



**CAPACITOR
COMPETENCE**
since 1958

ALUMINUM ELECTROLYTIC CAPACITORS

ALUMINUM ELECTROLYTIC CAPACITORS · SCREW TYPE

CD 139S HC SERIES

JIANGHAI EUROPE
Electronic Components GmbH

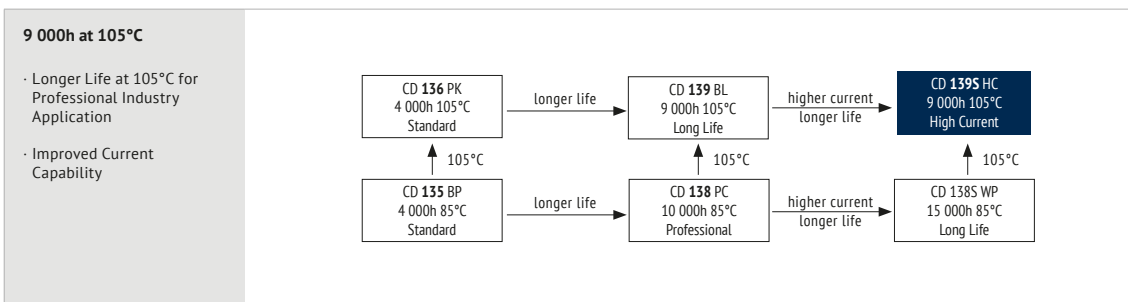


ENGINEERED SOLUTIONS

v2019.1

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ITEM CHARACTERISTICS

Operating Temperature Range (°C)	-40 - +105	The usage at lower temperatures than indicated may be possible. Please contact the Jianghai Europe sales office for approval.
Voltage Range (V)	350 - 450	
Capacitance Range (µF)	1 000 - 15 000	
Capacitance Tolerance (20°C, 120Hz)	± 20%	
Leakage Current	After 5 minutes at 20°C application of rated voltage, leakage current is not more than specified in table.	
Stability at Low Temperature (Capacitance Ratio at 120Hz)	$C_{-25°C} / C_{+20°C} \geq 0,7$ $C_{-40°C} / C_{+20°C} \geq 0,6$	
Fast Charge-Discharge	Please contact Jianghai for an appropriate choice of the capacitor or possible technical adaptations, esp. for applications like: Welding, Photoflash, Servo motors, X-Ray	

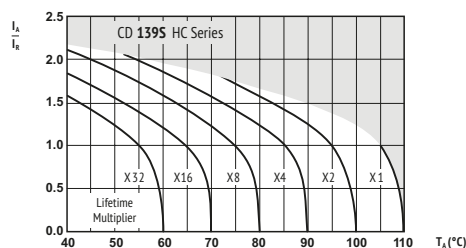
ITEM	USEFUL LIFE		LOAD LIFE	ENDURANCE TEST	SHELF LIFE	
Lifetime	9 000h	> 200 000h	5 000h	5 000h	1 000h	
Leakage Current	Not more than specified value		Not more than specified value	Not more than specified value	Not more than specified value	
Capacitance Change	Within ± 30% of initial value		Within ± 20% of initial value	Within ± 10% of initial value	Within ± 20% of initial value	
Dissipation Factor	Not more than 300% of specified value		Not more than 200% of specified value	Not more than 130% of specified value	Not more than 200% of specified value	
Condition:						
Applied Voltage	U_R	U_R	U_R	U_R	$U_R = 0$	After test: U_R to be applied for 30 min > 24h before measurement
Applied Current	I_R	$1,4 \times I_R$	I_R	$I_R = 0$	$I_R = 0$	
Applied Temperature	105°C	50°C	105°C	105°C IEC 60384	105°C	
Terminal and Construction	The terminal version has an impact on the current capability and mechanical behavior (vibration). For high current applications the terminals C,D and E are preferred, see page 141.					

MULTIPLIER FOR RIPPLE CURRENT (FREQUENCY COEFFICIENT)

Frequency	50Hz	120Hz	300Hz	1kHz	≥ 10 kHz
Coefficient	0,80	1,00	1,10	1,30	1,40

Multipliers for typical operating conditions.

MULTIPLIER FOR LIFETIME (LIFETIME DIAGRAM)



I_A = actual ripple current at 120Hz,
 I_B = rated ripple current at 120Hz, 105°C
 Multiplier of Useful Life as a function of ambient temperature & ripple current load

ENVIRONMENTAL

The products are RoHS, WEEE and REACH compliant. The detailed version please see separate "Environmental Certificates" document or www.jianghai-europe.com

SAFETY FACTOR

This diagram includes a safety margin. In many cases the allowed current capability/lifetime may be increased. For details and approvals please contact the Jianghai Europe sales office.

JIANGHAI EUROPE

Electronic Components GmbH



ENGINEERED SOLUTIONS

Customer specific adaptations needed? Please contact Jianghai Europe GmbH:
 TELEFON: +49 (0) 2151 652088-72 | E-MAIL: INFO@JIANGHAI-EUROPE.COM

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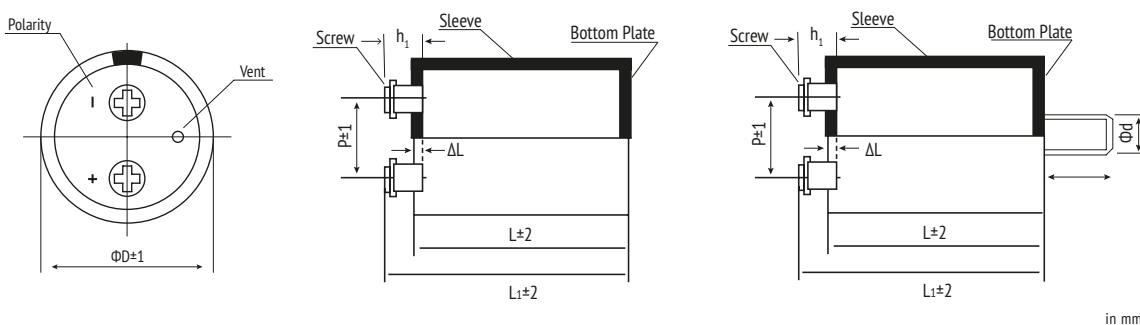
U_{RDC} (Surge Voltage) Code	C_R Rated Capacitance	ESR_{max} Equivalent Series Resistance 20°C 120Hz	ESR_{typ} Equivalent Series Resistance 20°C 120Hz	$\tan\delta$ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current	I_{RAC} Rated Ripple Current 105°C 120Hz	Size $\phi D \times L$	ORDER CODE ◇ = mounting style (stud) △△△△ = terminal style Details: Page 4
(V)	(μF)	(m Ω)	(m Ω)		(mA)	(Arms)	(mm)	
350 (400) 2V	3300	55	23	0,15	5,0	14,4	64 x 115	ECG2VHC332M0D115△△△△
	3900	46	19	0,15	5,0	16,6	64 x 130	ECG2VHC392M0D130△△△△
	4700	39	17	0,15	5,0	19,8	64 x 155	ECG2VHC472M0D155△△△△
		39	17	0,15	5,0	19,1	77 x 115	ECG2VHC472M0E115△△△△
	5600	32	14	0,15	5,0	21,9	77 x 130	ECG2VHC562M0E130△△△△
	6800	27	12	0,15	5,0	26,2	77 x 155	ECG2VHC682M0E155△△△△
	8200	22	11	0,15	5,0	29,3	90 x 157	ECG2VHC822M0F157△△△△
	10000	18	10	0,15	5,0	32,3	90 x 157	ECG2VHC103M0F157△△△△
	12000	15	8	0,15	5,0	39,0	90 x 196	ECG2VHC123M0F196△△△△
400 (450) 2G	2700	56	28	0,15	5,0	13,1	64 x 115	ECG2GHC272M0D115△△△△
	3300	46	23	0,15	5,0	15,2	64 x 130	ECG2GHC332M0D130△△△△
	3900	39	21	0,15	5,0	17,9	64 x 155	ECG2GHC392M0D155△△△△
		39	21	0,15	5,0	18,2	77 x 115	ECG2GHC392M0E115△△△△
	4700	32	17	0,15	5,0	20,1	77 x 130	ECG2GHC472M0E130△△△△
	5600	27	15	0,15	5,0	23,8	77 x 155	ECG2GHC562M0E155△△△△
	6800	22	13	0,15	5,0	26,7	90 x 157	ECG2GHC682M0F157△△△△
	8200	18	11	0,15	5,0	29,3	90 x 157	ECG2GHC822M0F157△△△△
	10000	15	9	0,15	5,0	35,6	90 x 196	ECG2GHC103M0F196△△△△
450 (500) 2W	2200	69	38	0,15	5,0	11,8	64 x 115	ECG2WHC222M0D115△△△△
	2700	56	31	0,15	5,0	13,7	64 x 130	ECG2WHC272M0D130△△△△
		56	31	0,15	5,0	14,5	77 x 115	ECG2WHC272M0E115△△△△
	3300	46	23	0,15	5,0	16,5	64 x 155	ECG2WHC332M0D155△△△△
		46	25	0,15	5,0	16,9	77 x 130	ECG2WHC332M0E130△△△△
	4700	32	18	0,15	5,0	21,7	77 x 155	ECG2WHC472M0E155△△△△
		27	16	0,15	5,0	26,4	77 x 195	ECG2WHC562M0E195△△△△
	5600	27	16	0,15	5,0	24,2	90 x 157	ECG2WHC562M0F157△△△△
		22	14	0,15	5,0	29,5	90 x 196	ECG2WHC682M0F196△△△△
	8200	19	12	0,15	5,0	32,4	90 x 196	ECG2WHC822M0F196△△△△

ORDER CODE SCREW TYPE

EC	G	2G	BP	102	M	B	E	160	A771	-	JExxxx						
Techno-logy	Terminal Type	Rated Voltage Code	Series Code	Capacitance Code	Capacitance Tolerance	Mounting	Diameter	Length	For Terminal Code see tables on the right	Material Code	for Specials only						
EC Electrolytic Capacitor	Screw G	10	1A	CD 135	BP	100	101	±20%	M	Bolt	B	36	A	53	053	-	-
		16	1C	CD 136	PK	1 000	102	±10%	K	Flat bottom, no bracket, single sleeve	N	40	B	65	065	PVC	V
		25	1E	CD 137	PX	10 000	103	+30/-10%	Q	Flat bottom, no bracket, full double sleeve	D	51	C	96	096	PET	E
		35	1V	CD 137S	PR			+20/-0%	R	Flat bottom incl. 2 stoppers bracket	I	64	D	100	100	Polyolefin	O
		40	1G	CD 138	PC			+20/-10%	V	Flat bottom incl. 3 stoppers bracket	Y	77	E	115	115	Standard: PVC Sleeve	
		50	1H	CD 138S	WP			+50/-10%	T	Details of Slewing see table on the right		90	F	236	236		
		63	1J	CD 139	BL			±20%	M			101	G				
		80	1K	CD 139S	HC												
		100	2A	CD 13H	BH												
		200	2D	CD 838	ZT												
		250	2E														
		350	2V														
		400	2G														
		420	2X														
		450	2W														
		500	2H														
		550	2Y														
		575	2Z														
		600	J2														



TECHNICAL SPECIFICATION



in mm

LENGTH

$L_1 = L + h_1 - \Delta L$
L_1 = Total Capacitor Length
L = Capacitor Case Length (see Capacitor Table)
h_1 = Terminal Length (see Terminal Code)
ΔL = Housing Correction (see Case & Mounting Style)

TERMINAL CODE

Terminal Code	ØD	Screw	Pitch P	d ₁	d ₂	h ₁	h ₂
A361	36	M5	12,7	8	11	6,8	1,8
A511	51	M5	21,8	10	13,0	6,8	1,8
D511	51	M5	21,8	10	13	5,5	0
A512	51	M5	21,8	10	13	7,14	0
A641	64	M5	28,2	10	15,5	7,3	2,3
C641	64	M5	28,5	13	0	7,2	0
C642	64	M6	28,6	13	0	5,5	0
D641	64	M5	28,2	13	15	6,4	0
D642	64	M6	28,2	13	15	6,4	0
E641/E642	64	M5	28,2	10	15,5	6,3	1,3
A771	77	M5	31,4	10	15,5	6,3	1,3
A772	77	M6	31,4	10	15,5	6,3	1,3
B771	77	M6	31,4	17,2	0	3,17	0
B772	77	M6	31,4	17,2	0	6,4	0
B774/B776	77	M5	31,4	17,2	0	6,4	0
C771	77	M5	31,4	17,2	0	3,5	0
C772	77	M6	31,4	17,2	0	3,5	0
C774	77	M5	31,4	17,2	0	6,4	0
C775	77	M6	31,4	17,2	0	6,4	0
C779	77	M6	31,4	13	0	5,5	0
D771	77	M5	31,4	13	15	6,4	0
E772	77	M5	31,4	10	15,5	6,3	1,3
E774	77	M5	31,4	13	17,5	5,5	3,5
F771	77	M6	31,4	13	15	6,4	0
F772	77	M5	31,4	13	15	6,4	0
A901	90	M5	31,4	10	15,5	6,3	1,3
B901	90	M6	31,4	17,2	0	6,4	0
B902	90	M5	31,4	17,2	0	6,4	0
C901/C905	90	M5	31,4	17,2	0	6,4	0
C902	90	M6	31,4	17,2	0	6,4	0
C904	90	M8	31,4	17,2	0	6,4	0
D902	90	M5	31,4	13	15	6,4	0
D903	90	M6	31,4	13	15	6,4	0
E901	90	M6	31,4	15	20	8,6	2,4
E902	90	M5	31,4	10	15,5	6,3	1,3
F901	90	M6	31,4	13	15	6,4	0
A101	101	M8	41,5	17,2	21,5	11	6

CASE & MOUNTING STYLE

Order Code	Mounting Style	Sleeving Style (typical design)	Housing Correction ΔL (in mm)
B	Bolt	Single Sleeve	0,8
N	Flat bottom, no bracket	Single Sleeve	0,8
D	Flat bottom, no bracket	Full length Double Sleeve	0,4
I	I-Type Bracket	Diameter 36: Single Sleeve	0,8
		Ur < 350V: ½ length Double Sleeve	0,6
		Ur ≥ 350V: full length Double Sleeve Other Sleeve Versions on request	0,4
Y	Y-Type Bracket	Ur < 350V: ½ length Double Sleeve	0,6
		Ur ≥ 350V: full length Double Sleeve Other Sleeve Versions on request	0,4

Bolt:	Ø D	Ø d	l (mm)	Max. Torque (Nm)
	Ø 36	M8	12	4
	≥ Ø 51	M12	16	12,5

SCREW TERMINAL (Hexagon Head)

Dimension	Min. Thread Depth (mm)	Max. Torque (Nm)	Max. Ripple Current (A)
M5 x 10	8,5	3	60
M6 x 12	8,5	4	100
M8 x 16	8,5	6	100

CAPACITOR POSITION

⚠ Screw capacitors need to be mounted into an upright position.
If a horizontal position is needed please ensure the safety vent is located on the highest position (12 o'clock).

■ = preferred

Other forms on request, especially non-symmetrical layout, watercooling or laser welded terminals.

Terminal A101 = A991

Terminal A, B and F include a potting mass filling, Terminal C, D and E use a middle pin fixation without glue.

Extended Cathode designs only available with Terminal C, D and E.

Some series of the catalogue might only be available with Terminal C,D and E.



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