	22.5	45	4.7	45	HCAB/Q31004*B210
1.5	32	22	13	27.5	-	0.8	16.0	45	5.9	67	HCAB/Q31504*B210
2	32	25	13	27.5	-	0.8	12.9	45	6.8	90	HCAB/Q32004*B210
2.3	32	28	14	27.5	-	0.8	11.8	45	7.3	103	HCAB/Q32304*B210
2.5	32	30	16	27.5	-	0.8	11.2	45	8.2	112	HCAB/Q32504*B210
3	32	33	18	27.5	-	0.8	10.1	45	8.9	135	HCAB/Q33004*B210

Note: (1) "-"=capacitance tolerance code, J=±5%,K=±10%;  
 (2) "I<sub>max</sub>" is the max. current effective value@f=10kHz Θamb=55°C,ΔT ≤30°C.

Outline Dimensions

U <sub>N</sub> =435V U <sub>rms</sub> =310V											
C <sub>N</sub> (μF)	W±1 (mm)	H±1 (mm)	B±1 (mm)	P (mm)	P1 (mm)	d±0.05 (mm)	ESR @10kHz	dv/dt (V/μs)	I <sub>max</sub> (A)	Î (A)	Ordering Information
3.5	32	33	18	27.5	-	0.8	9.2	45	9.3	157	HCAB/Q33504*B210
4	32	37	22	27.5	-	1.2	7.2	45	11.9	180	HCAB/Q34004*B230
4.5	32	37	22	27.5	-	1.2	6.6	45	12.4	202	HCAB/Q34504*B230
5	32	37	22	27.5	-	1.2	6.2	45	12.9	225	HCAB/Q35004*B230
5.5	42	33	18	37.5	-	1.2	9.4	34	10.7	187	HCAB/Q35504*F230
6	42	40	20	37.5	-	1.2	9.1	34	11.5	204	HCAB/Q36004*F230
6	42	40	20	37.5	10.2	1	7.5	34	12.4	204	HCAB/Q36004*F420
7	42	40	20	37.5	-	1.2	8.1	34	12.1	238	HCAB/Q37004*F230
7	42	40	20	37.5	10.2	1	6.5	34	13.3	238	HCAB/Q37004*F420
8	42	44	24	37.5	-	1.2	7.5	34	13.8	272	HCAB/Q38004*F230
8	42	44	24	37.5	10.2	1	5.9	34	15.3	272	HCAB/Q38004*F420
9	42	44	24	37.5	-	1.2	7.0	34	14.3	306	HCAB/Q39004*F230
9	42	44	24	37.5	10.2	1	5.3	34	16.0	306	HCAB/Q39004*F420
10	42	44	24	37.5	-	1.2	6.5	34	14.7	340	HCAB/Q31005*F230
10	42	44	24	37.5	10.2	1	4.9	34	16.7	340	HCAB/Q31005*F420
10	42	37	28	37.5	10.2	1	4.8	34	16.2	340	HCAB/Q31005*F420
12	42	45	30	37.5	20.3	1.2	4.0	34	18.8	408	HCAB/Q31205*F430
15	42	50	35	37.5	20.3	1.2	3.4	34	22.9	510	HCAB/Q31505*F430
18	42	50	35	37.5	20.3	1.2	2.9	34	24.4	612	HCAB/Q31805*F430
20	42	55	40	37.5	20.3	1.2	2.8	34	27.8	680	HCAB/Q32005*F430
22	42	55	40	37.5	20.3	1.2	2.6	34	28.6	748	HCAB/Q32205*F430
25	42	60	45	37.5	20.3	1.2	2.4	34	29.3	850	HCAB/Q32505*F430
28	42	60	45	37.5	20.3	1.2	2.2	34	30.1	952	HCAB/Q32805*F430
20	57.5	45	30	52.5	20.3	1.2	4.9	24	19.4	480	HCAB/Q32005*M430
25	57.5	50	35	52.5	20.3	1.2	4.1	24	23.2	600	HCAB/Q32505*M430
30	57.5	55	45	52.5	20.3	1.2	3.6	24	28.0	720	HCAB/Q33005*M430
35	57.5	55	45	52.5	20.3	1.2	3.2	24	29.2	840	HCAB/Q33505*M430
40	57.5	65	45	52.5	20.3	1.2	3.0	24	32.3	960	HCAB/Q34005*M430
45	57.5	65	45	52.5	20.3	1.2	2.7	24	33.2	1080	HCAB/Q34505*M430

Note: (1) "-"=capacitance tolerance code, J=±5%,K=±10%;  
 (2) "I<sub>max</sub>" is the max. current effective value@f=10kHz Θ<sub>amb</sub>=55°C,ΔT ≤30°C.

Outline Dimensions

U <sub>N</sub> =490V U <sub>rms</sub> =350V											
C <sub>N</sub> (μF)	W±1 (mm)	H±1 (mm)	B±1 (mm)	P (mm)	P1 (mm)	d±0.05 (mm)	ESR @10kHz	dv/dt (V/μs)	I <sub>max</sub> (A)	Î (A)	Ordering Information
0.47	32	18	9	27.5	-	0.8	16.9	125	4.1	58	HCAB/R24703*B210
0.68	32	20	11	27.5	-	0.8	12.5	125	5.0	85	HCAB/R26803*B210
1	32	25	13	27.5	-	0.8	9.7	125	6.4	125	HCAB/R21004*B210
1.5	32	28	14	27.5	-	0.8	7.6	125	7.7	187	HCAB/R21504*B210
2	32	33	18	27.5	-	1	5.9	125	9.8	250	HCAB/R22004*B220
2.2	32	33	18	27.5	-	1	5.6	125	10.1	275	HCAB/R22204*B220
2.5	32	37	22	27.5	-	1.2	4.9	125	12.4	312	HCAB/R22504*B230
3	32	37	22	27.5	-	1.2	4.4	125	13.2	375	HCAB/R23004*B230
3	32	37	22	27.5	10.2	1	3.0	125	14.6	375	HCAB/R23004*B420
3	42	33	18	37.5	10.2	1	5.6	80	12.0	240	HCAB/R23004*F420
3.5	42	33	18	37.5	10.2	1	4.9	80	12.8	280	HCAB/R23504*F420
4	42	40	20	37.5	-	1.2	6.0	80	12.9	320	HCAB/R24004*F230
4	42	40	20	37.5	10.2	1	4.5	80	14.2	320	HCAB/R24004*F420
4.5	42	40	20	37.5	10.2	1	4.0	80	14.9	360	HCAB/R24504*F420
4.5	42	40	20	37.5	-	1.2	5.6	80	13.4	360	HCAB/R24504*F230
5	42	40	20	37.5	-	1.2	5.3	80	13.9	400	HCAB/R25004*F230
5	42	40	20	37.5	10.2	1	3.7	80	15.6	400	HCAB/R25004*F420
5.5	42	44	24	37.5	10.2	1	3.5	80	17.7	440	HCAB/R25504*F420
6	42	44	24	37.5	10.2	1	3.3	80	18.3	480	HCAB/R26004*F420
6.5	42	44	24	37.5	10.2	1	3.1	80	18.8	520	HCAB/R26504*F420
6.5	42	37	28	37.5	10.2	1	3.0	80	18.4	520	HCAB/R26504*F420
7	42	45	30	37.5	20.3	1.2	2.8	80	20.4	560	HCAB/R27004*F430
8	42	45	30	37.5	20.3	1.2	2.5	80	21.4	640	HCAB/R28004*F430
9	42	45	30	37.5	20.3	1.2	2.3	80	22.3	720	HCAB/R29004*F430
10	42	46	35	37.5	20.3	1.2	2.1	80	23.1	800	HCAB/R21005*F430
12	42	50	35	37.5	20.3	1.2	1.9	80	27.6	960	HCAB/R21205*F430
15	42	55	40	37.5	20.3	1.2	1.7	80	32.4	1200	HCAB/R21505*F430
18	42	60	45	37.5	20.3	1.2	1.6	80	33.5	1440	HCAB/R21805*F430
12	57.5	45	30	52.5	20.3	1.2	3.2	55	22.8	660	HCAB/R21205*M430

Note: (1) "-"=capacitance tolerance code, J=±5%,K=±10%;  
 (2) "I<sub>max</sub>" is the max. current effective value@f=10kHz Θ<sub>amb</sub>=55°C,ΔT ≤30°C.

Outline Dimensions

UN=490V Urms=350V											
C <sub>N</sub> (μF)	W±1 (mm)	H±1 (mm)	B±1 (mm)	P (mm)	P1 (mm)	d±0.05 (mm)	ESR @10kHz	dv/dt (V/μs)	I <sub>max</sub> (A)	Ĥ (A)	Ordering Information
15	57.5	50	35	52.5	20.3	1.2	2.8	55	27.1	825	HCAB/R21505*M430
18	57.5	50	35	52.5	20.3	1.2	2.4	55	28.7	990	HCAB/R21805*M430
20	57.5	55	45	52.5	20.3	1.2	2.3	55	33.4	1100	HCAB/R22005*M430
25	57.5	55	45	52.5	20.3	1.2	2.0	55	35.4	1375	HCAB/R22505*M430
30	57.5	65	45	52.5	20.3	1.2	1.9	55	39.1	1650	HCAB/R23005*M430
UN=560V Urms=400V											
C <sub>N</sub> (μF)	W±1 (mm)	H±1 (mm)	B±1 (mm)	P (mm)	P1 (mm)	d±0.05 (mm)	ESR @10kHz	dv/dt (V/μs)	I <sub>max</sub> (A)	Ĥ (A)	Ordering Information
0.33	32	18	9	27.5	-	0.8	20.5	145	3.5	47	HCAB/G23303*B210
0.5	32	20	11	27.5	-	0.8	14.5	145	4.5	72	HCAB/G25003*B210
0.68	32	22	13	27.5	-	1	10.7	145	5.5	98	HCAB/G26803*B220
1	32	28	14	27.5	-	1	8.2	145	6.8	145	HCAB/G21004*B220
1.5	32	33	18	27.5	-	1.2	6.0	145	9.1	217	HCAB/G21504*B230
2	32	37	22	27.5	-	1.2	5.1	145	11.5	290	HCAB/G22004*B230
2.2	32	37	22	27.5	-	1.2	3.4	145	13.0	319	HCAB/G22204*B230
2.5	32	37	22	27.5	-	1.2	3.1	145	13.7	362	HCAB/G22504*B230
2.5	42	33	18	37.5	10.2	1	5.9	90	11.4	225	HCAB/G22504*F420
3	42	40	20	37.5	10.2	1	5.1	90	12.9	270	HCAB/G23004*F420
3.3	42	40	20	37.5	10.2	1	4.7	90	13.5	297	HCAB/G23304*F420
3.5	42	40	20	37.5	10.2	1	4.5	90	13.8	315	HCAB/G23504*F420
4	42	44	24	37.5	10.2	1.2	3.9	90	16.1	360	HCAB/G24004*F430
4.5	42	44	24	37.5	10.2	1.2	3.5	90	16.9	405	HCAB/G24504*F430
5	42	44	24	37.5	10.2	1.2	3.2	90	17.6	450	HCAB/G25004*F430
5	42	37	28	37.5	10.2	1.2	3.2	90	17.2	450	HCAB/G25004*F430
5.5	42	45	30	37.5	20.3	1.2	3.0	90	19.0	495	HCAB/G25504*F430
6	42	45	30	37.5	20.3	1.2	2.8	90	19.6	540	HCAB/G26004*F430
6.5	42	45	30	37.5	20.3	1.2	2.6	90	20.2	585	HCAB/G26504*F430
7	42	45	30	37.5	20.3	1.2	2.5	90	20.7	630	HCAB/G27004*F430
8	42	46	35	37.5	20.3	1.2	2.3	90	21.7	720	HCAB/G28004*F430
9	42	50	35	37.5	20.3	1.2	2.1	90	25.4	810	HCAB/G29004*F430

Note: (1) “-”=capacitance tolerance code, J=±5%,K=±10%;  
 (2) “I<sub>max</sub>” is the max. current effective value@f=10kHz Θamb=55°C,ΔT ≤30°C.

Outline Dimensions

UN=560V U <sub>rms</sub> =400V											
C <sub>N</sub> (μF)	W±1 (mm)	H±1 (mm)	B±1 (mm)	P (mm)	P1 (mm)	d±0.05 (mm)	ESR @10kHz	dv/dt (V/μs)	I <sub>max</sub> (A)	Ĵ (A)	Ordering Information
10	42	55	40	37.5	20.3	1.2	2.0	90	29.0	900	HCAB/G21005*F430
12	42	60	45	37.5	20.3	1.2	1.9	90	30.3	1080	HCAB/G21205*F430
14	42	60	45	37.5	20.3	1.2	1.7	90	31.5	1260	HCAB/G21405*F430
10	57.5	45	30	52.5	20.3	1.2	3.4	60	21.8	600	HCAB/G21005*M430
12	57.5	50	35	52.5	20.3	1.2	3.0	60	25.7	720	HCAB/G21205*M430
14	57.5	50	35	52.5	20.3	1.2	2.6	60	26.9	840	HCAB/G21405*M430
15	57.5	55	45	52.5	20.3	1.2	2.6	60	31.1	900	HCAB/G21505*M430
18	57.5	55	45	52.5	20.3	1.2	2.3	60	32.8	1080	HCAB/G21805*M430
20	57.5	55	45	52.5	20.3	1.2	2.1	60	33.7	1200	HCAB/G22005*M430
UN=700V U <sub>rms</sub> =500V											
C <sub>N</sub> (μF)	W±1 (mm)	H±1 (mm)	B±1 (mm)	P (mm)	P1 (mm)	d±0.05 (mm)	ESR @10kHz	dv/dt (V/μs)	I <sub>max</sub> (A)	Ĵ (A)	Ordering Information
0.33	32	20	11	27.5	-	0.8	15.6	180	3.8	59	HCAB/H23303*B210
0.5	32	25	13	27.5	-	0.8	11.5	180	5.0	90	HCAB/H25003*B210
1	32	33	18	27.5	-	1	6.9	180	7.8	180	HCAB/H21004*B220
1.5	32	37	22	27.5	-	1.2	5.0	180	10.7	270	HCAB/H21504*B230
1.5	42	33	18	37.5	-	1.2	8.5	110	9.2	165	HCAB/H21504*F230
2	42	40	20	37.5	10.2	1.2	5.5	110	11.5	220	HCAB/H22004*F430
2.2	42	40	20	37.5	10.2	1.2	5.0	110	12.0	242	HCAB/H22204*F430
2.5	42	44	24	37.5	10.2	1.2	4.5	110	13.9	275	HCAB/H22504*F430
3	42	44	24	37.5	10.2	1.2	3.9	110	15.0	330	HCAB/H23004*F430
3	42	37	28	37.5	10.2	1.2	3.8	110	14.6	330	HCAB/H23004*F430
3.5	42	45	30	37.5	20.3	1.2	3.4	110	16.5	385	HCAB/H23504*F430
4	42	45	30	37.5	20.3	1.2	3.1	110	17.4	440	HCAB/H24004*F430
4.5	42	46	35	37.5	20.3	1.2	2.8	110	18.2	495	HCAB/H24504*F430
5	42	46	35	37.5	20.3	1.2	2.6	110	18.9	550	HCAB/H25004*F430
5.5	42	50	35	37.5	20.3	1.2	2.5	110	22.1	605	HCAB/H25504*F430
6	42	55	40	37.5	20.3	1.2	2.4	110	25.1	660	HCAB/H26004*F430
6.5	42	55	40	37.5	20.3	1.2	2.2	110	25.8	715	HCAB/H26504*F430
7	42	55	40	37.5	20.3	1.2	2.1	110	26.5	770	HCAB/H27004*F430

Note: (1) "-"=capacitance tolerance code, J=±5%,K=±10%;  
 (2) "I<sub>max</sub>" is the max. current effective value@f=10kHz Θamb=55°C,ΔT ≤30°C.

Outline Dimensions

UN=700V U <sub>rms</sub> =500V											
C <sub>N</sub> (μF)	W±1 (mm)	H±1 (mm)	B±1 (mm)	P (mm)	P1 (mm)	d±0.05 (mm)	ESR @10kHz	dv/dt (V/μs)	I <sub>max</sub> (A)	Ĥ (A)	Ordering Information
8	42	60	45	37.5	20.3	1.2	2.0	110	27.4	880	HCAB/H28004*F430
9	42	60	45	37.5	20.3	1.2	1.9	110	28.3	990	HCAB/H29004*F430
6	57.5	45	30	52.5	20.3	1.2	4.1	75	19.0	450	HCAB/H26004*M430
7	57.5	50	35	52.5	20.3	1.2	3.7	75	22.2	525	HCAB/H27004*M430
8	57.5	50	35	52.5	20.3	1.2	3.3	75	23.3	600	HCAB/H28004*M430
9	57.5	55	45	52.5	20.3	1.2	3.1	75	27.4	675	HCAB/H29004*M430
10	57.5	55	45	52.5	20.3	1.2	2.8	75	28.4	750	HCAB/H21005*M430
12	57.5	55	45	52.5	20.3	1.2	2.5	75	30.0	900	HCAB/H21205*M430
UN=840V U <sub>rms</sub> =600V											
C <sub>N</sub> (μF)	W±1 (mm)	H±1 (mm)	B±1 (mm)	P (mm)	P1 (mm)	d±0.05 (mm)	ESR @10kHz	dv/dt (V/μs)	I <sub>max</sub> (A)	Ĥ (A)	Ordering Information
0.33	32	22	13	27.5	-	1	12.9	215	4.2	70	HCAB/U13303*B220
0.5	32	33	18	27.5	-	1	9.8	215	5.9	107	HCAB/U15003*B220
0.68	32	33	18	27.5	-	1	7.8	215	6.7	146	HCAB/U16803*B220
1	32	37	22	27.5	-	1.2	5.8	215	9.2	215	HCAB/U11004*B230
1.2	42	33	18	37.5	-	1.2	8.8	145	8.6	174	HCAB/U11204*F230
1.5	42	40	20	37.5	-	1.2	7.7	145	9.8	217	HCAB/U11504*F230
1.5	42	40	20	37.5	10.2	1	6.2	145	10.4	217	HCAB/U11504*F420
2	42	44	24	37.5	10.2	1	4.9	145	12.8	290	HCAB/U12004*F420
2.2	42	44	24	37.5	10.2	1	4.5	145	13.3	319	HCAB/U12204*F420
2.2	42	37	28	37.5	10.2	1	4.4	145	13.0	319	HCAB/U12204*F420
2.5	42	45	30	37.5	20.3	1.2	3.9	145	14.7	362	HCAB/U12504*F430
3	42	45	30	37.5	20.3	1.2	3.3	145	15.8	435	HCAB/U13004*F430
3.5	42	46	35	37.5	20.3	1.2	3.0	145	16.7	507	HCAB/U13504*F430
4	42	50	35	37.5	20.3	1.2	2.7	145	19.9	580	HCAB/U14004*F430
5	42	55	40	37.5	20.3	1.2	2.4	145	23.8	725	HCAB/U15004*F430
6	42	60	45	37.5	20.3	1.2	2.1	145	25.1	870	HCAB/U16004*F430
4.5	57.5	45	30	52.5	20.3	1.2	4.5	95	17.5	427	HCAB/U14504*M430
5	57.5	50	35	52.5	20.3	1.2	4.2	95	20.1	475	HCAB/U15004*M430
5.5	57.5	50	35	52.5	20.3	1.2	3.9	95	20.8	522	HCAB/U15504*M430

Note: (1) "-"=capacitance tolerance code, J=±5%,K=±10%;  
 (2) "I<sub>max</sub>" is the max. current effective value@f=10kHz Θ<sub>amb</sub>=55°C,ΔT ≤30°C.

Outline Dimensions

UN=840V U <sub>rms</sub> =600V											
C <sub>N</sub> (μF)	W±1 (mm)	H±1 (mm)	B±1 (mm)	P (mm)	P1 (mm)	d±0.05 (mm)	ESR @10kHz	dv/dt (V/μs)	I <sub>max</sub> (A)	Î (A)	Ordering Information
6	57.5	55	45	52.5	20.3	1.2	3.7	95	24.3	570	HCAB/U16004*M430
7	57.5	55	45	52.5	20.3	1.2	3.2	95	25.7	665	HCAB/U17004*M430
8	57.5	55	45	52.5	20.3	1.2	2.9	95	26.8	760	HCAB/U18004*M430
9	57.5	65	45	52.5	20.3	1.2	2.8	95	29.7	855	HCAB/U19004*M430
10	57.5	65	45	52.5	20.3	12	2.6	95	30.6	950	HCAB/U11005*M430

Note: (1) "-"=capacitance tolerance code, J=±5%,K=±10%;  
 (2) "I<sub>max</sub>" is the max. current effective value@f=10kHz Θ<sub>amb</sub>=55°C,ΔT ≤30°C.



# HCAC

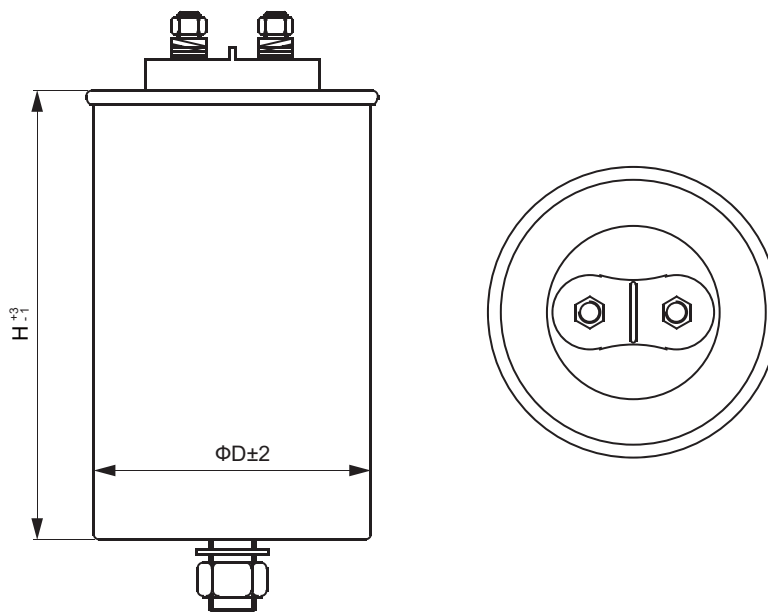
AC Oil-filled Filter Capacitor



## Features

- Suitable for AC filter circuit in power electronic equipment
- Withstand high harmonic current, peak current and peak voltage
- Self-healing property, excellent stable performance and reliability
- Explosion-proof design, more safety

## Outline Drawing



Note: The dimensions of the product are in mm units.  
Outline dimensions can be found in the Product Dimensions Table.

## Specifications

Reference Standard		GB/T 17702 (IEC 61071)
Rated Voltage $U_N$		250Va.c.~600Va.c.
Capacitance Range		20 $\mu$ F~600 $\mu$ F
Rated Frequency ( $f_N$ )		50/60Hz
Capacitance Tolerance		$\pm 5\%$ (J), $\pm 10\%$ (K)
Voltage Proof	Between terminals	2.15 $U_N$ (50/60Hz), 10s
	Between terminals and case	3600Va.c. (50/60Hz), 10s
Insulation Resistance ( $IR \times C_N$ )		$\geq 10000s$ (20°C, 100Vd.c., 60s)
Dielectric Dissipation Factor ( $\tan\delta_d$ )		0.0002 (1Hz, 20°C)
Climatic Category		40/70/56
Operating Temperature Range ( $\theta_{hs}$ )		-40°C~85°C
Max Altitude		2000m
Expected Lifetime		60000h@ $U_N, \theta_{hs} \leq 70^\circ C$
Mounting Position		Terminals upright

## Ordering Information

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
H	C	A	C	/												(	x	x	x	)
<b>Series code</b>				<b>AC rated voltage</b>		<b>Rated capacitance value</b>				<b>Capacitance tolerance</b>	<b>Outline dimension code</b>	<b>Resistor inside</b>	<b>Internal code</b>	<b>Internal code</b>						
				E2=250V R2=350V S9=425V H2=500V T1=540V U1=600V		For example: 1906=190 $\times 10^6$ pF =190 $\mu$ F				J= $\pm 5\%$ K= $\pm 10\%$	See table 1	0: No 1: Yes	0=(Standard part)	To identify when the special requirements needed						

**Table 1 Outline Dimensions Code**

Code	D±1 mm	H±3 mm	Code	D±1 mm	H±3 mm
14	76	85	2E	86	170
15	76	95	2J	86	200
18	76	120	2L	86	220
19	76	130	2N	86	240
1B	76	145	2P	86	250
1E	76	170	3N	96	240
1J	76	200	4N	106	240

**Outline Dimensions**

250Va.c.							
C <sub>N</sub> (μF)	D±1 mm	H±3 mm	P±1.5 mm	I <sub>max</sub> (A)	$\hat{I}$ (kA)	$\hat{I}_s$ (kA)	Ordering Information
150	76	120	30	30	2.3	7.0	HCAC/E21506-18*0
160	76	120	30	32	2.5	7.5	HCAC/E21606-18*0
180	76	130	30	31	2.4	7.3	HCAC/E21806-19*0
200	76	130	30	33	2.7	8.2	HCAC/E22006-19*0
230	76	145	30	33	2.5	7.5	HCAC/E22306-1B*0
240	76	145	30	35	2.6	7.8	HCAC/E22406-1B*0
300	76	200	30	52	2.2	6.5	HCAC/E23006-1J*0
350	76	200	30	55	2.5	7.6	HCAC/E23506-1J*0
400	86	200	30	57	3.6	10.9	HCAC/E24006-2J*0
500	86	220	30	63	3.8	11.3	HCAC/E25006-2L*0
600	86	250	30	63	3.8	11.5	HCAC/E26006-2P*0

**Notes:** 1) "-"=capacitance tolerance code, J=±5%,K=±10%;  
 2) "\*" =Whether internal resistor included, 0=No, 1=Yes.

Outline Dimensions

350Va.c.							
C <sub>N</sub> (μF)	D±1 mm	H±3 mm	P±1.5 mm	I <sub>max</sub> (A)	Î (kA)	Î <sub>s</sub> (kA)	Ordering Information
100	76	120	30	29	1.9	5.7	HCAC/R21006-18*0
120	76	120	30	30	2.3	6.9	HCAC/R21206-18*0
140	76	145	30	31	1.8	5.5	HCAC/R21406-1B*0
150	76	145	30	29	2.0	5.9	HCAC/R21506-1B*0
160	76	145	30	31	2.1	6.3	HCAC/R21606-1B*0
170	76	145	30	33	2.2	6.7	HCAC/R21706-1B*0
200	76	200	30	49	1.7	5.2	HCAC/R22006-1J*0
230	76	200	30	51	2.0	6.0	HCAC/R22306-1J*0
240	76	200	30	53	2.1	6.3	HCAC/R22406-1J*0
250	86	200	30	54	2.8	8.3	HCAC/R22506-2J*0
300	86	200	30	59	3.3	9.9	HCAC/R23006-2J*0
350	86	220	30	62	3.1	9.4	HCAC/R23506-2L*0
425Va.c.							
C <sub>N</sub> (μF)	D±1 mm	H±3 mm	P±1.5 mm	I <sub>max</sub> (A)	Î (kA)	Î <sub>s</sub> (kA)	Ordering Information
90	76	120	30	28	1.8	5.5	HCAC/S99005-18*0
95	76	120	30	30	2.0	5.9	HCAC/S99505-18*0
110	76	145	30	33	1.7	5.2	HCAC/S91106-1B*0
120	76	145	30	34	1.9	5.7	HCAC/S91206-1B*0
200	76	200	30	48	1.9	5.7	HCAC/S92006-1J*0
280	86	200	30	53	2.6	7.9	HCAC/S92806-2J*0
300	86	220	30	53	2.9	8.7	HCAC/S93006-2L*0
500Va.c.							
C <sub>N</sub> (μF)	D±1 mm	H±3 mm	P±1.5 mm	I <sub>max</sub> (A)	Î (kA)	Î <sub>s</sub> (kA)	Ordering Information
50	76	120	30	29	1.2	3.5	HCAC/H25005-18*0
60	76	120	30	30	1.4	4.2	HCAC/H26005-18*0
70	76	120	30	34	1.6	4.9	HCAC/H27005-18*0
90	76	145	30	32	1.6	4.9	HCAC/H29005-1B*0

Notes: 1) "-"=capacitance tolerance code, J=±5%, K=±10%;  
 2) "\*" =Whether internal resistor included, 0=No, 1=Yes.

Outline Dimensions

500Va.c.							
C <sub>N</sub> (μF)	D±1 mm	H±3 mm	P±1.5 mm	I <sub>max</sub> (A)	î (kA)	Îs (kA)	Ordering Information
140	76	200	30	49	1.5	4.5	HCAC/H21406-1J*0
160	76	200	30	52	1.7	5.2	HCAC/H21606-1J*0
200	86	200	30	57	2.2	6.5	HCAC/H22006-2J*0
230	86	220	30	58	2.6	7.7	HCAC/H22306-2L*0
540Va.c.							
C <sub>N</sub> (μF)	D±1 mm	H±3 mm	P±1.5 mm	I <sub>max</sub> (A)	î (kA)	Îs (kA)	Ordering Information
25	76	85	30	23	0.8	2.3	HCAC/T12505-14*0
35	76	95	30	27	0.8	2.5	HCAC/T13505-15*0
45	76	120	30	32	1.8	5.4	HCAC/T14505-18*0
60	76	145	30	31	1.8	5.4	HCAC/T16005-1B*0
80	76	170	30	52	1.8	5.3	HCAC/T18005-1E*0
100	86	170	30	57	2.2	6.6	HCAC/T11006-2E*0
140	86	240	30	57	2.7	8.1	HCAC/T11406-2N*0
190	96	240	30	61	3.7	11.0	HCAC/T11906-3N*0
240	106	240	35	66	4.6	13.9	HCAC/T12406-4N*0
600Va.c.							
C <sub>N</sub> (μF)	D±1 mm	H±3 mm	P±1.5 mm	I <sub>max</sub> (A)	î (kA)	Îs (kA)	产品订货标记
22	76	85	30	22	0.7	2.2	HCAC/U12205-14*0
30	76	95	30	26	0.8	2.4	HCAC/U13005-15*0
45	76	145	30	35	1.5	4.5	HCAC/U14505-1B*0
65	76	170	30	43	1.6	4.7	HCAC/U16505-1E*0
85	86	170	30	47	2.1	6.2	HCAC/U18505-2E*0
120	86	240	30	57	2.6	7.7	HCAC/U11206-2N*0
150	96	240	30	63	3.2	9.6	HCAC/U11506-3N*0
190	106	240	35	70	4.1	12.2	HCAC/U11906-4N*0

Notes: 1) “-”=capacitance tolerance code, J=±5%,K=±10%;  
 2) “\*” =Whether internal resistor included, 0=No, 1=Yes.

# HCBB62-X2T




Metallized polypropylene film interference suppression capacitor  
(Class X2, 275V/310V Temperature Humidity Bias/THB series)



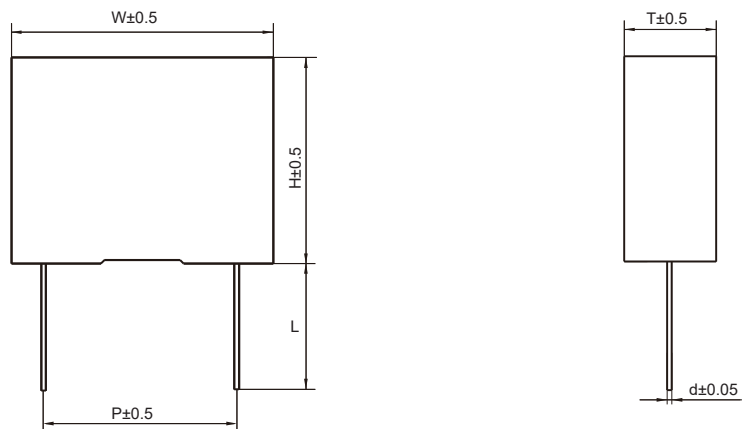
## Features

- Applied in reactive compensation system
- Low ESR, could withstand high ripple current
- Low self-inductance and Long life
- Mechanical explosion-proof structure, stable performance and high reliability
- Compliance with AEC-Q200 standard requirements

## Safety Approvals

	CQC	GB/T 6346.14	0.001μF-25μF,X2,±10%(K),±20%(M), 275/305/310/330/350Va.c. 40/110/56B,40/100/56B, 40/100/21B, 40/85/21B,40/85/56B File No.: CQC21001289371
	ENEC-VDE	EN 60384-14 IEC 60384-14	0.001μF-25μF,X2,±10%(K),±20%(M), 275/305/310/330/350Va.c. 40/110/56B; 40/100/56B; 40/100/21B; 40/85/21B;40/85/56B File No.: 125834
	UL/CUL	UL 60384-14 CSA E60384 - 1:14 CSA E60384 - 14:14	0.001μF-25μF,X2,±10%(K),±20%(M), 250/275/305/310/330/350Va.c. 40/110/56B; 40/100/56B; 40/100/21B; 40/85/21B;40/85/56B File No.: E311928,CCN:FOWX2/8

## Outline Drawing

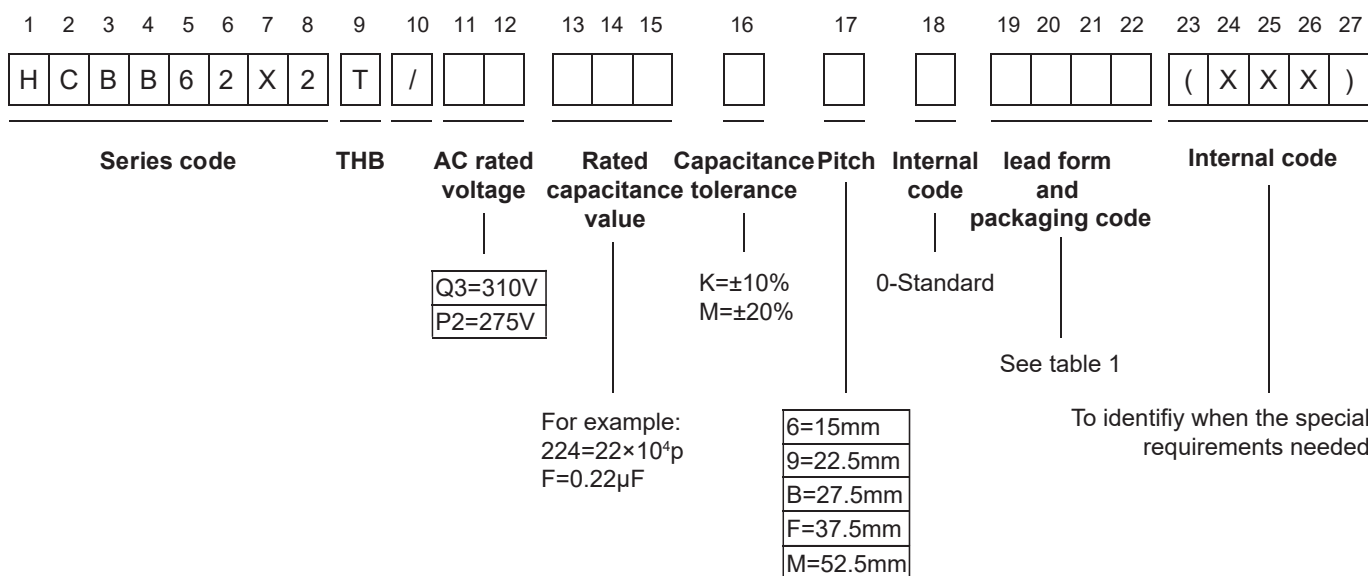


Note: The dimensions of the product are in mm units.  
Outline dimensions can be found in the Product Dimensions Table.

## Specifications

Reference standard		GB/T 6346.14 (IEC 60384-14)	
Rated voltage		275Va.c./310Va.c. (50Hz/60Hz)	
Capacitance range		0.022μF ~ 25μF	
Capacitance tolerance		±10%(K) ±20%(M) (20°C, 1kHz)	
Climatic category/ Flame resistant category		40/110/56/B	
Operation temperature range		-40°C~+110°C	
Voltage proof	Between terminals	4.3U <sub>R</sub> (Vd.c.)/2s	
	Between terminals and case	2120Va.c./2s	
Insulation resistance(IR×C <sub>N</sub> )		C <sub>N</sub> ≤0.33μF, IR≥15000 MΩ C <sub>N</sub> >0.33μF, IR×C <sub>N</sub> ≥5000s	(20°C, 100Vdc, 1min)
Dissipation Factor		C <sub>N</sub> ≤1.0μF	≤0.0010(1kHz, 20°C)    ≤0.0020(10kHz, 20°C)
		C <sub>N</sub> >1.0μF	≤0.0020(1kHz, 20°C)    ≤0.0040(10kHz, 20°C)
THB test (Damp Heat Test with Loading)		Temperature: 85°C±2°C; Humidity:85%RH±2%RH Voltage: 240Va.c. 50Hz; Duration: 1000h Capacitance change (ΔC/C): ≤10% Dissipation factor change(Δtanδ): ≤0.5%(1kHz) Insulation resistance: ≥50% of the rated value	

## Ordering Information



Note: (1) The customer special requirement express as special code after evaluating by Hongfa.

**Table1: Terminal Code**

Digit 19		Digit 20		Digit 21		Digit 22	
Code	explanation	Code	explanation	Code	explanation	Code	explanation
A	Ammo-pack	3	F=7.5	0	Straight lead	1	Between two consecutive mounting holes P=12.7mm,H0=18mm(Pitch=7.5)
		4	F=10.0			5	P=25.4mm,H0=18mm(Pitch=10.0/15.0)
		6	F=15.0				
C	straight lead (bulk package)	00	standard lead length (18mm±1mm)	0		0	length tolerance ±0.5mm Or standard lead length
		35	lead length 3.5mm <sup>1)</sup>				

Note: 1) If the length of lead is 4.5mm, then the code number is C450, the rest can be deduced by analogy

**Outline Dimensions**

275Va.c./310Va.c.													
C <sub>N</sub> (μF)	W (mm)	H (mm)	T (mm)	P (mm)	d (mm)	Ordering Information	C <sub>N</sub> (μF)	W (mm)	H (mm)	T (mm)	P (mm)	d (mm)	Ordering Information
0.022	18.0	11.0	5.0	15.0	0.6	HCBB62X2T/Q3223*60****	0.82	26.5	20.0	11.0	22.5	0.8	HCBB62X2T/Q3824*90****
0.033	18.0	11.0	5.0	15.0	0.6	HCBB62X2T/Q3333*60****	1.0	26.5	22.0	12.0	22.5	0.8	HCBB62X2T/Q3105*90****
0.047	18.0	11.0	5.0	15.0	0.6	HCBB62X2T/Q3473*60****	1.2	26.5	22.0	12.0	22.5	0.8	HCBB62X2T/Q3125*90****
0.068	18.0	11.0	5.0	15.0	0.6	HCBB62X2T/Q3683*60****	1.5	26.5	24.5	14.5	22.5	0.8	HCBB62X2T/Q3155*90****
0.10	18.0	12.0	6.0	15.0	0.6	HCBB62X2T/Q3104*60****	1.8	26.5	24.5	15.5	22.5	0.8	HCBB62X2T/Q3185*90****
0.15	18.0	13.5	7.5	15.0	0.6	HCBB62X2T/Q3154*60****	2.2	26.5	29.5	14.5	22.5	0.8	HCBB62X2T/Q3225*90****
0.18	18.0	13.5	7.5	15.0	0.6	HCBB62X2T/Q3184*60****	0.47	32.0	18.0	9.0	27.5	0.8	HCBB62X2T/Q3474*B0****
0.22	18.0	14.5	8.5	15.0	0.8	HCBB62X2T/Q3224*60****	0.56	32.0	18.0	9.0	27.5	0.8	HCBB62X2T/Q3564*B0****
0.27	18.0	14.5	8.5	15.0	0.8	HCBB62X2T/Q3274*60****	0.68	32.0	18.0	9.0	27.5	0.8	HCBB62X2T/Q3684*B0****
0.33	18.0	16.0	10.0	15.0	0.8	HCBB62X2T/Q3334*60****	0.82	32.0	20.0	11.0	27.5	0.8	HCBB62X2T/Q3824*B0****
0.39	18.0	19.0	11.0	15.0	0.8	HCBB62X2T/Q3394*60****	1.0	32.0	20.0	11.0	27.5	0.8	HCBB62X2T/Q3105*B0****
0.47	18.0	19.0	11.0	15.0	0.8	HCBB62X2T/Q3474*60****	1.2	32.0	22.0	13.0	27.5	0.8	HCBB62X2T/Q3125*B0****
0.15	26.5	15.0	6.0	22.5	0.8	HCBB62X2T/Q3154*90****	1.5	32.0	22.0	13.0	27.5	0.8	HCBB62X2T/Q3155*B0****
0.22	26.5	15.0	6.0	22.5	0.8	HCBB62X2T/Q3224*90****	1.8	32.0	25.0	13.0	27.5	0.8	HCBB62X2T/Q3185*B0****
0.33	26.5	16.0	7.0	22.5	0.8	HCBB62X2T/Q3334*90****	2.2	32.0	28.0	14.0	27.5	0.8	HCBB62X2T/Q3225*B0****
0.39	26.5	17.0	8.5	22.5	0.8	HCBB62X2T/Q3394*90****	2.7	32.0	30.0	16.0	27.5	0.8	HCBB62X2T/Q3275*B0****
0.47	26.5	17.0	8.5	22.5	0.8	HCBB62X2T/Q3474*90****	3.3	32.0	33.0	18.0	27.5	0.8	HCBB62X2T/Q3335*B0****
0.56	26.5	19.0	10.0	22.5	0.8	HCBB62X2T/Q3564*90****	3.9	32.0	33.0	18.0	27.5	0.8	HCBB62X2T/Q3395*B0****
0.68	26.5	19.0	10.0	22.5	0.8	HCBB62X2T/Q3684*90****	4.7	32.0	37.0	22.0	27.5	0.8	HCBB62X2T/Q3475*B0****

Note: (1) “\*” means capacitance tolerance code, K=±10%, M=±20%; “\*\*\*\*”=terminal code and packing code(see table 1);  
 (2) When the rated voltage is 275Va.c.,the digit 11 ~ 12 is P2.



**Outline Dimensions**

275Va.c./310Va.c.													
C <sub>N</sub> (μF)	W (mm)	H (mm)	T (mm)	P (mm)	d (mm)	Ordering Information	C <sub>N</sub> (μF)	W (mm)	H (mm)	T (mm)	P (mm)	d (mm)	Ordering Information
1.5	42.0	22.0	11.0	37.5	1.0	HCBB62X2T/Q3155*F0****	6.8	42.0	37.0	22.0	37.5	1.0	HCBB62X2T/Q3685*F0****
1.8	42.0	22.0	11.0	37.5	1.0	HCBB62X2T/Q3185*F0****	8.2	42.0	37.0	26.0	37.5	1.0	HCBB62X2T/Q3825*F0****
2.2	42.0	24.0	13.0	37.5	1.0	HCBB62X2T/Q3225*F0****	10.0	42.0	41.0	26.0	37.5	1.0	HCBB62X2T/Q3106*F0****
2.7	42.0	28.0	14.0	37.5	1.0	HCBB62X2T/Q3275*F0****	12.0	42.0	43.0	28.0	37.5	1.0	HCBB62X2T/Q3126*F0****
3.3	42.0	30.0	16.0	37.5	1.0	HCBB62X2T/Q3335*F0****	15.0M	42.0	45.0	30.0	37.5	1.0	HCBB62X2T/Q3156MF0****
3.9	42.0	30.0	16.0	37.5	1.0	HCBB62X2T/Q3395*F0****	15.0K	42.0	50.0	30.0	37.5	1.0	HCBB62X2T/Q3156KF0****
4.7M	42.0	30.0	16.0	37.5	1.0	HCBB62X2T/Q3475MF0****	18.0	57.5	45.0	30.0	52.5	1.2	HCBB62X2T/Q3186*M0****
4.7K	42.0	32.0	17.0	37.5	1.0	HCBB62X2T/Q3475KF0****	20.0	57.5	45.0	30.0	52.5	1.2	HCBB62X2T/Q3206*M0****
5.6	42.0	34.0	20.0	37.5	1.0	HCBB62X2T/Q3565*F0****	25.0	57.5	50.0	35.0	52.5	1.2	HCBB62X2T/Q3256*M0****

Note: (1) “\*” means capacitance tolerance code, K=±10%, M=±20%; “\*\*\*\*”=terminal code and packing code(see table 1);  
 (2) When the rated voltage is 275Va.c.,the digit 11 ~ 12 is P2.

# HCBB62-X2T




Metallized polypropylene film interference suppression capacitor  
(Class X2, 310V/350V Temperature Humidity Bias/THB series)



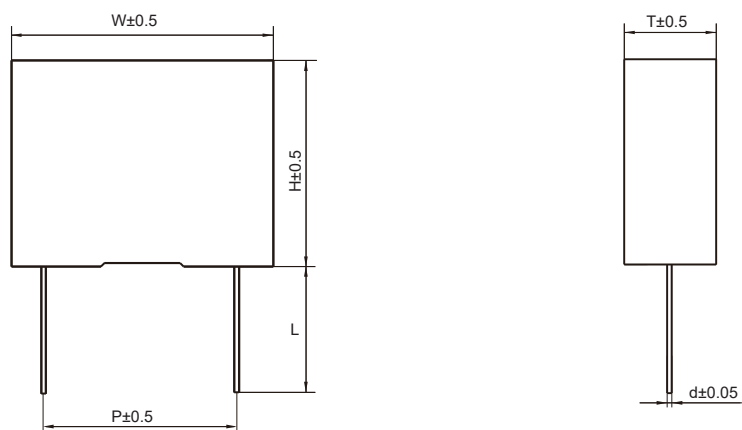
## Features

- Used in anti-interference occasions such as power supply cross line
- Metallized polypropylene film ,encapsulated in flame-resistant plastic case,sealed with epoxy resin
- Withstand overvoltage impact
- Excellent flame resistant ability
- High stability of capacitance nder sever ambient condition, such as high temperature and high himidity
- Compliance with AEC-Q200 standard requirements

## Safety Approvals

	CQC	GB/T 6346.14	0.001μF-25μF,X2,±10%(K),±20%(M), 275/305/310/330/350Va.c. 40/110/56B,40/100/56B, 40/100/21B, 40/85/21B,40/85/56B File No.: CQC21001289371
	ENEC-VDE	EN 60384-14 IEC 60384-14	0.001μF-25μF,X2,±10%(K),±20%(M), 275/305/310/330/350Va.c. 40/110/56B; 40/100/56B; 40/100/21B; 40/85/21B;40/85/56B File No.: 125834
	UL/CUL	UL 60384-14 CSA E60384 - 1:14 CSA E60384 - 14:14	0.001μF-25μF,X2,±10%(K),±20%(M), 250/275/305/310/330/350Va.c. 40/110/56B; 40/100/56B; 40/100/21B; 40/85/21B;40/85/56B File No.: E311928,CCN:FOWX2/8

## Outline Drawing

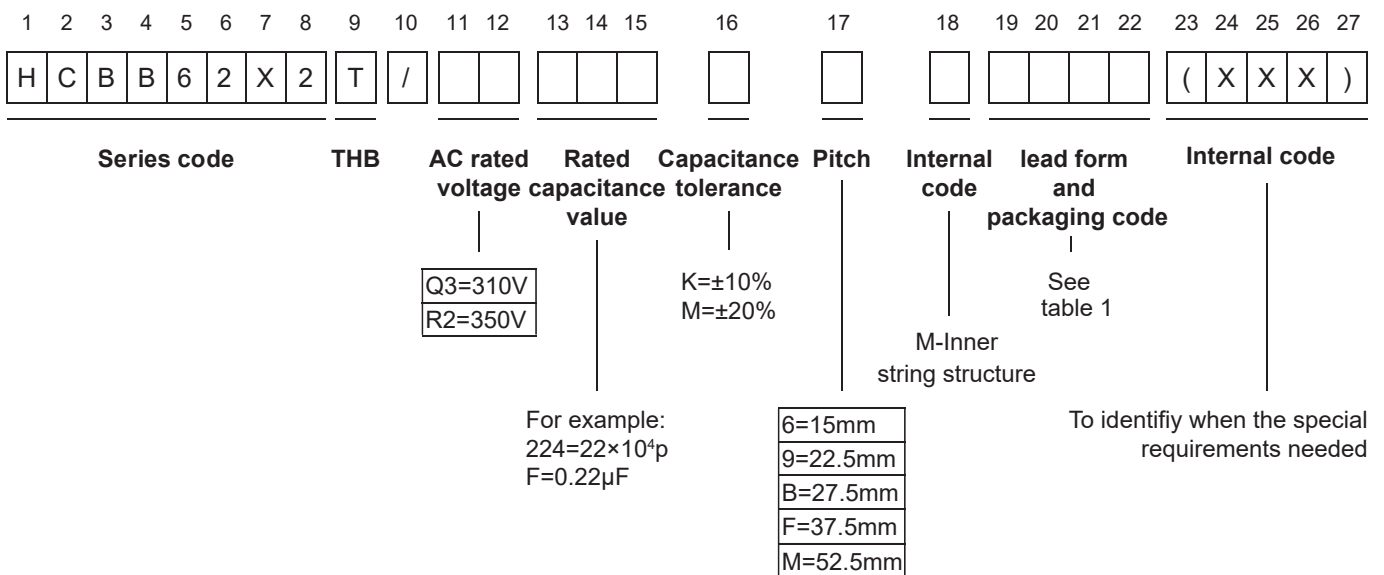


Note: The dimensions of the product are in mm units.  
Outline dimensions can be found in the Product Dimensions Table.

**Specifications**

Reference standard		GB/T 6346.14 (IEC 60384-14)		
Rated voltage		310Va.c.(50Hz/60Hz)	350Va.c.(50Hz/60Hz)	
Maximum continuous DC voltage		560Vd.c.	630Vd.c.	
Capacitance range		0.1μF~25μF	0.1μF~20μF	
Capacitance tolerance		±10%(K),±20%(M)(20°C,1kHz)		
Climatic category/ flame resistant category		40/110/56/B		
Operation temperature range		-40°C~+110°C		
Voltage proof	Between terminals	4.3U <sub>R</sub> (Vd.c.)/2s		
	Between terminals and case	2200Va.c./1min		
Insulation resistance (IR×C <sub>N</sub> )		C <sub>N</sub> ≤0.33μF,IR≥15000 MΩ C <sub>N</sub> >0.33μF,IR×C <sub>N</sub> ≥5000s	(20°C,100Vd.c.,1min)	
Dissipation Factor		0.10μF≤C <sub>N</sub> ≤1.0μF	≤0.0015(1kHz,20°C)	≤0.0040(10kHz,20°C)
		1.0μF<C <sub>N</sub> ≤10.0μF	≤0.0030(1kHz,20°C)	_____
		C <sub>N</sub> >10.0μF	≤0.0040(1kHz,20°C)	_____
THB test (Damp Heat Test with Loading)		Temperature: 85°C±2°C; Humidity:85%RH±2%RH Voltage: 300Va.c. 50Hz; Duration: 1000h Capacitance change (ΔC/C): ≤10% Dissipation factor change(Δtanδ): ≤0.5%(1kHz) Insulation resistance: ≥50% of the rated value		

**Ordering Information**



Note: (1) The customer special requirement express as special code after evaluating by Hongfa.

**Table1: Terminal Code**

Digit 19		Digit 20		Digit 21		Digit 22	
Code	explanation	Code	explanation	Code	explanation	Code	explanation
A	Ammo-pack	3	F=7.5	0	Straight lead	1	Between two consecutive mounting holes P=12.7mm,H0=18mm(Pitch=7.5)
		4	F=10.0			5	P=25.4mm,H0=18mm(Pitch=10.0/15.0)
		6	F=15.0				
C	straight lead (bulk package)	00	standard lead length (18mm±1mm)	0		0	length tolerance ±0.5mm Or standard lead length
		35	lead length 3.5mm <sup>1)</sup>				

Note: 1) If the length of lead is 4.5mm, then the code number is C450, the rest can be deduced by analogy.

**Outline Dimensions**

310Va.c.													
C <sub>N</sub> (μF)	W (mm)	H (mm)	T (mm)	P (mm)	d (mm)	Ordering Information	C <sub>N</sub> (μF)	W (mm)	H (mm)	T (mm)	P (mm)	d (mm)	Ordering Information
0.10	18.0	12.0	6.0	15.0	0.6	HCBB62X2T/Q3104*6M****	1.8	26.5	24.5	15.5	22.5	0.8	HCBB62X2T/Q3185*9M****
0.12	18.0	12.0	6.0	15.0	0.6	HCBB62X2T/Q3124*6M****	2.2	26.5	31.0	15.5	22.5	0.8	HCBB62X2T/Q3225*9M****
0.15	18.0	13.5	7.5	15.0	0.6	HCBB62X2T/Q3154*6M****	0.47	32.0	18.0	9.0	27.5	0.8	HCBB62X2T/Q3474*BM****
0.18	18.0	13.5	7.5	15.0	0.6	HCBB62X2T/Q3184*6M****	0.56	32.0	18.0	9.0	27.5	0.8	HCBB62X2T/Q3564*BM****
0.22	18.0	14.5	8.5	15.0	0.6	HCBB62X2T/Q3224*6M****	0.68	32.0	18.0	9.0	27.5	0.8	HCBB62X2T/Q3684*BM****
0.27	18.0	14.5	8.5	15.0	0.6	HCBB62X2T/Q3274*6M****	0.82	32.0	20.0	11.0	27.5	0.8	HCBB62X2T/Q3824*BM****
0.33	18.0	16.0	10.0	15.0	0.8	HCBB62X2T/Q3334*6M****	1.0	32.0	20.0	11.0	27.5	0.8	HCBB62X2T/Q3105*BM****
0.39	18.0	18.0	10.0	15.0	0.8	HCBB62X2T/Q3394*6M****	1.2	32.0	20.0	11.0	27.5	0.8	HCBB62X2T/Q3125*BM****
0.47	18.0	19.0	11.0	15.0	0.8	HCBB62X2T/Q3474*6M****	1.5	32.0	22.0	13.0	27.5	0.8	HCBB62X2T/Q3155*BM****
0.33	26.5	16.0	7.0	22.5	0.8	HCBB62X2T/Q3334*9M****	1.8	32.0	25.0	13.0	27.5	0.8	HCBB62X2T/Q3185*BM****
0.39	26.5	17.0	8.5	22.5	0.8	HCBB62X2T/Q339*9M****	2.2	32.0	24.5	15.0	27.5	0.8	HCBB62X2T/Q3225*BM****
0.47	26.5	17.0	8.5	22.5	0.8	HCBB62X2T/Q3474*9M****	2.7	32.0	30.0	16.0	27.5	0.8	HCBB62X2T/Q3275*BM****
0.56	26.5	19.0	10.0	22.5	0.8	HCBB62X2T/Q3564*9M****	3.3	32.0	30.0	16.0	27.5	0.8	HCBB62X2T/Q3335*BM****
0.68	26.5	19.0	10.0	22.5	0.8	HCBB62X2T/Q3684*9M****	3.9	32.0	33.0	18.0	27.5	0.8	HCBB62X2T/Q3395*BM****
0.82	26.5	20.0	11.0	22.5	0.8	HCBB62X2T/Q3824*9M****	4.7	32.0	34.0	20.0	27.5	0.8	HCBB62X2T/Q3475*BM****
1.0	26.5	22.0	12.0	22.5	0.8	HCBB62X2T/Q3105*9M****	5.6	32.0	37.0	22.0	27.5	0.8	HCBB62X2T/Q3565*BM****
1.2	26.5	22.0	12.0	22.5	0.8	HCBB62X2T/Q3125*9M****	6.8	32.0	40.0	24.0	27.5	0.8	HCBB62X2T/Q3685*BM****
1.5M	26.5	23.0	13.5	22.5	0.8	HCBB62X2T/Q3155M9M****	1.5	42.0	22.0	11.0	37.5	1.0	HCBB62X2T/Q3155*FM****
1.5K	26.5	24.5	14.5	22.5	0.8	HCBB62X2T/Q3155K9M****	1.8	42.0	24.0	13.0	37.5	1.0	HCBB62X2T/Q3185*FM****

Note: (1) “\*” means capacitance tolerance code, K=±10%, M=±20%; “\*\*\*\*”=terminal code and packing code(see table 1)  
 (2) When the rated voltage is 350Va.c.,the product is only CQC approved.

Outline Dimensions

310Va.c.													
C <sub>N</sub> (μF)	W (mm)	H (mm)	T (mm)	P (mm)	d (mm)	Ordering Information	C <sub>N</sub> (μF)	W (mm)	H (mm)	T (mm)	P (mm)	d (mm)	Ordering Information
2.2	42.0	24.0	13.0	37.5	1.0	HCBB62X2T/Q3225*FM****	8.2	42.0	37.0	26.0	37.5	1.0	HCBB62X2T/Q3825*FM****
2.7	42.0	26.0	15.0	37.5	1.0	HCBB62X2T/Q3275*FM****	10.0	42.0	41.0	26.0	37.5	1.0	HCBB62X2T/Q3106*FM****
3.3	42.0	28.0	14.0	37.5	1.0	HCBB62X2T/Q3335*FM****	12.0	42.0	43.0	28.0	37.5	1.0	HCBB62X2T/Q3126*FM****
3.9	42.0	30.0	16.0	37.5	1.0	HCBB62X2T/Q3395*FM****	15.0M	42.0	45.0	30.0	37.5	1.0	HCBB62X2T/Q3156MFM****
4.7	42.0	32.0	17.0	37.5	1.0	HCBB62X2T/Q3475*FM****	15.0K	42.0	50.0	30.0	37.5	1.0	HCBB62X2T/Q3156KFM****
5.6	42.0	33.5	18.5	37.5	1.0	HCBB62X2T/Q3565*FM****	18.0	57.5	45.0	30.0	52.5	1.2	HCBB62X2T/Q3186*MM****
6.8M	42.0	34.0	20.0	37.5	1.0	HCBB62X2T/Q3685MFM****	20.0M	57.5	45.0	30.0	52.5	1.2	HCBB62X2T/Q3206MMM****
6.8K	42.0	37.0	22.0	37.5	1.0	HCBB62X2T/Q3685KFM****	20.0K	57.5	48.0	30.0	52.5	1.2	HCBB62X2T/Q3206KMM****
							25.0	57.5	50.0	35.0	52.5	1.2	HCBB62X2T/Q3256*MM****
350Va.c.													
C <sub>N</sub> (μF)	W (mm)	H (mm)	T (mm)	P (mm)	d (mm)	Ordering Information	C <sub>N</sub> (μF)	W (mm)	H (mm)	T (mm)	P (mm)	d (mm)	Ordering Information
0.10	18.0	13.5	7.5	15.0	0.6	HCBB62X2T/R2104*6M****	0.68	26.5	20.0	11.0	22.5	0.8	HCBB62X2T/R2684*9M****
0.12	18.0	13.5	7.5	15.0	0.6	HCBB62X2T/R2124*6M****	0.82	26.5	22.0	12.0	22.5	0.8	HCBB62X2T/R2824*9M****
0.15	18.0	14.5	8.5	15.0	0.8	HCBB62X2T/R2154*6M****	1.0	26.5	23.0	13.5	22.5	0.8	HCBB62X2T/R2105*9M****
0.18	18.0	14.5	8.5	15.0	0.8	HCBB62X2T/R2184*6M****	1.2	26.5	24.5	14.5	22.5	0.8	HCBB62X2T/R2125*9M****
0.22	18.0	16.0	10.0	15.0	0.8	HCBB62X2T/R2224*6M****	1.5	26.5	29.5	14.5	22.5	0.8	HCBB62X2T/R2155*9M****
0.27	18.0	16.0	10.0	15.0	0.8	HCBB62X2T/R2274*6M****	1.8	26.5	31.0	15.5	22.5	0.8	HCBB62X2T/R2185*9M****
0.33	18.0	19.0	11.0	15.0	0.8	HCBB62X2T/R2334*6M****	0.33	32.0	18.0	9.0	27.5	0.8	HCBB62X2T/R2334*BM****
0.10	26.5	15.0	6.0	22.5	0.8	HCBB62X2T/R2104*9M****	0.39	32.0	18.0	9.0	27.5	0.8	HCBB62X2T/R2394*BM****
0.12	26.5	15.0	6.0	22.5	0.8	HCBB62X2T/R2124*9M****	0.47	32.0	18.0	9.0	27.5	0.8	HCBB62X2T/R2474*BM****
0.15	26.5	16.0	7.0	22.5	0.8	HCBB62X2T/R2154*9M****	0.56	32.0	18.0	9.0	27.5	0.8	HCBB62X2T/R2564*BM****
0.18	26.5	16.0	7.0	22.5	0.8	HCBB62X2T/R2184*9M****	0.68	32.0	20.0	11.0	27.5	0.8	HCBB62X2T/R2684*BM****
0.22	26.5	16.0	7.0	22.5	0.8	HCBB62X2T/R2224*9M****	0.82	32.0	20.0	11.0	27.5	0.8	HCBB62X2T/R2824*BM****
0.27	26.5	16.0	7.0	22.5	0.8	HCBB62X2T/R2274*9M****	1.0	32.0	22.0	13.0	27.5	0.8	HCBB62X2T/R2105*BM****
0.33	26.5	17.0	8.5	22.5	0.8	HCBB62X2T/R2334*9M****	1.2	32.0	22.0	13.0	27.5	0.8	HCBB62X2T/R2125*BM****
0.39M	26.5	17.0	8.5	22.5	0.8	HCBB62X2T/R2394M9M****	1.5	32.0	24.5	15.0	27.5	0.8	HCBB62X2T/R2155*BM****
0.39K	26.5	19.0	10.0	22.5	0.8	HCBB62X2T/R2394K9M****	1.8	32.0	28.0	14.0	27.5	0.8	HCBB62X2T/R2185*BM****
0.47	26.5	19.0	10.0	22.5	0.8	HCBB62X2T/R2474*9M****	2.2	32.0	30.0	16.0	27.5	0.8	HCBB62X2T/R2225*BM****
0.56	26.5	19.0	10.0	22.5	0.8	HCBB62X2T/R2564*9M****	2.7	32.0	33.0	18.0	27.5	0.8	HCBB62X2T/R2275*BM****

Note: (1) “\*” means capacitance tolerance code, K=±10%, M=±20%; “\*\*\*\*”=terminal code and packing code(see table 1)  
 (2) When the rated voltage is 350Va.c.,the product is only CQC approved.

**Outline Dimensions**

350Va.c.													
C <sub>N</sub> (μF)	W (mm)	H (mm)	T (mm)	P (mm)	d (mm)	Ordering Information	C <sub>N</sub> (μF)	W (mm)	H (mm)	T (mm)	P (mm)	d (mm)	Ordering Information
3.3M	32.0	33.0	18.0	27.5	0.8	HCBB62X2T/R2335MBM****	3.3K	42.0	32.0	17.0	37.5	1.0	HCBB62X2T/R2335KFM****
3.3K	32.0	38.0	18.0	27.5	0.8	HCBB62X2T/R2335KBM****	3.9	42.0	34.0	20.0	37.5	1.0	HCBB62X2T/R2395*FM****
3.9	32.0	37.0	22.0	27.5	0.8	HCBB62X2T/R2395*BM****	4.7M	42.0	34.0	20.0	37.5	1.0	HCBB62X2T/R2475MFM****
4.7M	32.0	37.0	22.0	27.5	0.8	HCBB62X2T/R2475MBM****	4.7K	42.0	37.0	22.0	37.5	1.0	HCBB62X2T/R2475KFM****
4.7K	32.0	38.0	24.0	27.5	0.8	HCBB62X2T/R2475KBM****	5.6	42.0	37.0	22.0	37.5	1.0	HCBB62X2T/R2565*FM****
0.68	42.0	22.0	11.0	37.5	1.0	HCBB62X2T/R2684*FM****	6.8M	42.0	37.0	24.0	37.5	1.0	HCBB62X2T/R2685MFM****
0.82	42.0	22.0	11.0	37.5	1.0	HCBB62X2T/R2824*FM****	6.8K	42.0	37.0	26.0	37.5	1.0	HCBB62X2T/R2685KFM****
1.0	42.0	22.0	11.0	37.5	1.0	HCBB62X2T/R2105*FM****	8.2	42.0	43.0	28.0	37.5	1.0	HCBB62X2T/R2825*FM****
1.2	42.0	22.0	11.0	37.5	1.0	HCBB62X2T/R2125*FM****	10.0	42.0	45.0	30.0	37.5	1.0	HCBB62X2T/R2106*FM****
1.5	42.0	24.0	13.0	37.5	1.0	HCBB62X2T/R2155*FM****	12.0	57.5	45.0	30.0	52.5	1.2	HCBB62X2T/R2126*MM****
1.8	42.0	26.0	15.0	37.5	1.0	HCBB62X2T/R2185*FM****	15.0M	57.5	45.0	30.0	52.5	1.2	HCBB62X2T/R2156MMM****
2.2	42.0	26.0	15.0	37.5	1.0	HCBB62X2T/R2225*FM****	15.0K	57.5	48.0	30.0	52.5	1.2	HCBB62X2T/R2156KMM****
2.7	42.0	30.0	16.0	37.5	1.0	HCBB62X2T/R2275*FM****	18.0	57.5	50.0	35.0	52.5	1.2	HCBB62X2T/R2186*MM****
3.3M	42.0	30.0	16.0	37.5	1.0	HCBB62X2T/R2335MFM****	20.0M	57.5	50.0	35.0	52.5	1.2	HCBB62X2T/R2206MMM****

Note: (1) “\*” means capacitance tolerance code, K=±10%, M=±20%; “\*\*\*\*”=terminal code and packing code(see table 1)  
 (2) When the rated voltage is 350Va.c.,the product is only CQC approved.

# Technical Terms and Definitions

## 1. Rated capacitance $C_N$

Capacitance value for which the capacitor has been designed.

## 2. Tolerance on rated capacitance $C_{tol}$

The deviation of actual measured capacitance from rated capacitance, the value is following:  $C_{tol} = (C - C_N) / C_N * 100\%$

C: Actual measured capacitance of a capacitor

$C_N$ : Rated capacitance of a capacitor

Tolerance on rated capacitance determines its application its priority values are  $\pm 5\%$  (J),  $\pm 10\%$  (K).

## 3. Rated voltage $U_N$

Rated a. c. voltage ( $U_N$ ):

Maximum operating peak voltage of either polarity of a reversing type waveform for which the capacitor has been designed.

Rated d. c. voltage ( $U_N$ ):

Maximum operating peak voltage of either polarity but of a non-reversing type waveform for which the capacitor has been designed.

## 4. Rms voltage $U_{rms}$

Root mean square of maximum value of sinusoidal a.c. voltage in continuous operation.

## 5. Ripple voltage $U_r$

Peak-to-peak alternating component of the unidirectional voltage

## 6. Non-recurrent surge voltage $U_s$

Peak voltage induced by a switching or any other disturbance of the system which is allowed for a limited number of times and for durations shorter than the basic period.

## 7. Insulation voltage $U_i$

R.M.S. value of the sine wave voltage designed for the insulation between terminals of capacitors to case or earth. If not specified, the R.M.S. value of the insulating voltage is equivalent to the rated voltage divided by  $\sqrt{2}$ .

## 8. Maximum current $I_{max}$

Maximum R.M.S. current for continuous operation.

## 9. Maximum peak current $\hat{I}$

Maximum peak current that can occur during continuous operation. The value is following:  $\hat{I} = C_N \times (dv/dt)$

## 10. Maximum surge current $\hat{I}_s$

Peak non-repetitive current induced by switching or any other disturbance of the system which is allowed for a limited number of times, for durations shorter than the basic period.

## 11. Rated frequency (of a capacitor) $f_N$

Frequency for which the capacitor has been designed.

## 12. Resonance frequency

Lowest frequency at which the impedance of the capacitor becomes minimum.

The value is following:  $f_r = 1 / (2\pi \sqrt{L_s C_N})$

## 13. Tangent of the loss angle of a capacitor $\text{tg}\delta$

Ratio between the equivalent series resistance and the capacitive reactance of the capacitor at specified sinusoidal alternating voltage and frequency.

## 14. Dielectric dissipation factor $\text{tg}\delta_0$

Constant dissipation factor of dielectric material for all capacitors at the rated frequency. The typical loss factor of polypropylene Film is  $2 \times 10^{-4}$

## 15. Equivalent series resistance of a capacitor ESR

Effective resistance which, if connected in series with an ideal capacitor of capacitance value equal to that of the capacitor in question, would have a power loss equals to active power dissipated in that capacitor under specified operating conditions.

## 16. Self-inductance $L_s$

Effective inductance which, if connected in series with an ideal capacitor of capacitance value equal to that of the capacitor in question, would have the resonance frequency equals to the resonance frequency in that capacitor.

## 17. Thermal resistance $R_{th}$

A heat property and a measurement of a temperature difference by which a capacitor resists a heat flow. It shows the temperature difference when a unit of heat energy flows through a capacitor in unit time. It has the units  $^{\circ}\text{C}/\text{W}$  or  $\text{K}/\text{W}$ .

## 18. Capacitor losses $P_j$

Active power dissipated in the capacitor. The value is following:  $P_j = I_{rms}^2 \times \text{ESR}$

## 19. Operating temperature $\Theta_o$

Temperature of the hottest point on the case of the capacitor when in thermal equilibrium.

## 20. Maximum operating temperature $\Theta_{max}$

Highest temperature at which the capacitor may be energized.

## 21. Lowest operating temperature $\Theta_{min}$

Lowest temperature at which the capacitor may be energized.

## 22. Cooling-air temperature $\Theta_{amb}$

Temperature of the cooling air measured at the hottest position in bank, under steady-state conditions, midway between two units. If one unit is involved, it is the temperature measured at a point approximately 0.1m away from the capacitor container and two-thirds of the height from its base.



# Technical Terms and Definitions

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## 23. Container temperature rise $\Delta\Theta_{case}$

Difference between the temperature of the hottest point of the container and the temperature of the cooling air.

## 24. Hotspot temperature $\Theta_{hs}$

Temperature at the hottest spot inside the capacitor. The value is following:  $\Theta_{hs} = \Theta_{amb} + P_j \times R_{th}$

## 25. Climatic category

The climatic category which the capacitor belongs to is expressed with minimum, maximum operating temperature and damp heat severity,

For example, 40/85/56

## 26. Insulation resistance IR

The insulation resistance is the ratio between an applied DC voltage and the resulting leakage current. It is expressed in M $\Omega$ .

The insulation resistance is usually expressed with time constant ( $\tau$ ), the time constant is expressed in seconds with the following formula:  $\tau = IR \times C_n$

## 27. Self-healing

It is only applicable to metallized film capacitor. Self-healing means the ability that the electrical properties of the capacitor are rapidly restored after a local breakdown of the dielectric.

The electrode of metallized film capacitor is the metal coating of the metalized film, which are vacuum-deposited directly onto the plastic film, have a thickness of only several tens nm. At weak point or impurities in the dielectric, a dielectric breakdown would occur. The energy released by the arc discharge in the breakdown channel rapidly evaporate the thin metal coating in the vicinity of the channel. The insulated region thus resulting around the former faulty area will cause the capacitor to regain its full operation ability.

## 28. Failure rate

Failure rate indicates the failure probability of capacitors in unit time after a certain point, while the capacitor haven't failed before the certain point. The unit is FIT (1FIT=1/10<sup>9</sup>hours)

For example, 10000 pcs of the capacitors work at given conditions for 10000 hrs and 10 pcs of capacitors failed,

So  $\lambda = 10 / (10000 \times 10000) = 100\text{FIT}$ .

## 29. Expected lifetime of a capacitor

Expected Lifetime is a statistical value calculated on the basis of experience and on theoretical evaluations, it depends on the applied voltage and the hot spot temperature during operation. Generally speaking, for capacitors applied in different situation, the designed average service lives are different. For example, capacitors used in DC-Link circuits will have a expected lifetime of probable 100000 hrs at rated voltage and 70°C hot spot temperature.

A rough evaluation for the expected capacitor life-time can be indicated like this: 10% increase of the voltage, half long lifetime will lose. Also 10% increase of hotspot increase, half long lifetime will lose.



# Application Notes

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## 1. Caution items in using plastic film capacitors

- 1) The plastic film capacitor varies in the maximum applicable voltage depending on the applied voltage, current, frequency and operational environment.
- 2) Generally speaking, although flame retardant shell or flame retardation epoxy is used in the coating or encapsulating of plastic film capacitor, continuous high temperature of firing will break the coating layer or plastic case of the capacitor, and may lead to melting and firing of the capacitor element.

## 2. Caution items in storing plastic film capacitors

- 1) It shouldn't be located in particular high temperature and high humidity.
- 2) Capacitors may not be stored in corrosive atmospheres, such as sulfides, acids, lye, salts, organic solvents or other corrosive substances.
- 3) When unchanging primal package, it shouldn't be stored more than 24 months (from the date marked on the capacitor's body or the label glued to the package)

# Guide For Customer Ordering

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## Please provide following information as much as you can

- 1.Applications: such as transducer, welding machine, induction heating machine
- 2.Application situation: such as DC-Link, IGBT snubber, resonance, etc.
- 3.Rated capacitance and tolerance
- 4.Voltage: such as rated voltage , working voltage, ripple voltage, non-recurrent surge voltage, etc.
- 5.Current: such as maximum current, maximum peak current ,pulse current, etc.
- 6.Frequency: such as working frequency, pulse frequency, etc.
- 7.Working environment: such as environment temperature, humidity, cooling mode, etc.
- 8.Dimensions: such as diameter,height or length,width etc.
- 9.Terminal types: such as lug, tab etc.



For more information, please access our web site:  
[www.hongfa.com](http://www.hongfa.com)





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