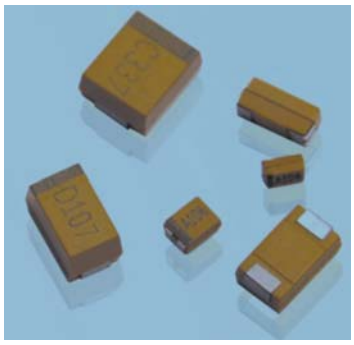
CA45U Series High Frequency Epoxy Molded Solid Electrolytic Chip Tantalum Capacitor

※(Can replace KEMET's T495,AVX's TPS,VISHAY's TR3 Series' Low ESR Capacitors)

Brief Introduction



●Epoxy molded encapsulation,Chip,Heteropolarity;

●Small in size,Light in weight,Stable in electricial performances,High Reliability & Frequency & Capacitance,Low ESR(is equal to KEMET's CA45U),High Capacitance;

●Applying in Satellites,Communications,Camera Shooting,Computers,such equipments with High-reliable SMT circuit;

●Operative Standard:QJ/PWV330-2010;

●Ordering Information:CA45U-157K016ET:1000 pcs.

Features

●Operating Temperature Range: -55°C~+125°C(When ＞85°C,with rated voltage derating);

●Capacitance Tolerance:K:±10%；M:±20%;

●DC Leakage at 25°C：$I_0 \leqslant 0.01 C_R U_R$(μA) or 0.5μA（Choose the greater one）;

●Dimensions:See Figure1 & Table1;

●Dissipation Factors (tgδ) at 25°C & Temperature Characteristics:See table 2;

●Rated Voltage,Category Voltage,Surge Voltage,Nominal Capacitance:See Table 3;

●ESR(Ω): Not exceed the parameter in Table 3.

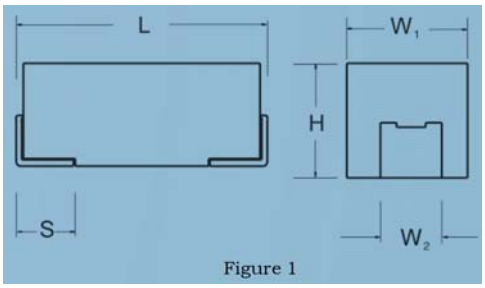


Figure 1

Table1 Dimensions (mm)

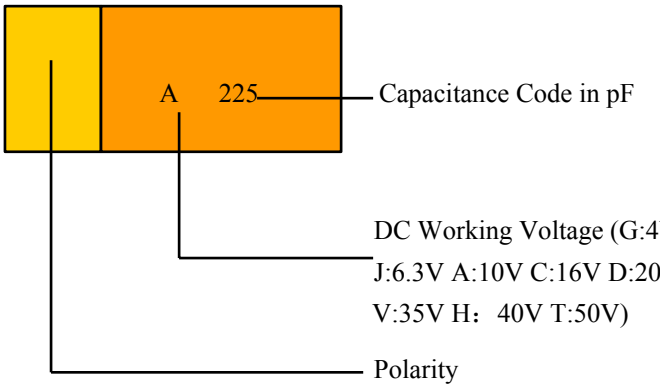
Case Code	L±0.2	W_1±0.2	H±0.2	S±0.2	W_2±0.2
C	6.0	3.2	2.5	1.3	2.2
D	7.3	4.3	2.8	1.3	2.4
E	7.3	4.3	4.1	1.35	2.4

Table2 Temperature Characteristics

Max					
tgδ(%) DF(%)				DCL (μA)	
-55℃	25℃	85℃	125℃	85℃	125℃
6	4	6		8 I 。	10 I 。
8	6	8			
10	8	10			
12	10	12			
14	12	14			
18	16	18			

Marking Specification

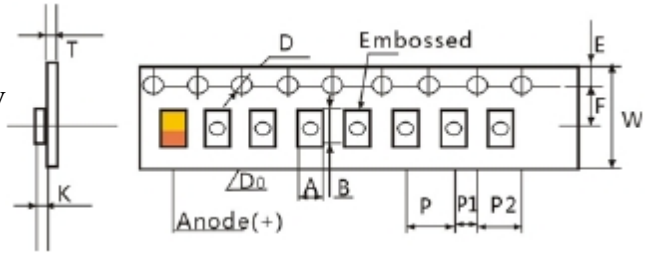
For example:10V2.2μF



Packing

T=Tape and reel
B=bulk pack

Taping and Packing



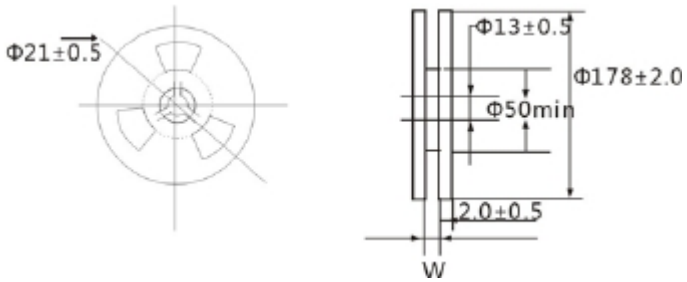
Carrier Tape Dimension

Unit:mm

Case Size	A±0.2	B±0.2	P±0.1	E±0.1	F±0.1	W±0.1
A	1.90	3.50	4.00	1.75	3.50	8.00
B	3.10	3.80	4.00	1.75	3.50	8.00
C	3.60	6.40	8.00	1.75	3.50	12.00
D	4.70	7.70	8.00	1.75	3.50	12.00
E	4.60	7.60	8.00	1.75	3.50	12.00
V	6.40	7.60	8.00	1.75	4.40	12.00

Reel Dimensions

Unit:mm



Case Code	W	Qty/reel
A、B	$8.4^{+1.5}_{0}$	2000
C、D	$12.4^{+2.0}_{0}$	500
E	$12.4^{+2.0}_{0}$	400
V	$12.4^{+2.0}_{0}$	400

Ordering Information

CA45L	105	M	035	A	T
Type	Capacitance Code	Tolerance	DC voltage	Case Size	Packaging
Chip Tantalum Capacitor	105 = $10x10^5$pF=1μF 105 $10x10^5$(pF)this is expressed in pico farads, the first two digits are the significant figures,the third is the number of zeros to follow	K=±10% M=±20%	4V=004 6.3V=006 10V=010 16V=016 20V=020 25V=025 35V=035 40V=040 50V=050 63V=063 75V=075 100V=100	A:3.2*1.6 B:3.5*2.8 C:6.0*3.2 D:7.3*4.3 E:7.3*4.3 V:7.3*6.1	T=Tape and reel B=bulk pack

Table 3 Electrical Characteristics

Nominal Capacitance（μF)	Case Code	Max DCL at 25℃ (μA)	Max DF(100Hz) at 25℃ (%)	Max ESR (100KHz) at 25℃ (Ω)	Ripple Current (A) 100KHz Max		
					+25℃	+85℃	+125℃
Rated Voltage 4V,Category Voltage 2.7V							
68	C	2.7	6.0	0.2	0.307	0.277	0.123
100	C	4.0	8.0	0.2	0.307	0.277	0.123
150	C	6.0	8.0	0.2	0.307	0.277	0.123
220	D	8.8	10.0	0.1	0.396	0.357	0.159
330	D	13	10.0	0.1	0.396	0.357	0.159
470	D	19	12.0	0.1	0.396	0.357	0.159
680	E	27	16.0	0.1	1.535	1.381	0.614
1000	E	40	16.0	0.07	1.535	1.381	0.614
Rated Voltage 6V,Category Voltage 4V							
15	C	0.9	6.0	0.4	0.926	0.833	0.370
22	C	1.4	6.0	0.35	0.926	0.833	0.370
33	C	2.0	6.0	0.3	0.926	0.833	0.370
47	C	2.9	6.0	0.2	0.926	0.833	0.370
68	C	4.1	6.0	0.2	0.926	0.833	0.370
68	D	4.1	8.0	0.175	0.926	0.833	0.370
100	C	6.0	8.0	0.2	0.856	0.770	0.342
100	D	6.0	8.0	0.15	0.913	0.822	0.365
150	C	9.0	8.0	0.2	0.742	0.668	0.297
150	D	9.0	8.0	0.15	0.742	0.668	0.297
220	D	13.2	10.0	0.1	1.225	1.102	0.490
330	D	19.8	10.0	0.1	1.225	1.102	0.490
330	E	19.8	10.0	0.1	1.285	1.156	0.514
470	D	28.2	12.0	0.1	1.095	0.986	0.438
470	E	28.2	12.0	0.1	1.095	0.986	0.438
680	E	40.8	12.0	0.1	1.593	1.434	0.637
1000	E	60.0	16.0	0.1	1.816	1.634	0.726

Table 3 Electrical Characteristics

Nominal Capacitance（μF)	Case Code	Max DCL at 25℃ (μA)	Max DF(100Hz) at 25℃ (%)	Max ESR (100KHz) at 25℃ (Ω)	Ripple Current (A) 100KHz Max		
					+25℃	+85℃	+125℃
Rated Voltage 10V,Category Voltage 6.3V							
10.0	C	1.5	6.0	0.5	0.565	0.508	0.226
15.0	C	1.5	6.0	0.4	0.565	0.508	0.226
22.0	C	2.2	6.0	0.345	0.565	0.508	0.226
33.0	C	3.3	6.0	0.3	0.565	0.508	0.226
47.0	D	4.7	6.0	0.2	0.866	0.780	0.346
68.0	D	6.0	6.0	0.15	1.000	0.900	0.400
100	D	10	8.0	0.1	1.200	1.100	0.490
150	D	8.0	8.0	0.1	1.225	1.102	0.490
220	D	22	10.0	0.125	1.095	0.986	0.438
330	E	33	12.0	0.8	1.095	0.986	0.438
470	E	47	12.0	0.8	1.658	1.492	0.663
Rated Voltage 16V,Category Voltage 10V							
6.8	C	1.1	6.0	0.5	0.132	0.119	0.053
10.0	C	1.6	6.0	0.5	0.132	0.119	0.053
15.0	C	2.4	6.0	0.4	0.632	0.569	0.253
22.0	D	3.6	6.0	0.25	0.632	0.569	0.253
33.0	C	5.3	6.0	0.3	0.632	0.569	0.253
33.0	D	5.3	6.0	0.2	0.816	0.735	0.327
47.0	D	7.5	6.0	0.2	1.000	0.900	0.400
68.0	D	10.9	6.0	0.15	1.000	0.900	0.400
100	E	16.0	6.0	0.125	1.095	0.986	0.438
100	D	16.0	6.0	0.1	1.285	1.156	0.514
150	E	24.0	6.0	0.1	1.285	1.156	0.514
220	E	35.0	10.0	0.1	1.285	1.156	0.514
Rated Voltage 20V,Category Voltage 13V							
4.7	C	2.3	6.0	0.6	0.738	0.665	0.295
6.8	C	3.4	6.0	0.5	0.738	0.665	0.295
10	C	5.0	6.0	0.45	0.738	0.665	0.295
15	D	7.5	6.0	0.275	0.738	0.665	0.295
22	D	11.0	6.0	0.275	0.816	0.735	0.326
33.0	D	5.3	6.0	0.2	0.866	0.780	0.346
47.0	D	7.5	6.0	0.175	0.926	0.833	0.370
47.0	E	7.5	6.0	0.15	1.049	0.944	0.420
68.0	D	10.9	6.0	0.15	1.000	0.900	0.400
68.0	E	10.9	1.0	0.15	1.049	0.944	0.420
100	E	16.0	8.0	0.12	1.049	0.944	0.420
150	E	24	8.0	0.12	1.049	0.944	0.420

Table 3 Electrical Characteristics

Nominal Capacitance（μF)	Case Code	Max DCL at 25℃ (μA)	Max DF(100Hz) at 25℃ (%)	Max ESR (100KHz) at 25℃ (Ω)	Ripple Current (A) 100KHz Max		
					+25℃	+85℃	+125℃
Rated Voltage 25V,Category Voltage 16V							
4.7	C	2.3	6.0	0.6	0.469	0.422	0.188
6.8	C	3.4	6.0	0.5	0.469	0.422	0.188
10	C	5.0	6.0	0.45	0.494	0.445	0.198
15	D	7.5	6.0	0.3	0.738	0.665	0.295
22	D	11.0	6.0	0.3	0.866	0.780	0.346
33.0	D	5.3	6.0	0.3	0.707	0.636	0.283
47.0	D	7.5	6.0	0.25	0.908	0.817	0.363
68.0	E	10.9	6.0	0.2	0.908	0.817	0.363
100	E	16.0	8.0	0.1	0.908	0.817	0.363
Rated Voltage 35V,Category Voltage 20V							
4.7	C	2.3	6.0	0.6	0.428	0.385	0.171
6.8	D	3.4	6.0	0.4	0.612	0.551	0.245
10	D	5.0	6.0	0.3	0.707	0.636	0.283
15	D	7.5	6.0	0.3	0.856	0.771	0.343
22	E	11.0	6.0	0.3	0.775	0.697	0.410
22	D	11.0	6.0	0.3	0.707	0.636	0.283
33.0	C	5.3	6.0	0.25	0.812	0.731	0.325
47.0	D	7.5	6.0	0.3	0.742	0.667	0.297
Rated Voltage 50V,Category Voltage 32V							
2.2	C	1.1	6.0	0.5	0.742	0.667	0.297
2.2	D	1.6	6.0	0.8	0.742	0.667	0.297
3.3	D	1.6	6.0	0.6	0.742	0.667	0.297
4.7	D	2.3	6.0	0.3	0.742	0.667	0.297
6.8	D	3.4	6.0	0.3	0.700	0.600	0.300
10	E	5.0	6.0	0.3	0.742	0.667	0.297
15	E	7.5	6.0	0.3	0.742	0.667	0.297
Rated Voltage 63V,Category Voltage 40V							
1.0	C	0.7	6.0	2.0	0.742	0.667	0.297
1.5	D	0.7	6.0	1.5	0.742	0.667	0.297
2.2	D	0.7	6.0	0.8	0.742	0.667	0.297
3.3	D	1.6	6.0	0.6	0.742	0.667	0.297
4.7	E	2.3	6.0	0.6	0.742	0.667	0.297
6.8	E	3.4	6.0	0.5	0.700	0.600	0.300
10	E	6.3	6.0	0.4	0.742	0.667	0.297

Table 3 Electrical Characteristics

Nominal Capacitance（μF)	Case Code	Max DCL at 25℃ (μA)	Max DF(100Hz) at 25℃ (%)	Max ESR (100KHz) at 25℃ (Ω)	Ripple Current (A) 100KHz Max		
					+25℃	+85℃	+125℃
Rated Voltage 75V,Category Voltage 50V							
1.0	D	0.7	6.0	2.0	0.742	0.667	0.297
1.5	D	0.7	6.0	1.5	0.742	0.667	0.297
3.3	E	1.6	6.0	0.8	0.742	0.667	0.297
4.7	E	2.3	6.0	0.6	0.742	0.667	0.297
6.8	E	3.4	6.0	0.6	0.700	0.600	0.300
Rated Voltage 100V,Category Voltage 63V							
1.5	D	1.5	6.0	2.0	0.742	0.667	0.297
2.2	E	2.2	6.0	1.5	0.742	0.667	0.297
3.3	E	3.3	6.0	0.8	0.742	0.667	0.297

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

2 Capacitance and DF measured at :100Hz，$U_{\_\_}=2.2°_{-1.0}V$，$U\sim=1.0°_{-0.5}V$, 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.