

# Tantalum capacitors

## ET2 - CA45 Chip Tantalum capacitors

ELECSOUND®

Surface mount technology

A, B, C, D, E, P six case available

Chip tantalum capacitors have lower ESR

Compatible with automatic pick and place equipment

Suitable for military equipment and computer ,mobile phone

Rohs Compliant

Operating temperature: -55 ~125°C

Capacitance Tolerance:±20% ,±10%%

Capacitance Range: 0.1μF~470μF

DC leakage current(20°C)  $I_0 \leq 0.01CRUR$  or 0.05μA

Life test: 2000 hours.

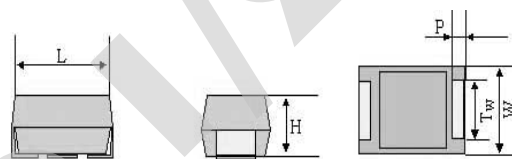
Voltage Rating: 4V~50V

### Dissipation factor(20°C) And Temperature performance

Cap.(μF)	Capacitance Change(%)			Max D.F(%)				Max DCL (μA)	
	-55°C	+85°C	+125°C	-55°C	+20°C	+85°C	+125°C	+85°C	+125°C
≤1.0	-10	+15	+12	6	4	6	6	10 I0	12 I0
1.5~6.8	-10	+15	+12	10	6	10	10	10 I0	12 I0
100-300(CD)	-10	+15	+12	12	8	12	12	10 I0	12 I0
100-300(B)	-10	+15	+12	14	10	14	14	10 I0	12 I0
≥470	-10	+15	+12	16	12	16	16	10 I0	12 I0

### How to order:

CA45	106	M	35	A	T
Type	Capacitance	Tolerance	DC voltage	Case size	Packaging
Chip Tantalum Capacitors	10X105(pF)	K=±10%	4V=004	A:3.2*1.6	T=Tape and reel
		M=±20%	6.3V=006	B:3.5*2.8	
			10V=010	C:6.0*3.2	
			16V=016	D:7.3*4.3	B=bulk pack
			25V=025	E:7.3*4.3	
			35V=035	P:2.0*1.2	
			50V=050		



### Exterior And Dimension

CASE	EIA / IECQ	L	W	H	P	Tw
P	2012	2.0±0.2	1.2±0.2	1.2±0.2	0.5±0.3	1.2±0.1
A	3216	3.2±0.2	1.6±0.2	1.6±0.2	0.8±0.3	1.2±0.1
B	3528	3.5±0.2	2.8±0.2	1.9±0.2	0.8±0.3	2.2±0.1
C	6032	6.0±0.3	3.2±0.3	2.5±0.3	1.3±0.3	2.2±0.1
D	7343	7.3±0.3	4.3±0.3	2.8±0.3	1.3±0.3	2.4±0.1
E	7343	7.3±0.3	4.3±0.3	4.0±0.3	1.3±0.3	2.4±0.1



Cap.(uF)	Rated voltage (V)								
	CODE	4(G)	6.3(J)	10(A)	16(C)	20(D)	25(E)	35(V)	50
0.1	104							A	A
0.15	154							A	A
0.22	224							A	A
0.33	334							A	B
0.47	474					P	A	A	A/B/C
0.68	684				P	P/A	A	A	B/C
1	105		P	P	P/A	A	A	A/B	B/C
1.5	155		P/A	P/A	P/A	A	A/B	B/C	C/D
2.2	225	P/A	P/A	P/A	P/A/B	A/B	A/B	B/C	C/D
3.3	335	P/A	P/A	P/A	P/A/B	A/B	A/B/C	C	C/D
4.7	475	A	P/A	P/A/B	A/B	A/B/C	B/C	C/D	D
6.8	685	A	A/B	A/B	A/B/C	A/B/C	B/C	C/D	D
10	106	A	A/B	A/B/C	A/B/C	B/C	B/C/D	C/D/E	D/E
15	156	A	A/B	A/B/C	B/C	B/C/D	C/D	D/E	E
22	226	A	A/B/C	A/B/C	B/C/D	C/D	C/D	D/E	
33	336	A/B	A/B/C	B/C/D	C/D	C/D	D/E	E	
47	476	A/B	A/B/C/D	B/C/D	C/D	D/E	D/E	E	
68	686	B/C	B/C/D	C/D	C/D	D/E	E		
100	107	B/C	B/C/D	C/D/E	D/E	E	E		
150	157	C	B/C/D	D/E	D/E				
220	227	C/D	C/D	D/E	E				
330	337	D/E	D/E	E	E				
470	477	D/E	D/E	E					

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Tantlum capacitors ESR								
Rated Voltage (V)								
	4	63	10	16	20	25	35	50
Capacitance with ESR (Standard / Extended) (uF)								
0.1					25		24	22
0.15					25		21	17.0/15.0
0.22					25		18	14
0.33					25		15	12
0.47				25	25	14	10/12	8
0.68			30	25	12/25	10	8	7
1		14/25	12/25	11/20	9	7/8	6.5	5.5
1.5	30	12/25	10.0/25	8.0/12.0	5/6.5	5	4.5/5.2	4.0/4.5
2.2	25	9/20	7.0/15	5.5/6.5	3.5/5.3	4.5	3.5	2.5
3.3	9/20	7.0/12	5.5/10	4.5/5.0	2.5/3.0	2.8	2.0/2.5	2
4.7	7.5/10	6.0/7.0	4/5	3.5/4	2.5/2.8	2.4	1.5/2.2	1.4
6.8	6.5/7.0	4/5	3/4	2.5/3.5	1.8/2.0	1.4/2.0	1.3	
10	4/6	3/4	20./3.0	2.0/2.8	1.3	1.2/1.8	1	
15	3.5/4	3.3/4.0	2.2/2.8	1.8	1.1	1	0.9	
22	3.2/3.5	2.5/3.5	1.8/2.4	1.1/1.6	0.9	0.9	0.9	
33	2.2/2.8	1.8/2.0	1.1/1.6	0.9/1.5	0.9	0.9	0.9	
47	1.8/2.2	1.6/2.0	0.9/1.2	0.9/1.4	0.9/0.9	0.9	0.9	
68	1.1/1.6	0.9/1.6	0.9	0.9	0.9	0.9	0.9	
100	0.9/1.3	0.9/1.4	0.9	0.9	0.9	0.9	0.9	
150	0.9	0.9	0.9	0.9				
220	0.9	0.9	0.9	0.9				
330	0.9	0.9	0.9					
470	0.9	0.9	0.9					

Special Low ESR available