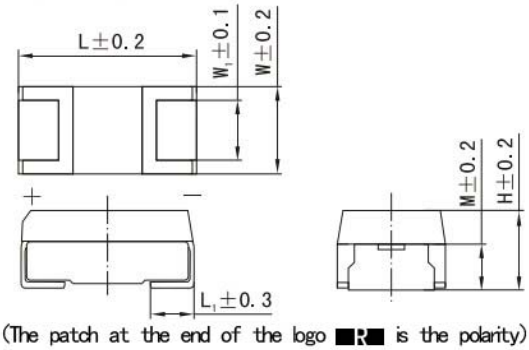
CAK45 Aerospace Grade Series with GJB,Solid Electrolytic Chip Tantalum Capacitor
Executive Standard: CAST/CKZ0601A and CAST/CKX0601/001A

Characteristics and Application

●Molded encapsulation, Good sealing performance, Chip, Small in size, Light in weight,Heteropolarity;
●Excellent and stable in electrical characteristics,High reliability, Long life-span,Stable in storability, Be equal to CWR11 Series in MIL-PRF-55365/8B;
●Aerospace grade, the level of failure rate is at Grde C or higher in the Weibull Distribution;
●Applicable to Astronavigation, Aerospace, Aviation, Weapons, Electronics,Vessels, Telecommunications,such Electrical equipments with SMT DC&Impulse Circuit for Military use.
●Ordering information:CAK45AG-336K016DT; 1500pcs

Main Features

●Operating Temperature Range:-55℃~+125℃（＞85℃ with rated voltage derating）
●Rated Voltage, Derating Voltage, Nominal Capacitance: See table 3
●Capacitance tolerance:J: ±5%;K：±10%; M：±20%
●DC leakage At+25℃: $I_0 \leq 0.01 C_R U_R$ (μA) or 0.5μA（which is greater）
●Dissipation Factors (tgδ) at 25℃: Not exceed the parameter in table 2
●Temperature Characteristics: Not exceed the parameter in table 2
●ESR: Not exceed the parameter in table 4
●Dimensions: See figure 1 and table 1



(The patch at the end of the logo ■R■ is the polarity)
(P.S:The end of the polarity is with no holes for case A and B,and with holes for case C and D)

Figure 1

Table1 Dimensions

mm

Case Code	L	W	H	L_1	W_1	M
A	3.2	1.6	1.6	0.8	1.2	1.0
B	3.5*	2.8	1.9	0.8	2.0	1.2
C	6.0*	3.2*	2.5*	1.3	2.2	1.45*
D	7.3*	4.3*	2.8*	1.3	3.0	1.6*
P.S..The tolerance of the parameters with "*" is ±0.3mm.						

Table2 Temperature Characteristics

Nominal Capacitance CR（μF）	Range of Capacitance (%)			Max					
				tgδ(%)				DCL (μA)	
	-55℃	85℃	125℃	-55℃	25℃	85℃	125℃	85℃	125℃
≤1.0	±10	±10	±12	6	4	6		10Ⅰ。	12Ⅰ。
1．5~68				8	6	8			
100				10	8	10			

P.S. : 1) Capacitance and DF measured at :100Hz,$U_{__}=2.2^{\circ}_{-1.0}$V，$U_{\sim}=1.0^{\circ}_{-0.5}$V.
2) When testing the DCL of Capacitors at 125℃,only derating voltage applied.

Table3 Rated Voltage, Derating Voltage and Nominal Capacitance

Rated Voltage U_R(V)	4	6.3	10	16	20	25	35	40	50
Derating Voltage U_C(V)	2.7	4	7	10	13	17	23	26	33
Case Code	Nominal Capacitance C_R (μF)								
A	2.2 3.3 4.7	1.5 2.2 3.3	1.0 1.5 2.2	0.68 1.0 1.5	0.47 0.68 1.0	0.33 0.47	0.10 0.15 0.22 0.33	0.10 0.15 0.22	0.10
B	6.8 10 15	4.7 6.8 10	3.3 4.7 6.8	2.2 3.3 4.7	1.5 2.2 3.3	0.68 1.0 1.5	0.47 0.68 1.0	0.33 0.47	0.15 0.22 0.33
C	22 33	15 22	10 15 22	6.8 10 15	4.7 6.8	2.2 3.3 4.7	1.5 2.2 3.3	0.68 1.0 1.5	0.47 0.68 1.0
D	47 68 100	33 47 68	33 47	22 33	10 15 22	6.8 10 15	4.7 6.8 10	2.2 3.3 4.7 6.8	1.5 2.2 3.3 4.7

Table 4 ESR values at 25°C

Rated Voltage U_R(V)	4	6.3	10	16	20	25	35	40	50
Nominal Capacitance C_R (μF)	Max ESR(100KHz) Ω								
0.1							24.0	23.0	22.0
0.15							21.0	19.0	17.0
0.22							18.0	16.0	14.0
0.33						15.0	15.0	14.0	12.0
0.47					14.0	14.0	10.0	9.0	8.0
0.68				12.0	12.0	7.5	8.0	7.5	7.0
1.0			10.0	10.0	10.0	6.5	6.5	6.3	6.0
1.5		8.0	8.0	8.0	6.0	6.5	4.5	4.5	4.0
2.2	8.0	8.0	8.0	5.5	5.0	3.5	3.5	3.2	2.5
3.3	8.0	8.0	5.5	5.0	4.0	3.0	2.5	2.4	2.0
4.7	8.0	5.5	4.5	4.0	3.0	2.5	1.5	1.5	1.5
6.8	5.5	4.5	3.5	3.5	2.4	1.4	1.3	1.2	
10	4.0	3.5	3.0	2.5	1.8	1.2	1.1		
15	3.5	3.0	2.5	1.8	1.1	1.0			
22	3.2	2.2	1.8	1.1	0.9				
33	2.2	1.6	1.1	0.9					
47	1.6	1.1	0.9						
68	1.1	0.9							
100	0.9								

P.S. : 1) ESR values at 25°C measured at :(100±5)KHz;$U_{\_\_}$=2.2°$_{-1.0}$V， U~=1.0°$_{-0.5}$V.