

CA42型树脂包封固体电解质钽电容器

CA42 Series Epoxy-Coated Solid Electrolytic Tantalum Capacitor

产品介绍

Brief Introduction

CA42型系列电容器是烧结阳极、树脂包封的固体电解质钽电容器。产品采用优质的抗潮、阻燃性黄色环氧树脂粉末包封，激光打印标志。其性能符合GB7215-87, Q/PWV602-2003。是为电视机、录像机、计算机、程控交换机、电话、仪器、仪表等民用电子整机配套的理想产品。

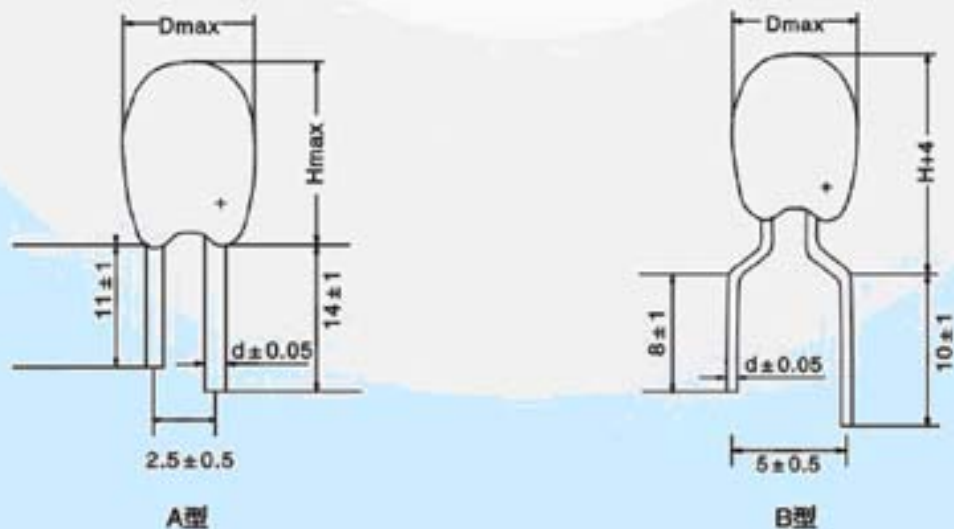


CA42 Series sinter-anode, epoxy-coated solid electrolyte tantalum capacitors are encapsulated with flame-retardant yellow epoxy powder, marked with laser. CA42 Series meets the requirements of standard GB7215-87, Q/PWV602-2003, used in military and civil applications such as TV sets, camcorders, computers, Program-controlled electronic telephone switching system, telephones, instruments and meters.

主要性能

Features

- 使用温度范围：-55℃~+125℃(大于85℃以降额电压使用)
 - 漏电流：25℃时 $I_L \leq 0.02C_r U_r$ 或 1 μ A(取大者)
 - 容量范围：0.1 μ F~330 μ F
 - 容量偏差：K级：±10%；M级：±20%
 - 外形尺寸：见图和表1
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- Operating Temperature Range：-55℃~+125℃(>85℃ (with rated voltage derating))
 - DC Leakage at 25℃： $I_L \leq 0.02C_r U_r$ or 1 μ A
 - Capacitance Range：0.1 μ F~330 μ F
 - Capacitance Tolerance：K：±10%；M：±20%
 - Dimensions：See Figure& Table1



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表1 外形尺寸、额定电压、降额电压、损耗角正切值及标称电容量对应表

额定电压 $U_r(V)$			4	6.3	10	16	25	35(32)	40	50	
类别电压 $U_c(V)$			2.5	4	6.3	10	16	20	25	32	
外形尺寸(mm)			最大重量 (g)	标称电容量 $C_n(\mu F)$							
DxH	d	s									
(A) 4.4x7	0.5	2.5	0.8	4.7	2.2	1.5	0.68	0.33	0.1	0.1	0.1
				6.8	3.3	2.2	1.0	0.47	0.15	0.15	0.15
				10	4.7	3.3	1.5	0.68	0.22	0.22	0.22
				15	6.8	4.7	2.2	1.0	0.33	0.33	0.33
					10		3.3	1.5	0.47	0.47	0.47
									0.68	0.68	
(B) 5x7.5	0.5	2.5	1.5	22	15	6.8	4.7	2.2	1.0	1.0	0.68
				33		10	6.8	3.3	1.5	1.5	
(C) 5.5x9	0.5	2.5	2					4.7	2.2	2.2	1.0
				47	22	15	10	6.8	3.3	3.3	1.5
					33	22	15	10	4.7		2.2
(D) 6.3x10	0.5	2.5	2.5	68	47	33	22	15	6.8	4.7	3.3
				100	68	47	33	22	10	6.8	4.7
					100	68					
(E) 7.2x12	0.5	2.5	3	150	150	100	47	33	15	10	6.8
							68				
(F) 8.5x12.5	0.5	5	4	220	220	150	100	47	22	15	10
				330							
(G) 9.5x16	0.5	5	5	470	330	220	150	68	33	22	15
				680	470	330	220	100	47	33	22
				1000	680	470	330	150	68	47	33
					820	680	470				

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高低温特性

Temperature Performance

容量 Capacitance (μF)	容量变化 Capacitance Change(%)			损耗最大值 Max D.F.(%)			漏电流最大 Max DCL(μA)	
	-55°C	+85°C	+125°C	-55°C	+85°C	+125°C	+85°C	+125°C
≤ 1.0	± 10	± 15	± 25	6	6	6	10 I ₀	12.5 I ₀
1.5-6.8				8	8	8		
10-68				10	10	10		
100-220				14	14	14		
≥ 330				16	16	16		

标记与包装

Marking & Packaging



卷盘尺寸 (各项说明IEC286-2)

Dimension of tape and reel(per specification IEC286-2)

符合 Symbol	尺寸 Dimensions (mm)	符合 Symbol	尺寸 Dimensions (mm)	
P	12.7 ± 1.0	D	4.0 ± 0.2	
P ₀	12.7 ± 0.3	T	0.5 ± 0.2	
W	18	+1	0 ± 0.2	
		-0.5	H	16 ± 0.5
W ₀	5min	S	2.5 ± 0.5 5.0 ± 0.7	
H ₀	9	+0.75	P ₁	5.10 ± 0.5 3.85 ± 0.7
		-0.5		
W ₁	0	+1	P ₂	6.35 ± 0.4
		0		
H ₁	32.5max	ΔP	$\pm 1.3\text{max}$	

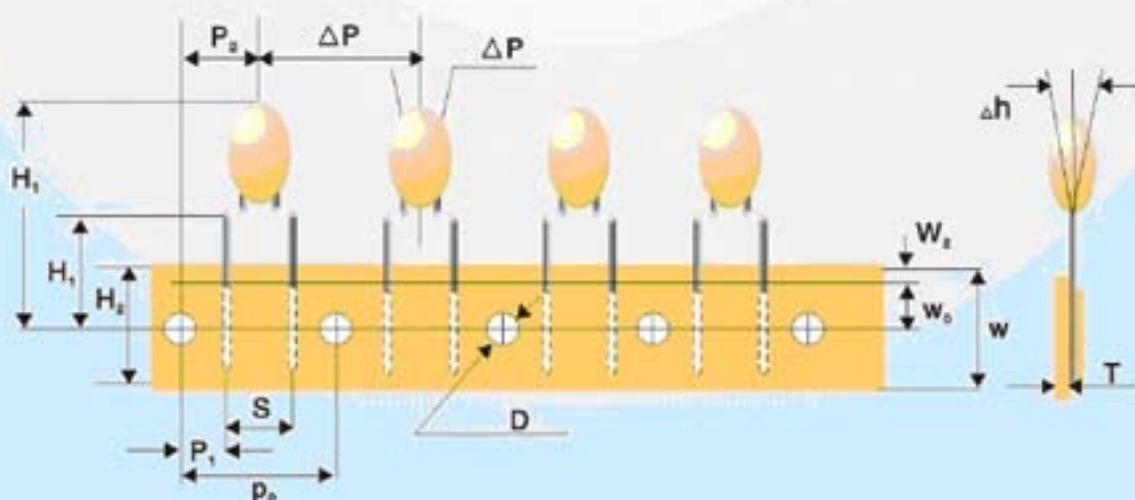
包装形式

Packaging

B:散装 (Bulk)

T:盘式编带 (Reel)

A:弹匣式编带 (Ammo)



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订货方法

Order Information

CA42	105	M	035	A	T
类型 Type	标称容量代码 Capacitance Code	容量精度 Tolerance	额定电压 DC Voltage	脚距 Leads Pitch	包装形式 Packaging
CA42	105代表 $10 \times 10^5 \text{ pF} = 1 \mu\text{F}$ $105 = 10 \times 10^5 (\text{pF})$ 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 25V=025 35V=035 40V=040 50V=050	A代表2.5mm间距 B代表5.0mm间距	T, A代表编带 B代表散装 T=Tape and reel A=ammo pack B=bulk pack

表3 电性能一览表

Table 3 Electrical Features

额定电压 U_r (V) Rated Voltage	标称容量 Nominal Capacitance C_n (μF)	壳号 Case Size	漏电流 DCL(μA) Max.	损耗角正切 $\text{tg}\delta$ (%) Max
4 V (2.5V 125°C)				
4	4.7	A	1.00	6
4	6.8	A	1.00	6
4	10	A	1.00	8
4	15	A	1.20	8
4	22	B/A	1.76	8
4	33	B/A	2.64	8
4	47	C/B	3.76	8
4	68	D/C	5.44	8
4	100	D/C	8.00	10
4	150	E/D	12.00	12
4	220	F/E	17.60	12
4	330	F/E	26.40	14
4	470	G	37.60	14
6.3 V (4V 125°C)				
6.3	2.2	A	1.00	6
6.3	3.3	A	1.00	6
6.3	4.7	A	1.00	6
6.3	6.8	A	1.00	6
6.3	10	A	1.26	8
6.3	15	B/A	1.89	8
6.3	22	C/B	2.77	8
6.3	33	C/B	4.16	8
6.3	47	D/C/B	5.92	8
6.3	68	D/C	8.57	8

额定电压 U_r (V) Rated Voltage	标称容量 Nominal Capacitance C_n (μF)	壳号 Case Size	漏电流 DCL(μA) Max.	损耗角正切 $\text{tg}\delta$ (%) Max
6.3	100	D/C	12.60	10
6.3	150	E/D	18.90	12
6.3	220	F/E	27.72	12
6.3	330	G/F	41.58	14
6.3	470	G	59.22	14
10 V (6.3V 125°C)				
10	1.5	A	1.00	6
10	2.2	A	1.00	6
10	3.3	A	1.00	6
10	4.7	A	1.00	6
10	6.8	B/A	1.36	6
10	10	B/A	2.00	8
10	15	C/B/A	3.00	8
10	22	C/B	4.40	8
10	33	D/C/B	6.60	8
10	47	D/C	9.40	8
10	68	D/C	13.60	8
10	100	E/D/C	20.00	10
10	150	F/E	30.00	10
10	220	G/F	44.00	10
10	330	G	66.00	12
16V (10 V 125°C)				
16	0.68	A	1.00	6
16	1.0	A	1.00	6
16	1.5	A	1.00	6

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(续) 表3 电性能一览表

额定电压 U _r (V) Rated Voltage	标称容量 Nominal Capacitance C _n (μF)	壳号 Case Size	漏电流 DCL(μA) Max.	损耗角正切 tgδ(%) Max
16	2.2	A	1.00	6
16	3.3	A	1.06	6
16	4.7	B/A	1.50	6
16	6.8	B/A	2.18	6
16	10	C/B/A	3.20	8
16	15	C/B	4.80	8
16	22	D/C/B	7.04	8
16	33	D/C	10.56	8
16	47	E/D/C	15.04	8
16	68	E/D	21.76	8
16	100	F/E/D	32.00	10
16	150	G/F	48.00	10
16	220	G	70.40	10
20V (13V 125°C)				
20	0.47	A	1.00	6
20	0.68	A	1.00	6
20	1.0	A	1.00	6
20	1.5	A	1.00	6
20	2.2	A	1.00	6
20	3.3	B/A	1.32	6
20	4.7	B/A	1.88	6
20	6.8	B	2.72	6
20	10	C/B	4.00	8
20	15	C/B	6.00	8
20	22	D/C	8.80	8
20	33	D/C	13.20	8
20	47	E/D	18.80	8
20	68	F/E	27.20	8
20	100	G/F	40	10
20	150	G	60	10
25V (16V 125°C)				
25	0.33	A	1.00	6
25	0.47	A	1.00	6
25	0.68	A	1.00	6
25	1.0	A	1.00	6
25	1.5	A	1.00	6
25	2.2	B/A	1.10	6
25	3.3	B/A	1.65	6
25	4.7	C/B	2.35	6

额定电压 U _r (V) Rated Voltage	标称容量 Nominal Capacitance C _n (μF)	壳号 Case Size	漏电流 DCL(μA) Max.	损耗角正切 tgδ(%) Max
25	6.8	C/B	3.40	6
25	10	C/B	5.00	8
25	15	D/C	7.50	8
25	22	D/C	11.00	8
25	33	E/D	16.50	8
25	47	E/D	23.50	8
25	68	G/F	34.00	8
25	100	G	50.00	10
35V (20V 125°C)				
35	0.1	A	1.00	6
35	0.22	A	1.00	6
35	0.33	A	1.00	6
35	0.47	A	1.00	6
35	0.68	A	1.00	6
35	1.0	B/A	1.00	6
35	1.5	B/A	1.05	6
35	2.2	C/B	1.54	6
35	3.3	C/B	2.31	6
35	4.7	C	3.29	6
35	6.8	D/C	4.76	6
35	10	D/C	7.00	8
35	15	E/D	10.50	8
35	22	F/E	15.40	8
35	33	G/F	23.10	8
35	47	G	32.90	8
40V (25V 125°C)				
40	0.1	A	1.00	4
40	0.15	A	1.00	4
40	0.22	A	1.00	4
40	0.33	A	1.00	4
40	0.47	A	1.00	4
40	0.68	A	1.00	4
40	1.0	B	1.00	4
40	1.5	B	1.20	6
40	2.2	C/B	1.76	6
40	3.3	C	2.64	6
40	4.7	D/C	3.76	6
40	6.8	D/C	5.44	6
40	10	E/D	8.00	8
40	15	E	12.00	8

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额定电压 U _r (V) Rated Voltage	标称电容量 Nominal Capacitance C _n (μF)	壳号 Case Size	漏电流 DCL(μA) Max.	损耗角正切 tgδ(%) Max	额定电压 U _r (V) Rated Voltage	标称电容量 Nominal Capacitance C _n (μF)	壳号 Case Size	漏电流 DCL(μA) Max.	损耗角正切 tgδ(%) Max
40	22	G/F	17.60	8	50	1.5	C	1.50	6
40	33	G	26.40	8	50	2.2	C	2.20	6
50 V (32V 125°C)									
50	0.1	A	1.00	4	50	3.3	D/C	3.30	6
50	0.22	A	1.00	4	50	4.7	D	4.70	6
50	0.33	A	1.00	4	50	6.8	E/D	6.80	6
50	0.47	A	1.00	4	50	10	F/E	10.00	8
50	0.68	B/A	1.00	4	50	15	G/F	15.00	8
50	1.0	C/B	1.00	4	50	22	G	20.00	8

- 注：1、禁止使用万用表测量钽电容器（极易造成不可逆损伤而导致产品报废）。
 2、电容量、损耗角正切的测试频率为100Hz，U_r = 2.2*U_nV，U_r = 1.0*U_nV（有效值）；测量方式采用串联等效电路。
 3、测量125℃漏电流时，请施加类别电压；漏电流参数为5分钟读数。
 4、特殊尺寸要求产品可以同我公司协商生产。

- P.S.: 1 Please do not use multimeter through the measuring procedures.
 2 Capacitance and DF measured at :100Hz, U_r = 2.2*U_nV, U_r = 1.0*U_nV, Frequency=100Hz.
 Test only applied in series equivalent circuit.
 3 Voltage derating is applied at +125°C. (The DCL parameter should be read after 5minutes when it connected to the circuit).
 4 Special size and demand could consult with us.