APPROVAL SHEET

Customer:	
Customer Part NO.	
Part NO.	**CD035M221F10PC97V00A**
Item:	**220uF/35V**
Catalog Series:	**CD Series**
Date of Issue:	**SEP.18.2026**
Approved NO. :	**SD20260900575**

BUYER'S STAMP	Approvaled by			

Su'scon	Submitted by			
	Approval	Check	Affirm	Design
東莞冠坤電子有限公司 發 行 2023-02-24 工程部	工程部 2023-02-24 劉銘坤	工程部 2023-02-24 鐘 華	工程部 2023-02-24 莫明強	工程部 2023-02-24 賴彤影

TEL:0769-8308 6886
FAX:0769-8308 6886
Mail：sales016@heyuecap.com

Halogen Free RoHS COMPLIANT Environmental-Benefit Products

RECORD OF REVISION

NO.	VERSION	REASON	DATE	CHECKED	REMARKS
1	A00	First Release	2026.09.21	劉冬冬	
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CD Specification For Approval

NO.	Customer Part No.	Specification	Part No.
1		EC,220uF/35V	CD035M221F10PC97V00A
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Explanation of Parts Numbers (ERP System)

Draw Up:1999.12.15	Codification:DKK/Ⅲ-00-002
Revise:2016.06.15	Edition:A08

Explanation of Parts Numbers

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
C	D	0	3	5	M	2	2	1	F	1	0	P	C	9	7	V	0	0	R/A
[Series]		[Voltage]			[Capacitance Tolerance]	[Capacitanc Code]			[Diameter]	[Length]		[Special Remark]	[Customer Code]			[Type Code description]			R=RoHS/Free Halogen A=Automotive products RoHS/Free Halogen

[Voltage]		
	004=4V	
	006=6.3V	
	010=10V	
	016=16V	
	025=25V	
	035=35V	
	050=50V	
	063=63V	
	080=80V	
	100=100V	
	160=160V	
350=350V	180=180V	
400=400V	200=200V	
420=420V	250=250V	
450=450V	315=315V	
500=500V	330=330V	

[Capacitance Tolerance]
J= ±5 %
K= ±10%
M= ±20 %
A= 0 %~+20 %
S= 0 %~+40 %
R= 0 %~+50 %
D= -5 %~+20 %
V= -10 %~+20 %
Q= -10 %~+30 %
T= -10 %~+50 %
E= -15 %~+20 %
I= -30 %~+20 %
B= +10 %~+30 %
N= +10 %~+25 %
C= -5 %~+15 %

[Capacitanc Code]	
0R1=0.1uF	
1R0=1uF	
100=10 uF	
101=100 uF	
102=1000 uF	
103=10000 uF	
223=22000 uF	
G52=1650 uF	
Y=14.5Φ	
W=42Φ	
R=51Φ	
S=64Φ	
T=76Φ	
U=90Φ	
V=100Φ	

[Diameter]
B=3Φ
C=4Φ
D=5Φ
E=6.3Φ
F=8Φ
G=10Φ
H=12Φ
X=12.5Φ
I=13Φ
J=16Φ
K=18Φ
L=20Φ
M=22Φ
N=25Φ
O=30Φ
P=35Φ
Q=40Φ
A=11.5Φ

[Length]
1) Length < 100mm Integer,Input it direct.
2) Length < 100mm Decimal,Please refer the code as below: Ex:11.5 isBB; 5.4 is 5A;
3. Length ≧ 100mm,First digit input No.0~9，2nd 、3rd refer as below Code11 Ex:115,Input B5.

Code 11、18	Meaning		
A	10		
B	11		
C	12		
D	13		
E	14		
F	15		
G	16		
H	17		
I	18		
J	19	M	22
K	20	N	31
L	35		

Code 12、19	Meaning
A	0.4
B	0.5
C	0.6
D	0.7
E	0.8
F	0.9
G	0.1
H	0.2
I	0.3

[Special Remark]		
RADIAL	B=Forming Only C=Lead Cut D=Lead Cut and Crimp N=Lead spacing expand to 2.0 mm then Cut E=Lead spacing expand to 2.5 mm then Cut F=Lead Forming spacing 5.0 mm thenCut H=Lead Forming Cut and Crimp S=Long Lead L=Facing cathode:Lead Cut and Bending (turn right) Z=Facing cathode:Lead Cut and Bending (turn left) P=Taping (Ammo pack) R=Tape and Reel V=V-chip Type (SMD)	<1>Code No.17 is"P","R"Code No.18、19 is stand for Lead pitch. <2>Code No.17 is C,N,E,F,D,H,W,K,L,Z, Code No.18、19 is stand for Lead length. <3>Code No.17 is S,Code No.18、19 be filled in "00" is stand for General Long Lead
Lug	G= LG Type Terminal PCS= PC board pin-out Straight Terminal PCY= PC board pin-out LUG Terminal PCU= PC board pin-out U-Insert Terminal PCB= PC board pin-out Bend Terminal ST= Straight Type Terminal U= 5 Pin Straight Terminal W= Screw Terminal YL= Snap	<4>Code No.17 is "B",Code No.18、19 be filled in "00" is stand for Forming Long Lead <5>Code No.17 is "V",Code No.18、19 be filled in "00" is Fill code number, does not mean other significance

Code 13	Meaning
T	Convex Rubber seal {Standard：Lead Type 12.5Φ≦D≦18Φ(Breathe freely}
P	Flat Rubber seal {Standard：Lead Type 3Φ≦D≦12Φ：20Φ、22Φ、25Φ}
0	Snap-in,U-LUG Type
G	Different colors of sleeve

C97	Customer No.

2.ERP P/N System compare with NCC's Description

(1) "Finished Products" ----20 Codes，

(2) Snap in Type---- "Semi-finished products P/N" has not demand，It's also 20 Codes

(3) Lead Type---- 16 codes for "Semi-finished products" ，It's 16 codes (If Specially enquire and 16 codes can not be reached, It will be 20 code for that)

(4) Codes No.13：Specially Code，It's difference between clients enquire and same Spec multiple enquired.

(5) Codes No.14~16 which is for clients Code.

(6) Length of Lead Cut and Forming bigger than10.0mm or appendix digit，Letters Description。

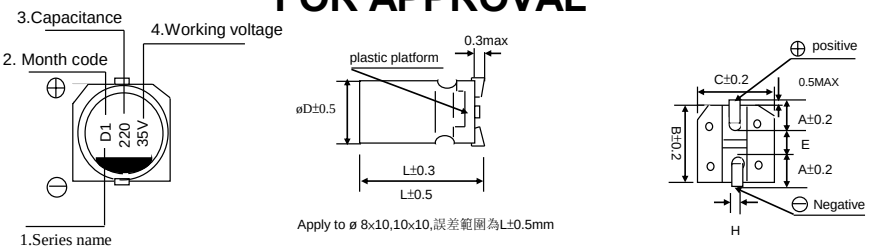
DONG GUAN KUAN KUN ELECTRONIC CO., LTD

YIN HE INDUSTRIAL ZONE, QING XI TOWN, TEL: +86-769- 83086886
DONG GUAN CITY, GUANG DONG CHINA (P.R.O.C) FAX: +86-769- 83086886

FOR APPROVAL

DIMENSIONS(mm)

■ Chip Type



ΦD	4*5.4	5*5.4	6.3*5.4	6.3*7.7	8*6.5	8*10	10*12.5
A	1.8	2.1	2.4	2.4	3.3	2.9	3.2
B	4.3	5.3	6.6	6.6	8.3	8.3	10.3
C	4.3	5.3	6.6	6.6	8.3	8.3	10.3
E	1.0	1.4	2.1	2.1	2.3	3.2	4.5
L	5.4	5.4	5.4	7.7	6.5	10	12.5
H	0.5~0.8	0.5~0.8	0.5~0.8	0.5~0.8	0.5~0.8	0.8~1.1	0.8~1.1

Customer:		**Electrolytic Capacitors CD Series**									**Code**	
Electric Characteristics:												
P/N	P/N	Cap. (uF)	Cap. Tol. (%)	Rate Volt. (V-DC)	Surge Volt. (V-DC)	Oper. Temp. (℃)	Nominal Case Size D*L(mm)	Leakage Current Max (uA)	D.F. MAX (%)	R.C 100KHz (mA rms)	IMP 100KHz at 25℃(Ω)Max	Load Life (hours)
	CD035M221F10PC97V00A	220	±20	35	40.3	105	8*10	77	13	450	0.170	3000

REMARKS:

1. Leakage Current Test: **6.3V ~100V at 20℃ for 2 minutes ;**

2. Operating temperature: **6.3V~100V -55℃~ +105℃ ;**

3. .Dissipation Factor Test: **at 20℃, 120 Hz.**

4. Capactitance Test: **at 20℃, 120 Hz.**

5. Ripple Current Test: **at 105℃, 100K Hz ;**

6. Load Life: **3000 hours, with application of rated voltage at 105℃.**
(L<10mm, 2000 hours;)

Capacitance Change: **Within ±30% of initial value;**

tanδ: **300% or less of initial specified value;**

Leakage Current: **Initial specified value or less;**

7. Shelf Life: **The following specifications shall be satisfied when the capacitors are restored to 20℃ after exposing them for 1000 hours 105℃ without voltage applide. Before the measurement, the capacitor shall be preconditioned by applying voltage according to them 4.1 of JIS C5101-4.**

Capacitance Change: **Within ±30% of initial value;**

tanδ: **300% or less of initial specified value;**

Leakage Current: **Initial specified value or less;**

8. when have characteristic requested : **Load life & shelf life test and etc. , judgment standard reference to our catalogue.**

9.Remarks: **Su'scon Part Number with suffix code "A" is specially offered for automotive project, which meets AEC-Q200 standard.**

●SPECIFICATION

Leakage Current 洩漏電流	After 2 minutes application of rated voltage,leakage current is not more than 0.01cv or 3(uA),whichever is greater.								
Dissipation Factor 散逸因素（損失角） (tan δ)	Measurement Frequency:120Hz. Temperature:20℃								
	Rate Voltage(V)	6.3	10	16	25	35	50	63	80	100
	tan δ （MAX)	0.30	0.26	0.22	0.16	0.13	0.10	0.08	0.08	0.07
Low Temperature Stability 低溫特性	Measurement Frequency:120Hz.								
	Rate Voltage(V)	6.3	10	16	25	35	50	63	80	100
Impedance Ratio(MAX)	Z(-25℃)/Z(20℃)	4	3	2	2	2	2	2	2	2
阻抗比率(MAX)	Z(-55℃)/Z(20℃)	8	5	4	3	3	3	3	3	3

●Frequency Coefficient of Permissible Ripple Current

Frequency(Hz)	120 ≦ F< 1K	1K ≦ F< 10K	10K ≦ F< 100K	100K≦ F
≦33	0.35	0.70	0.90	1.00
33~150	0.40	0.85	0.92	1.00
>150	0.60	0.85	0.95	1.00

The endurance of capacitors is reduced with internal heating produced by ripple current at the rate of halving the lifetime with every 5℃ rise.

When long life performance is required in actual use, the rms ripple current has to be reduced.