CA45L Series Epoxy Molded Solid Electrolytic Chip Tantalum Capacitor

Features

- Epoxy molded encapsulation, Chip, Heteropolarity;
- Small in size , Light in Weight , Stable in electrical &storage performances , Long life-span , High reliability ;
- Low ESR, High Frequency Performance;
- Applying in Satellite , Telecommunications , DV , Computer , such Electrical Equipments with High reliable SMT DC& Impulse Circuit, which has high demanding in high-frequency electronic character;
- Operative Standard: QJ/PWV305-2008;

Brief Introduction

- Operating Temperature Range: -55℃~+125℃(when >85℃ , with rated voltage derating)
- Rated Voltage, Category Voltage, Nominal Capacitance: See Table 3;
- Capacitance Tolerance: K: ±10% ; M:±20%;
- DC Leakage at 25℃ : $I_0 \leq 0.01 C_R U_R$(μA) or 0.5μA (Choose the greater one) ;
- Dissipation Factors (tgδ) at 25℃ : Not exceed the parameter in Table 3;
- ESR: Not exceed the parameter in Table 3;
- Temperature Characteristics : Not exceed the parameter in Table 2;
- Dimensions: See Table1& Figure;

Dimensions--Millimeters

Case Code	L±0.2	W_1±0.2	H±0.2	S±0.2	W_2±0.2
A	3.2	1.6	1.6	0.8	1.2
B	3.5	2.8	1.9	0.8	2.2
C	6.0	3.2	2.5	1.3	2.2
D	7.3	4.3	2.8	1.3	2.4
E	7.3	4.3	4.1	1.3	2.4
V	7.3	6.1	3.6	1.35	3.0

Outline Drawings

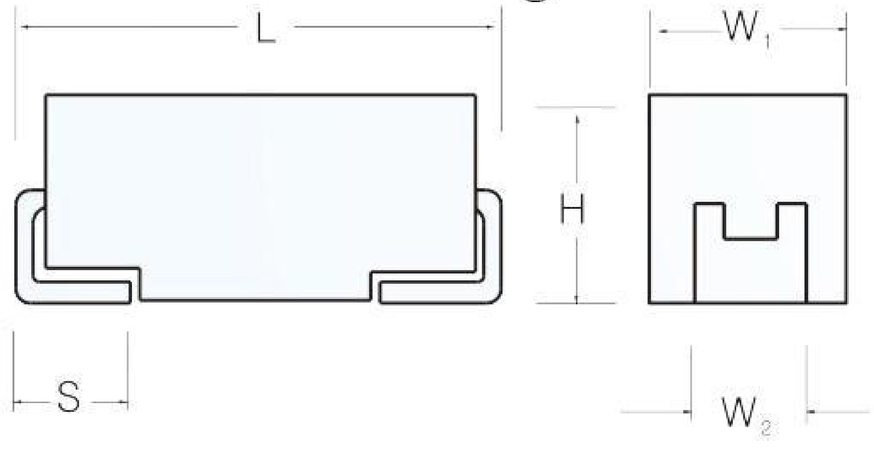

Table2 Temperature Characteristics

Max					
tgδ(%) DF(%)				(μA)DCL	
-55℃	25℃	85℃	125℃	85℃	125℃
6	4	6		$8 I_0$	$10 I_0$
8	6	8			
10	8	10			
12	10	12			
14	12	14			

Table3 Electrical Characteristics

Nominal Capacitance (μF)	Case Code	Max DCL(100Hz) at +25℃μA	Max DF(100kHz) at +25℃	Max ESR (100 kHz) +25℃ Ω
Rated Voltage 4V, Category Voltage 2.7V				
2.2	A	0.5	6.0	6.0
3.3	A	0.5	6.0	6.0
4.7	A	0.5	6.0	3.5
4.7	B	0.5	6.0	3.0
6.8	A	0.5	6.0	3.0
6.8	B	0.5	6.0	2.0
10	A	0.5	6.0	2.0
10	B	0.5	6.0	1.5
15	B	0.6	6.0	1.8
15	C	0.6	6.0	1.2
22	B	0.9	6.0	1.6
22	C	0.9	6.0	0.6
33	B	1.3	6.0	1.2
33	C	1.3	6.0	0.9
33	D	1.3	6.0	0.6
47	B	1.9	6.0	0.9
47	C	1.9	6.0	1.0
47	D	1.9	6.0	0.3
68	C	2.7	6.0	0.6
68	D	2.7	6.0	0.25
100	C	4.0	8.0	0.5
100	D	4'0	8.0	0.2
150	C	6.0	8.0	0.5
150	D	6.0	8.0	0.35
150	E	6.0	8.0	0.15
220	D	8.8	10.0	0.3
220	E	8.8	10.0	0.15
330	E	13	10.0	0.2
330	V	13	10.0	0.2
470	E	19	12.0	0.15

Nominal Capacitance (μF)	Case Code	Max DCL(100Hz) at +25℃μA	Max DF(100kHz) at +25℃	Max ESR (100 kHz) +25℃ Ω
Rated Voltage 4V, Category Voltage 2.7V				
470	V	19.0	12.0	0.15
Rated Voltage 6V, Category Voltage 4V				
1.5	A	0.5	6.0	6.0
2.2	A	0.5	6.0	6.0
3.3	A	0.5	8.0	6.0
4.7	A	0.5	6.0	4.0
4.7	B	0.5	6.0	3.5
6.8	A	0.5	6.0	2.5
6.8	B	0.5	6.0	2.0
10	A	0.6	6.0	2.0
10	B	0.6	6.0	1.8
15	B	0.9	6.0	1.8
15	C	0.9	6.0	0.6
22	B	1.4	6.0	1.2
22	C	1.4	6.0	0.8
33	B	2.0	6.0	1.2
33	C	2.0	6.0	0.8
47	B	2.9	6.0	0.6
47	C	2.9	6.0	0.5
47	D	2.9	6.0	0.3
68	C	4.1	6.0	0.5
68	D	4.1	6.0	0.2
100	C	6.0	8.0	0.4
100	D	6.0	8.0	0.2
100	E	6.3	8.0	0.15
150	C	9.0	8.0	0.5
150	D	9.0	8.0	0.3
150	E	9.0	8.0	0.15
220	E	13.2	8.0	0.2
220	V	13.2	8.0	0.2

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Nominal Capacitance (μF)	Case Code	Max DCL(100Hz) at +25℃μA	Max DF(100kHz) at +25℃	Max ESR (100 kHz) +25℃ Ω
tage 6V, Category Voltage 4V				
330	E	19.8	8.0	0.2
330	V	19.8	10.0	0.2
470	E	28.2	12.0	0.15
470	V	28.2	12.0	0.15
Rated Voltage10V, Category Voltage 7V ategory Vc				
1.0	A	0.5	4.0	6.0
1.5	A	0.5	4.0	6.0
2.2	A	0.5	6.0	6.0
2.2	B	0.5	6.0	5.0
3.3	A	0.5	6.0	5.0
3.3	B	0.5	6.0	3.5
4.7	A	0.5	6.0	3.5
4.7	B	0.5	6.0	2.0
6.8	A	0.7	6.0	3.0
6.8	B	0.7	6.0	2.1
10.0	A	1.0	6.0	2.5
10.0	B	1.0	6.0	1.5
10.0	C	1.0	6.0	0.8
15.0	B	1.5	6.0	1.2
15.0	C	1.5	6.0	0.6
22.0	B	2.2	6.0	1.0
22.0	C	2.2	6.0	0.7
22.0	D	2.2	6.0	0.5
33.0	B	3.3	6.0	0.5
33.0	C	3.3	6.0	1.5
33.0	D	3.3	6.0	0.3
47.0	C	4.7	8.0	0.4
47.0	D	4.7	6.0	0.3
68.0	C	6.0	6.0	0.6
68.0	D	6.0	6.0	0.3
68.0	E	6.0	6.0	0.2
100	C	10	8.0	0.5
100	D	10	8.0	0.2
150	E	8.0	8.0	0.15
150	D	8.0	8.0	0.2
220	E	22	10.0	0.2
220	V	22	10.0	0.2
330	E	33	10.0	0.18
330	V	33	10.0	0.18
470	E	47	12.0	0.15
470	V	47	12.0	0.15

Nominal Capacitance (μF)	Case Code	Max DCL(100Hz) at +25℃μA	Max DF(100kHz) at +25℃	Max ESR (100 kHz) +25℃ Ω
Rated Voltage 16V, Category Voltage 10V				
0.68	A	0.6	4.0	8.0
1.0	A	1.0	4.0	6.0
1.5	A	1.5	6.0	6.0
1.5	B	1.5	6.0	0.5
2.2	A	2.2	6.0	5.0
2.2	B	2.2	6.0	3.0
3.3	A	0.5	6.0	5.0
4.7	A	0.5	6.0	3.0
4.7	B	0.5	6.0	2.0
6.8	A	1.1	6.0	3.0
6.8	B	1.1	6.0	1.5
6.8	C	1.1	6.0	1.0
10.0	B	1.6	6.0	1.2
10.0	C	1.6	6.0	0.8
15.0	B	2.4	6.0	1.2
15.0	C	2.4	6.0	0.6
15.0	D	2.4	6.0	0.6
22.0	C	3.6	6.0	0.4
22.0	D	3.6	6.0	0.5
33.0	C	5.3	6.0	0.5
33.0	D	5.3	6.0	0.3
47.0	C	7.6	6.0	0.6
47.0	D	7.6	6.0	0.3
47.0	E	7.6	6.0	0.2
68.0	D	11.0	6.0	0.2
68.0	E	11.0	6.0	0.2
100	D	16.0	8.0	0.2
100	E	16.0	8.0	0.2
150	D	24.0	8.0	0.5
150	E	24.0	8.0	0.2
220	E	35.0	10.0	0.2
220	V	35.0	10.0	0.2
330	E	52.0	10.0	0.18
330	V	52.0	10.0	0.18
Rated Voltage 20V, Category Voltage 15V				
2.2	A	0.5	6.0	4.5
2.2	B	0.5	6.0	2.5
3.3	A	0.7	6.0	4.0
3.3	B	0.7	6.0	3.0
3.3	C	0.7	6.0	2.5
4.7	B	1.0	6.0	1.5

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Nominal Capacitance (μF)	Case Code	Max DCL(100Hz) at +25℃μA	Max DF(100kHz) at +25℃	Max ESR (100 kHz) +25℃ Ω
Rated Voltage 20V, Category Voltage 15V				
4.7	C	1.0	6.0	1.0
6.8	B	1.4	6.0	1.0
6.8	C	1.4	6.0	0.8
6.8	D	1.4	6.0	0.7
10.0	B	2.0	6.0	1.8
10.0	C	2.0	6.0	0.6
10.0	D	2.0	6.0	0.5
15.0	C	3.0	6.0	1.0
15.0	D	3.0	6.0	1.7
22.0	C	4.4	6.0	0.8
22.0	D	4.4	6.0	0.4
33.0	C	6.6	6.0	0.8
33.0	D	6.6	6.0	1.2
47.0	C	9.7	6.0	0.6
47.0	D	9.7	6.0	0.25
47.0	E	9.7	6.0	0.25
68.0	E	13.6	6.0	0.25
68.0	V	13.6	6.0	0.25
100	E	20.0	8.0	0.25
100	V	20.0	8.0	0.25
150	E	30.0	8.0	0.18
220	V	44.0	10.0	0.18
Rated Voltage 25V, Category Voltage 17V				
0.33	A	0.5	4.0	10.0
0.47	A	0.5	4.0	9.0
0.68	A	0.5	4.0	5.5
1.0	A	0.5	4.0	7.0
1.0	B	0.5	4.0	4.0
1.5	A	0.5	6.0	4.5
1.5	B	0.5	6.0	3.0
2.2	B	0.6	6.0	2.5
2.2	C	0.6	6.0	2.0
3.3	B	0.9	6.0	2.0
3.3	C	0.9	6.0	1.2
4.7	B	1.2	6.0	1.5
4.7	C	1.2	6.0	1.0
6.8	B	1.7	6.0	2.5
6.8	C	1.7	6.0	1.0
10	B	2.5	6.0	2.5
10	C	2.5	6.0	1.0
15	C	3.8	6.0	0.5

Nominal Capacitance (μF)	Case Code	Max DCL(100Hz) at +25℃μA	Max DF(100kHz) at +25℃	Max ESR (100 kHz) +25℃ Ω
Rated Voltage 25V, Category Voltage 17V				
15	D	3.8	6.0	0.4
22	C	5.5	6.0	0.8
22	D	5.5	6.0	0.4
33	D	7.5	6.0	0.3
33	E	7.5	6.0	0.25
47	E	11.8	6.0	0.3
47	V	11.8	6.0	0.3
68	E	17	6.0	0.25
68	V	17	6.0	0.25
Rated Voltage 35V, Category Voltage 23V				
0.1	A	0.5	4.0	12.0
0.15	A	0.5	4.0	10.0
0.22	A	0.5	4.0	8.0
0.33	A	0.5	4.0	7.0
0.47	A	0.5	4.0	4.0
0.47	B	0.5	4.0	4.0
0.68	A	0.5	4.0	7.0
0.68	B	0.5	4.0	3.5
1.0	A	0.5	4.0	6.0
1.0	B	0.5	6.0	3.0
1.5	B	0.6	6.0	3.0
1.5	C	0.6	6.0	2.5
2.2	B	0.8	6.0	2.5
2.2	C	0.8	6.0	2.0
3.3	C	1.3	6.0	1.2
3.3	D	1.3	6.0	1.0
4.7	C	1.8	6.0	0.8
4.7	D	1.8	6.0	0.7
6.8	C	2.7	6.0	0.7
6.8	D	2.7	6.0	0.6
10	C	4.0	6.0	0.7
10	D	4.0	6.0	0.4
15	D	6.0	6.0	0.35
15	E	6.0	6.0	0.3
22	E	8.8	6.0	0.3
22	V	8.8	6.0	0.3
33	E	11.0	6.0	0.3
33	V	11.0	6.0	0.3
Rated Voltage 50V, Category Voltage 33V				
0.1	A	0.5	4.0	12.0
0.15	A	0.5	4.0	8.0

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Nominal Capacitance (μF)	Case Code	Max DCL(100Hz) at +25℃μA	Max DF(100kHz) at +25℃	Max ESR (100 kHz) +25℃ Ω
Rated Voltage 50V, Category Voltage33V				
0.22	A	0.5	4.0	10.0
0.22	B	0.5	4.0	6.0
0.33	A	0.5	4.0	8.0
0.33	B	0.5	4.0	5.0
0.47	B	0.5	4.0	3.0
0.68	B	0.5	4.0	3.0
0.68	C	0.5	4.0	2.0
1.0	B	0.5	4.0	3.0
1.0	C	0.5	4.0	1.8
1.5	C	0.7	6.0	1.8

Nominal Capacitance (μF)	Case Code	Max DCL(100Hz) at +25℃μA	Max DF(100kHz) at +25℃	Max ESR (100 kHz) +25℃ Ω
Rated Voltage 50V, Category Voltage33V				
1.5	D	0.7	6.0	1.0
2.2	C	1.1	6.0	1.5
2.2	D	1.1	6.0	0.7
3.3	C	1.6	6.0	1.2
3.3	D	1.6	6.0	0.7
4.7	D	2.3	6.0	0.6
6.8	D	3.4	6.0	0.6
6.8	E	3.4	6.0	0.5
10	E	5.0	6.0	0.4
10	V	7.5	6.0	0.4

P.S. : 1 Please do not use mul timeter through the measuring procedures.

2 Capacitance and DF measured at :100Hz , U _ =2.2°$_{-1.0}$V , U~=1.0°$_{-0.5}$V,Frequency=100Hz.Test only applied in series equivalent circuit.

3 Voltage derating is applied at +125℃. (The DCL parameter should be read after 5minutes when it connected to the circuit) .

4 Special size and demand could consult with us.