



物料承认书

ROHS

APPROVAL SHEET

档案编号:

客户名称:

华秋

Customer name:

供应商

东莞市创慧电子有限公司

公司地址

东莞市谢岗镇金川工业区

物料名称

铝电解电容器

物料名称

铝电解电容器

物料编码

CD2942W221 M

物料品牌

CH

物料规格

450V220UF

供方电话

0769-87633398

物料尺寸

D25X35L

供方传真

0769-87633399

附件

物料规格书:

N

Y

ROHS检测报告:

N

Y

样品测试报告:

N

Y

IQC样品:

N

Y

备注

新机型物料

物料变更

增加/变更供应商

其他:

客户确认栏

批准
Approver

审核
Checker

制作
Engineer

盖章

日期:

供应商确认栏

批准
Approver

审核
Checker

制作
Engineer

盖章

刘劲松

魏小容

邓瑶玲



日期:

2024/4/10

CD294 Series

Aluminum Electrolytic Capacitors

Item Name	Rating	Case size
CD2942W221M	450V220UF	D25X35L

1. Operating Temp. Range

-40°C ~ +105°C

Electrical Characteristics

See Table 1.

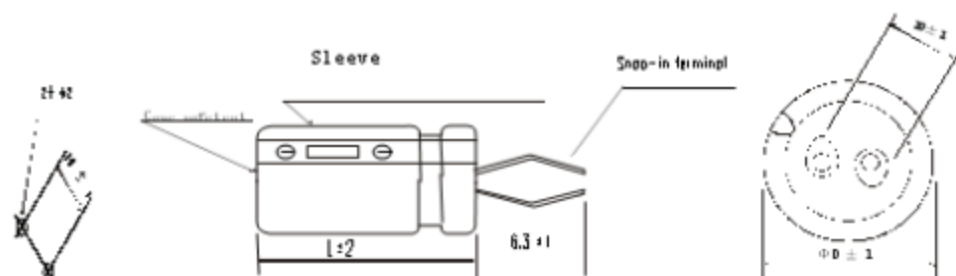
【Table 1】

Rated Voltage VDC	Surge Voltage VDC	Nominal Static Capacitance (μF)	Tolerance on Capacitance (%) 20°C 120Hz	Dissipation Factor (tan δ) max 20°C 120Hz	Leakage Current 5min. 20°C (μA)	Permissible Ripple Current (Arms) 105°C 120Hz
450	500	220	-20~+20	0.20	1500	0.94

3

Shape and Dimensions

Unit (mm)



PCB hole dimensions

Unit(mm)

φ D+0.5Max	L+2.0Max	F±0.5
25	35	10.0

4. Marking

Following items are printed with white color on black color sleeve

	CH	①	① Rated voltage & Nominal Capacitance
	CD294	②	② Polarity (negative)
	220UF450V	③	③ Trade Mark
	VENT 105 °C	④	④ Symbol of Capacitance Tolerance (M)
		⑤	⑤ Max Operating Temp.

5. MULTIPLIER FOR RIPPLE CURRENT

①. Frequency Coefficient

Cap(μF) \ Freq.(Hz)	60(50)	120	300	1K	10K
220	0.8	1	1.25	1.34	1.5

②. Temperature Coefficient

Ambient Temperature(°C)	40	60	70	85	105
Coefficient	2.4	2.1	1.78	1.65	1

6. Characteristics

No.	Item	Performance		Test Method		
1	Leakage Current	I = 1500 μ A Whichever is smaller (After 2 min)		Protection Resistor : 1000 \pm 10 Ω Applied Volt : Rated Voltage Measuring time : 2minutes		
2	Static Capacitance	-20 ~ +20		Measured Frequency : 120Hz \pm 20% Measured Voltage \leq 0.5Vrms, 1.5 ~ 2.0VDC		
3	Dissipation Factor (tan δ)	0.20 and Under		Same as condition of Capacitors		
4	High Temp. Load Characteristics	Leakage Current	\leq the value specified in Table 1	The capacitor can work for 2000 H under normal		
		Cap. Change	$\leq \pm 20\%$ of initial value			
		Dissipation Factor	$\equiv 200\%$ of value specified in Table 1			
		Appearance	No remarkable abnormality			
5	High Temp. no load Characteristics	Leakage Current	\leq the value specified in Table 1	The capacitor can be placed for 1000H under normal conditions		
		Cap. Change	$\leq \pm 20\%$ of initial value			
		Dissipation Factor	$\equiv 200\%$ of value specified in Table 1			
		Appearance	No remarkable abnormality			
6	Terminal Strength	Tensile Strength	45N {4.5kg}	Keeping time Tensile 1~5sec Bending 30 \pm 5sec		
		Bending Strength	25N {2.5kg}			
7	Impedance Ratio	W V	450			
		Z(-25 $^{\circ}$ C) / Z(+20 $^{\circ}$ C)	4			
		Z(-40 $^{\circ}$ C) / Z(+20 $^{\circ}$ C)	/			
8	Temperature Characteristics	Stage	Item	Performance	Stage	Test Temp($^{\circ}$ C)
		2,3	Impedance Ratio	less than the value mentioned in 5-7,	1	20 \pm 2
		5	Cap. Change	$\leq \pm 25\%$ against value in stage 4	2	-25 \pm 3;
					3	-40 \pm 3;
			After the capacitor is held at temperature of each stage and reaches temperature stability, measure performance.	4	20 \pm 2	
				5	105 \pm 2	
6	20 \pm 2					
9	Surge Voltage	Item	Performance	Test Temp. 15~35 $^{\circ}$ C Test volt. Surge Volt. Specified in 2 Voltage apply. 1,000times of chage for 30 \pm 5sec, under frequency of 6 \pm 0.5sec, and discharge for 5min30sec.		
		Leakage Current	\leq the initial specified value			
		Cap. Change	$\leq \pm 15\%$ against value before test			
		Dissipation Factor	\leq the initial specified value			
		Appearance	No remarkable abnormality			
Drawing						

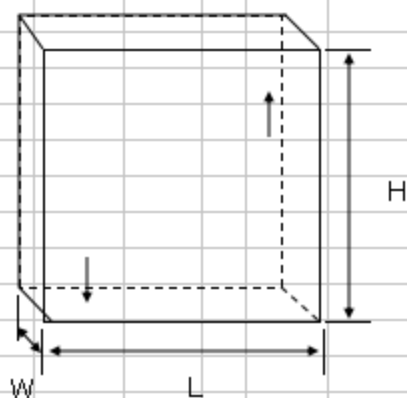
6-2 Characteristics

No.	Item	Performance		Test Method	
10	Vibration	Capacitance	Stability required		
	Resistance	Cap. Change	$\leq \pm 5\%$ of the initial specified value		
		Appearance	No remarkable abnormality		
Frequency : 10~55Hz/1min. Width of vibration, 1.5mm Direction and duration X, Y and Z directions, each for 2 hours (Total 9 hours)					
11	Solderability	3/4 area of surrounding directions of surface should be covered with new solder.		Solder: Sn-Ag, Sn-Cu Type Soldering Temp : 240 \pm 5 $^{\circ}$ C Dipping degree : 2~2.5mm Flux : Ethanol solution (JIS K8101) or Isopropylalcohol (JIS K8839) solution of Rosin (JIS K5902)	
12	Resistance to Soldering	Leakage Current	\leq Initial specified value	Soldering Temp. 280 \pm 5 $^{\circ}$ C	
		Cap. Change	$\leq \pm 10\%$ of initial value	Soldering Time . 10 \pm 1 sec.	
	Dissipation Factor	\leq Initial specified in value			
	Appearance	No remarkable abnormality			
13	Resistance to Humidity	Leakage Current	\leq Initial specified value	Test Temp. : 40 \pm 2 $^{\circ}$ C	
		Cap. Change	$\leq \pm 15\%$ of initial value	Humidity 90~95%	
	Dissipation Factor	\leq Initial specified value	Test Time : 500 \pm 8 hours		
	Appearance	No remarkable abnormality	After the above condition,restored to normal temp, and then measured.		
14	Perssure valve moment characteristics	There must not be thing ignition, scattering the resolution that that case works safely		Dcmethod: impress the reverse voltage and of 1A, I cancel an electric current.	

The above data is for reference only, the service life depends on the working environment temperature, continuous working time, current size and many other factors, the actual results may be different.

7.Packing method

5-1 Packaging shape, size, quantity



Component size	Quantity per	Symbol of box	L	H	W
D25X35L	PCS	Y-2	480	320	320

8 Related Standards JIS C 5141

9 Marking on packing box

- ① Item name
- ② Series name
- ③ Rated Voltage
- ④ Nominal Static Capacitance
- ⑤ Case size
- ⑥ Lot No.
- ⑦ Quantity

10.Soldering

Soldering by soldering iron

Temperature of iron tip : 270~350°C

Operating time : within 3 sec.

Flow soldering.

Preheat : PCB surface temperature 120°C±5°C

Solder Temp : 260°C±5°C

Solder Dipping Temp. : 2~4sec.

11.Cleaning of PC board after soldering

Using following solvents is possible but make sure following condition

Solvent

IPA or Alcoholic agent like Pinealpha ST-100S, Cleanthrough 750H, 750L, 710M, 750K,
or Technocare FRW-14~17

① Cleaning should be made by ultrasonic within 5min, at the temperature less than 60°C.

② Control of pollution is necessary (conductivity,pH, specific gravity, water volume)

③ Please do not keep near cleaning agent. Please do not store in air-tight container.

Please let it dry by hot air at the temperature less than maximum operating temp.



东莞市创慧电子有限公司

Dong Guan Chuang Hui Electronics Factory

TEST DATA SHEET OF ELECTROLYTIC CAPACITORS (数据测试表)

DATE (日期):	2024/4/10	QUANTITY (数量):	10	PCS
CUSTOMER (客户):	华秋	BRAND(商标):	CH	SERIES(型号) CD294
RATINGS (规格):	450V220UF	CASE SIZE (尺寸):	D25X35L	

Capacitance	Max.TAN δ	Max.Leakage	Max.Impedance	Max.Ripple	WORKING	SURGE
Tolerance at	at 120 Hz	Current(μ A)	(Ω)	Current(Arms)	TEMP	VOLT.
120Hz/25 $^{\circ}$ C	25 $^{\circ}$ C	After2min.	At100KHz/25 $^{\circ}$ C	At120HZ/ 105 $^{\circ}$ C	($^{\circ}$ C)	(V)
-20~+20	20%	1500	/	0.94	-40 $^{\circ}$ C ~ +105 $^{\circ}$ C	500

NO.	CAPACITANCE (μ F)	TAN δ (%)	Leakage Current (μ A)	Impedance (Ω)	Remarks
1	200.2	5.12	112.2		
2	201.2	5.22	102.2		
3	201.5	5.14	105.0		
4	201.0	5.22	115.4		
5	201.5	5.26	116.2		
6	201.2	5.21	114.5		
7	202.1	5.21	112.7		
8	201.5	5.54	116.8		
9	201.5	5.54	118.7		
10	204.2	5.56	114.5		
MIN.	200.2	5.12	102.2		
MAX.	204.2	5.56	118.7		
AVE.	201.6	5.30	112.8		

核准	刘劲松	审核	魏小容	制作	邓瑶玲
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ADDR.: 东莞市谢岗镇金川工业区创慧产业园

TEL: 0769-87633398 FAX: 0769-87633399

Web Site: http: Email: dg-chuanghui@tom.com