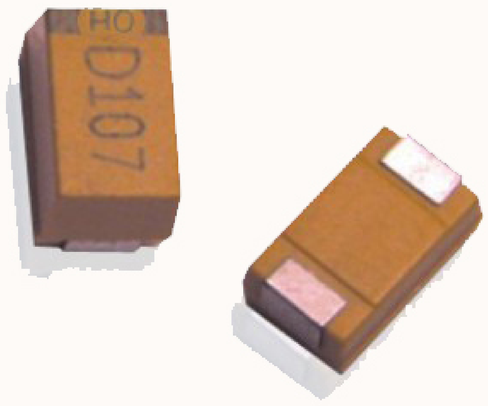
CA55 Series Conductive Polymer Electrolytic Chip Tantalum Capacitor

Brief Introduction



- Epoxy molded encapsulation, Chip, Small in size, Light in weight,Heteropolarity;
- Stable in electrical &storage performances , Long life-span, High reliability;
- Conductive Polymer Electrolytic , Super Low ESR, High Frequency Properties, Enduring Ripple Current;
- No Combustion Failure Mode;
- 100% Passed Surge Current Texting;
- Applying in Satellites, Comminication-Equipments, Cameras, PC such Electrical Equipments with DC& Impulse Circuit for Military and Civil use;
- Operative Standard: QJ/PWV501-2011;

Features

- Operating Temperature Range: -55℃~+125℃(when >85℃ , with rated voltge derating);
- Rated Voltage, Category Voltage, Nominal Capacitance: See Table 2;
- Capacitance Tolerance: K: ±10% ; M:±20%;
- DC Leakage & DF (tgδ) at 25℃ : Not exceed the parameter in Table 3;
- AC Ripple Current (85℃、100KHz) : Not exceed the parameter in Table 4;
- ESR (25℃、100KHz) : Not exceed the parameter in Table 5;
- Temperature Characteristics: Not exceed the parameter in Table 3;
- Dimensions and Case Code: See Figure1 &Table 1;

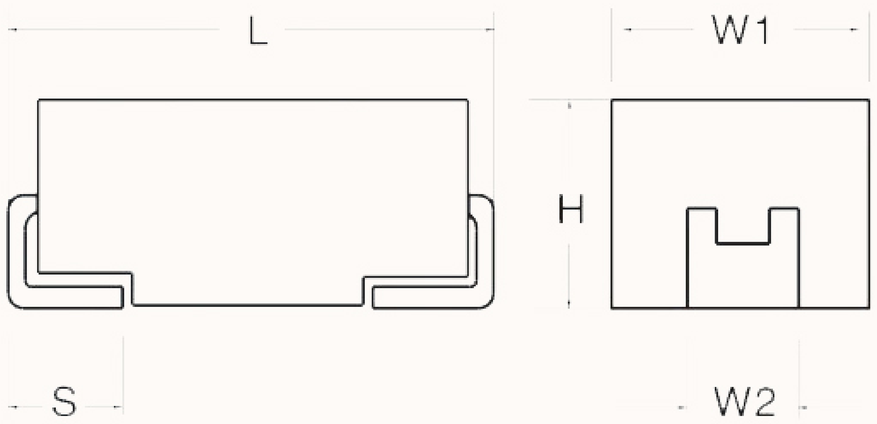


图1

Table1 Demensions(mm)

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

Table2 Temperature Characteristics

Case Code	Range of Capacitance (%)			Max						
				tgδ(%)				DCL		
	-55℃	85℃	125℃	-55℃	25℃	85℃	125℃	25℃	85℃	125℃
A	±10	±20	±30	10	8	10	10	$I_0 \leq 0.1U_RC_R$	$8I_0$	$10I_0$
B										
C										
D				12	10	12	12			
E										

Table3 Electrical Characteristics

Rated Voltage	2.5	4	6.3	10	16	25
Derating Voltage	1.7	2.7	4	7	10	17
Nominal Capacitance	Case(Standard Size, Small Size)					
10				B/A	B	C
15		B/A	B/A	B/A	B	D
22		B	B	B	C	E
33		C	C	C	D	E
47		C/B	C/B	C/B	D	
68		C	C	C	D/E	
100		C	D	D	D	
150		D	D	D	E	
220		D	D	D	E	
330		D	E	E		
470	C	D	E			
680	D	E				
1000	E					

P.S. 1 UR is Rated Voltage, CR is Nominal Capacitance .

2 Capacitance and DF measured at : (120±5) Hz , U _ =2.2°$_{-1.0}$V , U~=1.0°$_{-0.5}$V, Frequency=100Hz.

3 DCL Measuring Conditions: Applying Rated Voltage, the Charging Interval can not exceed 5min(when testing under125℃, please applying Category Voltage.)

Table4 AC Ripple Current at 85℃

Rated Voltage	2.5	4	6.3	10	16	25
Nominal Capacitance	AC Ripple Current（85℃，100KHz）A					
10				1.0	1.1	1.0
15		0.7	0.7	1.0	1.2	1.2
22		0.7	0.7	1.0	1.2	1.2
33		0.9	0.9	1.0	1.3	1.5
47		0.9	0.9	1.0	1.3	
68		1.0	1.0	1.3	1.3	
100		1.0	1.0	1.3	1.3	
150		1.0	1.5	1.5	2.2	
220		1.4	1.6	1.7	2.2	
330		1.6	1.6	1.8		
470	1.6	1.7	1.8			
680	2.0	2.0				
1000	2.5					

Table5 ESR at 25℃

	2.5	4	6.3	10	16	25
	ESR（25℃，100KHz）Ω					
10				0.08	0.1	0.1
15		0.1	0.1	0.08	0.1	0.08
22		0.09	0.09	0.08	0.08	0.08
33		0.08	0.06	0.06	0.05	0.08
47		0.07	0.06	0.05	0.06	
68		0.07	0.06	0.05	0.05	
100		0.05	0.06	0.05	0.06	
150		0.06	0.055	0.05	0.05	
220		0.06	0.05	0.04	0.05	
330		0.04	0.04	0.04		
470	0.05	0.04	0.04			
680	0.04	0.035				
1000	0.03					

P.S. Capacitance and DF measured at：（Frequency=（100±5）Hz，U _ =2.2-1.00V，U~=1.0-0.50V）