

CA45U Low ESR Chip Tantalum Capacitors (SMD Tantalum Capacitors)

◆ Brief Introduction

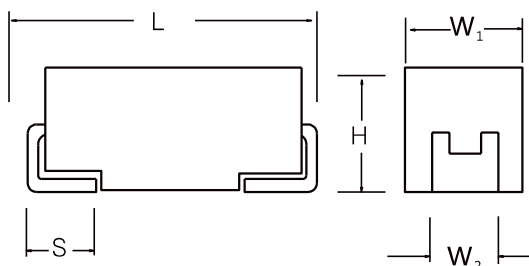
Low ESR series of robust MnO₂ solid tantalum electrolyte capacitors
 Power supply applications, general medium power DC/DC convertors
 Operating Standard: QJ/PWV330-2010
 Factory quality control system: Military Standard GJB9001C-2017
 Meets RoHS , Reach requirement

◆ Specifications

Operating Temperature Range: -55℃ ~ +125℃; >85℃(with rated voltage derating);
 DC Leakage at 25℃: $I_o \leq 0.01C_R U_R$ or 0.5uA (Choose the greater one)
 Capacitance Range: 1uF~1000uF
 Voltage Range: 6.3V, 10V, 16V, 25V, 35V, 50V, 63V, 75V, 100V
 Capacitance Tolerance: K: +/-10%; M: +/-20% (+/-20% tolerance is standard)
 SPQ: A,B case: 2000pcs/reel; C,D case: 500pcs/reel; E case: 400pcs/reel
 Low ESR parameter please refer to Table 3
 How to order, please refer to Part Number System

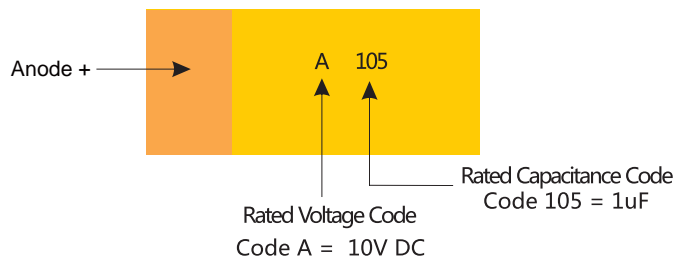
◆ Table 1 Dimensions (Unit: mm)

	Case Code		L	W1	H	S	W2
A	1206	3216-18	3.30±0.20	1.70±0.20	1.80±0.20	0.70±0.20	1.20±0.20
B	1210	3528-21	3.60±0.20	2.90±0.20	2.10±0.20	0.70±0.20	2.20±0.20
C	2312	6032-28	6.20±0.20	3.30±0.20	2.60±0.20	1.30±0.20	2.20±0.20
D	2917	7343-31	7.40±0.20	4.40±0.20	3.00±0.20	1.30±0.20	2.40±0.20
E	2917	7343-43	7.40±0.40	4.40±0.40	4.30±0.40	1.30±0.20	2.40±0.20
V	2924	7360-38	7.50±0.40	6.20±0.40	3.80±0.40	1.40±0.20	3.00±0.20



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◆ Marking on Chip Tantalum Capacitor Body



Voltage Code Table for Chip Tantalum Capacitors

Voltage Code	G	J	A	C	D	E	V	H	T
Rated Voltage	4V	6.3V	10V	16V	20V	25V	35V	40V	50V

◆ Table 2 Temperature Characteristics

Max					
t gδ(%)				DCL (μA)	
-55°C	25°C	85°C	125°C	85°C	125°C
6	4	6		8 I _o	10 I _o
8	6	8			
10	8	10			
12	10	12			
14	12	14			
18	16	18			

◆ How to order

<u>CA45U</u>	<u>T</u>	<u>107</u>	<u>K</u>	<u>0006</u>	<u>000B</u>	<u>R</u>	<u>401</u>
<u>Type</u>	<u>Material Code</u>	<u>Capacitance Code</u>	<u>Tolerance</u>	<u>For DC Voltage</u>	<u>Size Code</u>	<u>Package Code</u>	<u>Suffix Indicate Low ESR</u>
CA45U	T: Tantalum Cap For CA45U	pF Code: 1st two digits represent significant figures 3rd digit represents multiplier (number of zeros to follow) 106 = 10uF 105 = 1uF	K: +/-10% M: +/-20%	0006: 6.3VDC 0010: 10VDC 0035: 35VDC 0050: 50VDC 0100: 100VDC	000A: A case 000B: B case 000C: C case 000D: D case 000E: E case	R: Tape & Reel	Low ESR code in mΩ 151: mean 150mΩ (0.15Ω) 202: mean 2000mΩ (2Ω) 750: mean 75mΩ (0.075Ω)

Case Code/ESR

Rated Voltage (v)	4	6.3	10	16
Cap(uF)	Case Code/ESR			
6.8				A (2000), B (1200)
10			A (1800)	A (1700), B (1200)
15			A (1000), B (600)	B (800), C (600)
22			A (1200), B (400)	B (700), C (500), D (500)
33		A (1500), B (600)	B (450), C (400), D (300)	C (500), D (300)
47	A (1500), B (900)	B (600), C (300)	B (500), C (400), D (300)	C (300), D (300), E (200)
68	B (1000), C (600)	B (500), C (500), D (250)	C (200), D (150)	C (1000), D (200), E (200)
100	B (450), C (500)	B (400), C (300), D (300)	C (250), D (200), E (150)	C (800), D (200), E (200)
150	C (500), D (350), E (200)	C (300), D (300), E (150)	D (200), E (150)	D (500), E (200)
220	B (800), C (500), D (300), E (100)	B (800), C (200), D (150), E (150)	D (200), E (200), V (200)	E (200), V (200)
330	D (400), E (200), V (200)	D (150), E (150)	D (150), E (150), V (150)	E (180), V (180)
470	D (200), E (150), V (150)	E (150)	E (150)	E (450)
680	E (150)	E (150)	E (150)	
1000	E (150)	E (150)		

Continued table

Rated Voltage (v)	20	25	35	50
Cap(uF)	Case Code/ESR			
0.47			A (4000), A (8000)	A (3000)
0.68			A (6000), A (7000)	B (3000)
1			A (6000), B (2500)	B (2500), C (1800)
1.5		A (4500), B (3000)	B (3000), C (2500)	C (1800), D (1000)
2.2		A (3000), B (2500)	B (2500), C (2000)	C (1500), D (700)
3.3	A (4000), B (3000)	B (2000), C (1200)	B (2500), C (1200)	C (700), D (700)
4.7	A (2500), B (1500), C (1000)	B (1000), C (1000)	B (2000), C (800), D (700)	C (700), D (600)
6.8	B (1000), C (800)	B (2000), C (1000), D (700)	C (700), D (600)	D (600), E (500)
10	B (1200), C (600), D (500)	B (1500), C (900), D (450)	C (700), D (400)	D (400), E (400)
15	B (1500), C (800), D (600)	C (500), D (400)	D (350), E (300)	E (400)
22	C (600), D (400)	C (800), D (400)	D (400), E (300)	E (400)
33	C (600), D (400)	D (300), E (250)	D (500), E (300)	
47	C (300), D (250), E (250)	D (350), E (300)	D (400), E (400)	
68	D (250), E (250)	E (250), V (250)	E (800)	
100	D (300), E (250)	E (200), V (200)		
150	D (450), E (180)	E (600), V (300)		
220	E (450), V (250)			
330	E (450), V (450)			

◆ Table 3 Electrical Characteristics

Part Number	Rated Voltage	Nominal Capacitance	Case Code	Rated Temperature	Category Temperature	Category Voltage	Max DCL at +25°C	Max DF at +25°C 100Hz	Max ESR +25°C 100KHz	Ripple Current (A) 100KHz Max		
	(V)	(μF)		(°C)						(°C)	(V)	(μA)
CA45UT476#0004000A152	4	47	A	85	125	2.7	1.9	11	1500	0.208	0.187	0.083
CA45UT476#0004000B901	4	47	B	85	125	2.7	1.9	8	900	0.289	0.26	0.115
CA45UT686#0004000B102	4	68	B	85	125	2.7	2.7	8	1000	0.274	0.246	0.11
CA45UT686#0004000C601	4	68	C	85	125	2.7	2.7	6	600	0.387	0.348	0.155
CA45UT107#0004000B451	4	100	B	85	125	2.7	4	10	450	0.408	0.367	0.163
CA45UT107#0004000C501	4	100	C	85	125	2.7	4	10	500	0.424	0.381	0.17
CA45UT157#0004000C501	4	150	C	85	125	2.7	6	10	500	0.424	0.381	0.17
CA45UT157#0004000D351	4	150	D	85	125	2.7	6	8	350	0.548	0.493	0.219
CA45UT157#0004000E201	4	150	E	85	125	2.7	6	8	200	0.791	0.711	0.316
CA45UT227#0004000C501	4	220	C	85	125	2.7	8.8	12	500	0.424	0.381	0.17
CA45UT227#0004000D301	4	220	D	85	125	2.7	8.8	10	300	0.592	0.532	0.237
CA45UT227#0004000E101	4	220	E	85	125	2.7	8.8	10	100	1.118	1.006	0.447
CA45UT337#0004000D401	4	330	D	85	125	2.7	13.2	14	400	0.512	0.46	0.205
CA45UT337#0004000E201	4	330	E	85	125	2.7	13.2	12	200	0.791	0.711	0.316
CA45UT337#0004000V201	4	330	V	85	125	2.7	13.2	12	200	0.866	0.779	0.346
CA45UT477#0004000D201	4	470	D	85	125	2.7	18.8	14	200	0.725	0.652	0.29
CA45UT477#0004000E151	4	470	E	85	125	2.7	18.8	12	150	0.913	0.821	0.365
CA45UT477#0004000V151	4	470	V	85	125	2.7	18.8	12	150	1	0.9	0.4
CA45UT687#0004000E151	4	680	E	85	125	2.7	27.2	14	150	0.913	0.821	0.365
CA45UT108#0004000E151	4	1000	E	85	125	2.7	40	15	150	0.913	0.821	0.365
CA45UT336#0006000A152	6.3	33	A	85	125	4	2.1	8	1500	0.208	0.187	0.083
CA45UT336#0006000B601	6.3	33	B	85	125	4	2.1	8	600	0.354	0.318	0.141
CA45UT476#0006000B601	6.3	47	B	85	125	4	3	8	600	0.354	0.318	0.141
CA45UT476#0006000C301	6.3	47	C	85	125	4	3	6	300	0.548	0.493	0.219
CA45UT686#0006000B501	6.3	68	B	85	125	4	4.3	10	500	0.387	0.348	0.155
CA45UT686#0006000C501	6.3	68	C	85	125	4	4.3	8	500	0.424	0.381	0.17
CA45UT686#0006000D251	6.3	68	D	85	125	4	4.3	6	250	0.648	0.583	0.259
CA45UT107#0006000B401	6.3	100	B	85	125	4	6.3	14	400	0.433	0.389	0.173
CA45UT107#0006000C301	6.3	100	C	85	125	4	6.3	8	300	0.548	0.493	0.219
CA45UT107#0006000D301	6.3	100	D	85	125	4	6.3	8	300	0.592	0.532	0.237
CA45UT157#0006000C301	6.3	150	C	85	125	4	9.5	12	300	0.548	0.493	0.219
CA45UT157#0006000D301	6.3	150	D	85	125	4	9.5	10	300	0.592	0.532	0.237
CA45UT157#0006000E151	6.3	150	E	85	125	4	9.5	10	150	0.913	0.821	0.365
CA45UT227#0006000C201	6.3	220	C	85	125	4	13.9	14	200	0.671	0.603	0.268
CA45UT227#0006000D151	6.3	220	D	85	125	4	13.9	12	150	0.837	0.753	0.335
CA45UT227#0006000E151	6.3	220	E	85	125	4	13.9	12	150	0.913	0.821	0.365
CA45UT337#0006000D151	6.3	330	D	85	125	4	20.8	14	150	0.837	0.753	0.335
CA45UT337#0006000E151	6.3	330	E	85	125	4	20.8	14	150	0.913	0.821	0.365
CA45UT477#0006000E151	6.3	470	E	85	125	4	29.6	14	150	0.913	0.821	0.365
CA45UT687#0006000E151	6.3	680	E	85	125	4	42.8	14	150	0.913	0.821	0.365
CA45UT106#0010000A182	10	10	A	85	125	6.3	1	8	1800	0.19	0.171	0.076
CA45UT156#0010000A102	10	15	A	85	125	6.3	1.5	8	1000	0.255	0.229	0.102
CA45UT156#0010000B601	10	15	B	85	125	6.3	1.5	6	600	0.354	0.318	0.141
CA45UT226#0010000A122	10	22	A	85	125	6.3	2.2	12	1200	0.233	0.209	0.093
CA45UT226#0010000B401	10	22	B	85	125	6.3	2.2	6	400	0.433	0.389	0.173
CA45UT336#0010000B451	10	33	B	85	125	6.3	3.3	8	450	0.408	0.367	0.163
CA45UT336#0010000C401	10	33	C	85	125	6.3	3.3	6	400	0.474	0.426	0.19
CA45UT336#0010000D301	10	33	D	85	125	6.3	3.3	6	300	0.592	0.532	0.237
CA45UT476#0010000B501	10	47	B	85	125	6.3	4.7	10	500	0.387	0.348	0.155
CA45UT476#0010000C401	10	47	C	85	125	6.3	4.7	8	400	0.474	0.426	0.19
CA45UT476#0010000D301	10	47	D	85	125	6.3	4.7	6	300	0.592	0.532	0.237
CA45UT686#0010000C201	10	68	C	85	125	6.3	6.8	8	200	0.671	0.603	0.268
CA45UT686#0010000D151	10	68	D	85	125	6.3	6.8	6	150	0.837	0.753	0.335
CA45UT107#0010000C251	10	100	C	85	125	6.3	10	10	250	0.6	0.54	0.24
CA45UT107#0010000D201	10	100	D	85	125	6.3	10	8	200	0.725	0.652	0.29
CA45UT107#0010000E151	10	100	E	85	125	6.3	10	8	150	0.913	0.821	0.365
CA45UT157#0010000D201	10	150	D	85	125	6.3	15	10	200	0.725	0.652	0.29
CA45UT157#0010000E151	10	150	E	85	125	6.3	15	10	150	0.913	0.821	0.365
CA45UT227#0010000D101	10	220	D	85	125	6.3	22	12	100	1.224	1.101	0.489
CA45UT227#0010000E201	10	220	E	85	125	6.3	22	12	200	0.791	0.711	0.316
CA45UT227#0010000V201	10	220	V	85	125	6.3	22	12	200	0.866	0.779	0.346
CA45UT337#0010000D151	10	330	D	85	125	6.3	33	14	150	0.837	0.753	0.335
CA45UT337#0010000E151	10	330	E	85	125	6.3	33	14	150	0.913	0.821	0.365
CA45UT337#0010000V151	10	330	V	85	125	6.3	33	14	150	1	0.9	0.4
CA45UT477#0010000E151	10	470	E	85	125	6.3	47	14	150	0.913	0.821	0.365
CA45UT687#0010000E151	10	680	E	85	125	6.3	68	14	150	0.913	0.821	0.365
CA45UT685#0016000A202	16	6.8	A	85	125	10	1.1	6	2000	0.18	0.162	0.072
CA45UT685#0016000B102	16	6.8	B	85	125	10	1.1	6	1200	0.25	0.225	0.1
CA45UT106#0016000A172	16	10	A	85	125	10	1.6	8	1700	0.196	0.176	0.078
CA45UT106#0016000B801	16	10	B	85	125	10	1.6	6	800	0.306	0.276	0.123
CA45UT106#0016000B122	16	10	B	85	125	10	1.6	6	1200	0.25	0.225	0.1
CA45UT156#0016000B801	16	15	B	85	125	10	2.4	6	800	0.306	0.275	0.122
CA45UT156#0016000C601	16	15	C	85	125	10	2.4	6	600	0.387	0.348	0.155
CA45UT226#0016000B701	16	22	B	85	125	10	3.5	8	700	0.327	0.294	0.131
CA45UT226#0016000C501	16	22	C	85	125	10	3.5	6	500	0.424	0.381	0.17
CA45UT226#0016000D501	16	22	D	85	125	10	3.5	6	500	0.458	0.412	0.183
CA45UT336#0016000C501	16	33	C	85	125	10	5.3	6	500	0.424	0.381	0.17
CA45UT336#0016000D301	16	33	D	85	125	10	5.3	6	300	0.592	0.532	0.237
CA45UT476#0016000C301	16	47	C	85	125	10	7.5	8	300	0.548	0.493	0.219
CA45UT476#0016000D301	16	47	D	85	125	10	7.5	6	300	0.592	0.532	0.237
CA45UT476#0016000E201	16	47	E	85	125	10	7.5	6	200	0.791	0.711	0.316
CA45UT686#0016000C102	16	68	C	85	125	10	10.9	8	1000	0.3	0.27	0.12
CA45UT686#0016000D201	16	68	D	85	125	10	10.9	8	200	0.725	0.652	0.29
CA45UT686#0016000E201	16	68	E	85	125	10	10.9	6	200	0.791	0.711	0.316
CA45UT107#0016000C801	16	100	C	85	125	10	16	12	800	0.335	0.301	0.134

◆Table 3 Electrical Characteristics

Part Number	Rated Voltage	Nominal Capacitance	Case Code	Rated Temperature	Category Temperature	Category Voltage	Max DCL at +25 °C	Max DF at +25 °C 100Hz	Max ESR +25 °C 100KHz	Ripple Current (A) 100KHz Max		
	(V)	(µF)		(°C)	(°C)	(V)	(µA)	%	mΩ	25 °C	85 °C	125 °C
CA45UT107#0016000D201	16	100	D	85	125	10	16	8	200	0.725	0.652	0.29
CA45UT107#0016000E201	16	100	E	85	125	10	16	8	200	0.791	0.711	0.316
CA45UT157#0016000D501	16	150	D	85	125	10	24	12	500	0.458	0.412	0.183
CA45UT157#0016000E201	16	150	E	85	125	10	24	10	200	0.791	0.711	0.316
CA45UT227#0016000E201	16	220	E	85	125	10	35.2	12	200	0.791	0.711	0.316
CA45UT227#0016000V201	16	220	V	85	125	10	35.2	12	200	0.866	0.779	0.346
CA45UT337#0016000E181	16	330	E	85	125	10	52.8	12	180	0.833	0.749	0.333
CA45UT337#0016000V181	16	330	V	85	125	10	52.8	12	180	0.913	0.821	0.365
CA45UT477#0016000E451	16	470	E	85	125	10	75.2	16	450	0.527	0.474	0.211
CA45UT335#0020000A402	20	3.3	A	85	125	15	0.7	6	4000	0.127	0.114	0.051
CA45UT335#0020000B302	20	3.3	B	85	125	15	0.7	6	3000	0.158	0.142	0.063
CA45UT475#0020000A252	20	4.7	A	85	125	15	0.9	6	2500	0.161	0.144	0.064
CA45UT475#0020000B152	20	4.7	B	85	125	15	0.9	6	1500	0.224	0.201	0.089
CA45UT475#0020000C102	20	4.7	C	85	125	15	0.9	6	1000	0.3	0.27	0.12
CA45UT685#0020000B102	20	6.8	B	85	125	15	1.4	6	1000	0.274	0.246	0.11
CA45UT685#0020000C801	20	6.8	C	85	125	15	1.4	6	800	0.335	0.301	0.134
CA45UT106#0020000B122	20	10	B	85	125	15	2	6	1200	0.25	0.225	0.1
CA45UT106#0020000C601	20	10	C	85	125	15	2	6	600	0.387	0.348	0.155
CA45UT106#0020000D501	20	10	D	85	125	15	2	6	500	0.458	0.412	0.183
CA45UT156#0020000B152	20	15	B	85	125	15	3	6	1500	0.224	0.201	0.089
CA45UT156#0020000C801	20	15	C	85	125	15	3	6	800	0.335	0.301	0.134
CA45UT156#0020000D601	20	15	D	85	125	15	3	6	600	0.418	0.376	0.167
CA45UT226#0020000C601	20	22	C	85	125	15	4.4	6	600	0.387	0.348	0.155
CA45UT226#0020000D401	20	22	D	85	125	15	4.4	6	400	0.512	0.46	0.205
CA45UT336#0020000C601	20	33	C	85	125	15	6.6	6	600	0.387	0.348	0.155
CA45UT336#0020000D401	20	33	D	85	125	15	6.6	6	400	0.512	0.46	0.205
CA45UT476#0020000C301	20	47	C	85	125	15	9.4	8	300	0.548	0.493	0.219
CA45UT476#0020000D251	20	47	D	85	125	15	9.4	8	250	0.648	0.583	0.259
CA45UT476#0020000E251	20	47	E	85	125	15	9.4	6	250	0.707	0.636	0.283
CA45UT686#0020000D251	20	68	D	85	125	15	13.6	8	250	0.648	0.583	0.259
CA45UT686#0020000E251	20	68	E	85	125	15	13.6	6	250	0.707	0.636	0.283
CA45UT107#0020000D301	20	100	D	85	125	15	20	10	300	0.592	0.532	0.237
CA45UT107#0020000E251	20	100	E	85	125	15	20	10	250	0.707	0.636	0.283
CA45UT157#0020000D451	20	150	D	85	125	15	30	10	450	0.483	0.434	0.193
CA45UT157#0020000E181	20	150	E	85	125	15	30	10	180	0.833	0.749	0.333
CA45UT227#0020000E451	20	220	E	85	125	15	44	12	450	0.527	0.474	0.211
CA45UT227#0020000V251	20	220	V	85	125	15	44	12	250	0.775	0.697	0.31
CA45UT337#0020000E451	20	330	E	85	125	15	66	12	450	0.527	0.474	0.211
CA45UT337#0020000V451	20	330	V	85	125	15	66	12	450	0.577	0.519	0.231
CA45UT155#0025000A452	25	1.5	A	85	125	17	0.5	6	4500	0.12	0.108	0.048
CA45UT155#0025000B302	25	1.5	B	85	125	17	0.5	6	3000	0.158	0.142	0.063
CA45UT225#0025000A302	25	2.2	A	85	125	17	0.6	6	3000	0.147	0.132	0.059
CA45UT225#0025000B252	25	2.2	B	85	125	17	0.6	6	2500	0.173	0.155	0.069
CA45UT335#0025000B202	25	3.3	B	85	125	17	0.8	6	2000	0.194	0.174	0.077
CA45UT335#0025000C122	25	3.3	C	85	125	17	0.8	6	1200	0.274	0.246	0.11
CA45UT475#0025000B102	25	4.7	B	85	125	17	1.2	6	1000	0.274	0.246	0.11
CA45UT475#0025000C102	25	4.7	C	85	125	17	1.2	6	1000	0.3	0.27	0.12
CA45UT685#0025000B202	25	6.8	B	85	125	17	1.7	6	2000	0.194	0.174	0.077
CA45UT685#0025000C102	25	6.8	C	85	125	17	1.7	6	1000	0.3	0.27	0.12
CA45UT685#0025000D701	25	6.8	D	85	125	17	1.7	6	700	0.387	0.348	0.155
CA45UT106#0025000B152	25	10	B	85	125	17	2.5	8	1500	0.224	0.201	0.089
CA45UT106#0025000C901	25	10	C	85	125	17	2.5	6	900	0.316	0.284	0.126
CA45UT106#0025000D451	25	10	D	85	125	17	2.5	6	450	0.483	0.434	0.193
CA45UT156#0025000C501	25	15	C	85	125	17	3.8	6	500	0.424	0.381	0.17
CA45UT156#0025000D401	25	15	D	85	125	17	3.8	6	400	0.512	0.46	0.205
CA45UT226#0025000C801	25	22	C	85	125	17	5.5	6	800	0.335	0.301	0.134
CA45UT226#0025000D401	25	22	D	85	125	17	5.5	6	400	0.512	0.46	0.205
CA45UT336#0025000D301	25	33	D	85	125	17	8.3	8	300	0.592	0.532	0.237
CA45UT336#0025000E251	25	33	E	85	125	17	8.3	6	250	0.707	0.636	0.283
CA45UT476#0025000D351	25	47	D	85	125	17	11.8	8	350	0.548	0.493	0.219
CA45UT476#0025000E301	25	47	E	85	125	17	11.8	6	300	0.645	0.58	0.258
CA45UT686#0025000E251	25	68	E	85	125	17	17	8	250	0.707	0.636	0.283
CA45UT686#0025000V251	25	68	V	85	125	17	17	8	250	0.775	0.697	0.31
CA45UT107#0025000E201	25	100	E	85	125	17	25	10	200	0.791	0.711	0.316
CA45UT107#0025000V201	25	100	V	85	125	17	25	10	200	0.866	0.779	0.346
CA45UT157#0025000E601	25	150	E	85	125	17	37.5	10	600	0.456	0.41	0.183
CA45UT105#0035000A602	35	1	A	85	125	23	0.5	6	6000	0.104	0.093	0.042
CA45UT105#0035000B252	35	1	B	85	125	23	0.5	4	2500	0.173	0.155	0.069
CA45UT155#0035000B302	35	1.5	B	85	125	23	0.5	6	3000	0.158	0.142	0.063
CA45UT155#0035000C252	35	1.5	C	85	125	23	0.5	6	2500	0.19	0.171	0.076
CA45UT225#0035000B252	35	2.2	B	85	125	23	0.8	6	2500	0.173	0.155	0.069
CA45UT225#0035000C202	35	2.2	C	85	125	23	0.8	6	2000	0.212	0.19	0.085
CA45UT335#0035000B252	35	3.3	B	85	125	23	1.2	6	2500	0.173	0.155	0.069
CA45UT335#0035000C122	35	3.3	C	85	125	23	1.2	6	1200	0.274	0.246	0.11
CA45UT475#0035000B202	35	4.7	B	85	125	23	1.6	8	2000	0.194	0.174	0.077
CA45UT475#0035000C801	35	4.7	C	85	125	23	1.6	6	800	0.335	0.301	0.134
CA45UT475#0035000D701	35	4.7	D	85	125	23	1.6	6	700	0.387	0.348	0.155
CA45UT685#0035000C701	35	6.8	C	85	125	23	2.4	6	700	0.359	0.323	0.143
CA45UT685#0035000D601	35	6.8	D	85	125	23	2.4	6	600	0.418	0.376	0.167
CA45UT106#0035000C701	35	10	C	85	125	23	3.5	6	700	0.359	0.323	0.143
CA45UT106#0035000D401	35	10	D	85	125	23	3.5	6	400	0.512	0.46	0.205
CA45UT156#0035000D351	35	15	D	85	125	23	5.3	6	350	0.548	0.493	0.219
CA45UT156#0035000E301	35	15	E	85	125	23	5.3	6	300	0.645	0.58	0.258
CA45UT226#0035000D401	35	22	D	85	125	23	7.7	6	400	0.512	0.46	0.205

CA45U Low ESR Chip Tantalum Capacitors (SMD Tantalum Capacitors)

◆Table 3 Electrical Characteristics

Part Number	Rated Voltage	Nominal Capacitance	Case Code	Rated Temperature	Category Temperature	Category Voltage	Max DCL at +25°C	Max DF at +25°C 100Hz	Max ESR +25°C Ω 100KHz	Ripple Current (A) 100KHz Max		
	(V)	(μF)		(°C)	(°C)					(V)	(μA)	%
CA45UT226#0035000E301	35	22	E	85	125	23	7.7	6	300	0.645	0.58	0.258
CA45UT336#0035000D501	35	33	D	85	125	23	11.6	8	500	0.458	0.412	0.183
CA45UT336#0035000E301	35	33	E	85	125	23	11.6	6	300	0.645	0.58	0.258
CA45UT476#0035000D401	35	47	D	85	125	23	16.5	8	400	0.512	0.46	0.205
CA45UT476#0035000E401	35	47	E	85	125	23	16.5	6	400	0.559	0.503	0.224
CA45UT686#0035000E801	35	68	E	85	125	23	23.8	8	800	0.395	0.355	0.158
CA45UT105#0050000B252	50	1	B	85	125	33	0.5	6	2500	0.173	0.155	0.069
CA45UT105#0050000C182	50	1	C	85	125	33	0.5	4	1800	0.224	0.201	0.089
CA45UT155#0050000C182	50	1.5	C	85	125	33	0.8	6	1800	0.224	0.201	0.089
CA45UT155#0050000D102	50	1.5	D	85	125	33	0.8	6	1000	0.324	0.291	0.13
CA45UT225#0050000C152	50	2.2	C	85	125	33	1.1	6	1500	0.245	0.22	0.098
CA45UT225#0050000D701	50	2.2	D	85	125	33	1.1	6	700	0.387	0.348	0.155
CA45UT335#0050000C701	50	3.3	C	85	125	33	1.7	6	700	0.359	0.323	0.143
CA45UT335#0050000D701	50	3.3	D	85	125	33	1.7	6	700	0.387	0.348	0.155
CA45UT475#0050000C701	50	4.7	C	85	125	33	2.4	6	700	0.359	0.323	0.143
CA45UT475#0050000D601	50	4.7	D	85	125	33	2.4	6	600	0.418	0.376	0.167
CA45UT685#0050000D601	50	6.8	D	85	125	33	3.4	6	600	0.418	0.376	0.167
CA45UT685#0050000E501	50	6.8	E	85	125	33	3.4	6	500	0.5	0.45	0.2
CA45UT106#0050000D401	50	10	D	85	125	33	5	6	400	0.512	0.46	0.205
CA45UT106#0050000E401	50	10	E	85	125	33	5	6	400	0.559	0.503	0.224
CA45UT156#0050000E401	50	15	E	85	125	33	7.5	6	400	0.559	0.503	0.224
CA45UT226#0050000E401	50	22	E	85	125	33	11	8	400	0.559	0.503	0.224

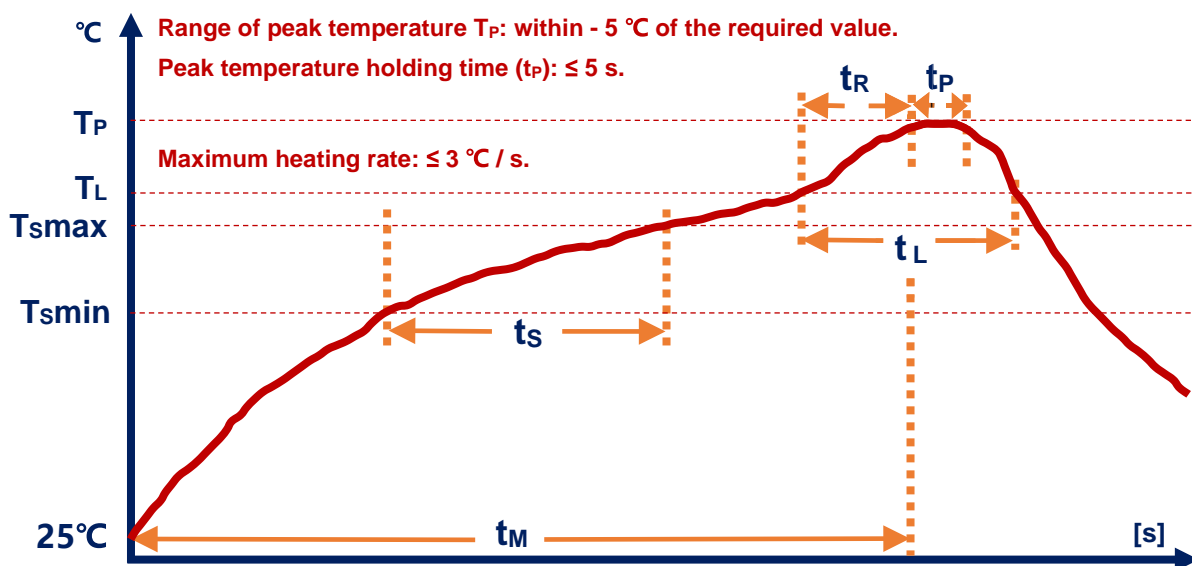
Important Note

1. Please do not use multimeter to test tantalum capacitors.
2. Capacitance and DF measured at :100Hz , $U_{-} = 2.2^{\circ}_{-1.0} V$, $U_{\sim} = 1.0^{\circ}_{-0.5} V$, Frequency = 100Hz. Test only applied to series equivalent circuit.
3. Please refer to derating voltage or category voltage if temperature > 85°C
4. The DCL parameter should be read after 5 minutes when it connected to the circuit.
5. For special requirement please consult to our sales.
6. '# 'means tolerance.

1. Precautions for tantalum capacitor reflow soldering

The recommended reflow oven temperature setting for lead-free soldering is shown in the table below.

Equipment type	8 temperature zone		10 temperature zone	
	Upper	Lower	Upper	Lower
1 zone	120°C	120°C	100°C	100°C
2 zone	150°C	150°C	120°C	120°C
3 zone	160°C	160°C	150°C	150°C
4 zone	170°C	170°C	155°C	155°C
5 zone	200°C	200°C	160°C	160°C
6 zone	230°C	230°C	170°C	170°C
7 zone	250°C	250°C	200°C	200°C
8 zone	180°C	180°C	230°C	230°C
9 zone	/	/	250°C	250°C
10 zone	/	/	180°C	180°C



Solder type		Tin lead solder	Lead free solder
T_S Min	Minimum preheating temperature	100°C	150°C
T_S Max	Maximum preheating temperature	150°C	200°C
t_s	Preheating time	60~120s	60~120s
$T_L \sim T_P$	Heating rate	$\leq 3^\circ\text{C/s}$	$\leq 3^\circ\text{C/s}$
T_L	Melting point of solder paste	183°C	217°C
t_L	Melting time of solder paste	60~150s	60~150s
T_P	Peak temperature	220°C*/235°C**	245°C*/250°C**
t_p	Holding time of peak temperature ($5^\circ\text{C} \sim 0^\circ\text{C}$)	$\leq 10\text{s}$	$\leq 3\text{s}^*$ or 5s^{**}
$T_P \sim T_L$	Cooling rate	$\leq 6^\circ\text{C/s}$	$\leq 6^\circ\text{C/s}$
t_m	Time from 25°C to peak temperature	$\leq 6\text{ min}$	$\leq 8\text{ min}$

Note: All temperatures are based on product size and measure the ambient temperature at 1cm height above the PCB board.

*** corresponds to a, B, C shells and ** ** corresponds to other shell numbers.