

CA45U Low ESR Chip Tantalum Capacitors (SMD Tantalum Capacitors)

◆ Brief Introduction

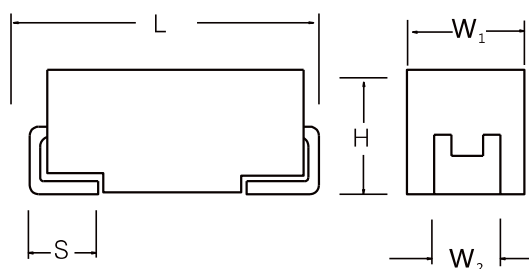
Low ESR series of robust MnO₂ solid tantalum electrolyte capacitors
 Power supply applications, general medium power DC/DC convertors
 Operating Standard: QJ/PWV330-2010
 Factory quality control system: Military Standard GJB9001C-2017
 Meets RoHS , Reach requirement

◆ 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

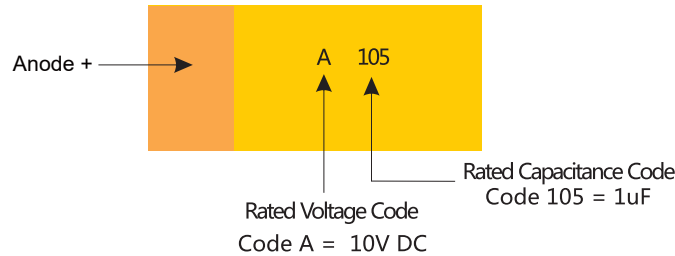
◆ Table 1 Dimensions (Unit: mm)

	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					
tgδ(%)				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

CA45U	T	107	K	0006	000B	R	401
Type	Material Code	Capacitance Code	Tolerance	For DC Voltage	Size Code	Package Code	Suffix Indicate Low ESR
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)			

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◆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)	%	mΩ	25°C	85°C	125°C
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 , $U_{-} = 2.2^{°}_{-1.0}V$, $U_{~} = 1.0^{°}_{-0.5}V$, 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.

Note: Specification is subject to change without further notice. For more details and updates, please visit our website.