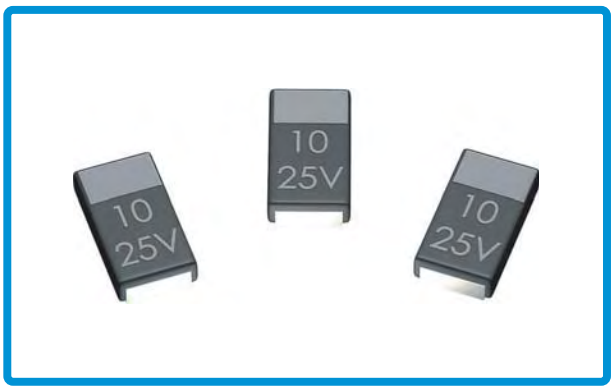
Tantalum Capacitors with Solid Electrolyte

RoHS

TC Series
Surface Mount Molded Chip

MERITEK

TC series is designed for hybrid circuit and low profile printed circuit board applications where inductance is to be minimized or where substrate space is at a premium. They can be attached to substrates or circuit boards by dip soldering, welding, re-flow soldering or other conventional methods. These units have the further advantage of being compatible with automatic assembly equipment minus the problems associated with flexible terminal lead wires.



SPECIFICATIONS

Capacitance	Range	0.1μF to 220μF						
	Tolerance	±20%(M), ±10%(K)						
Dissipation Factor (tan δ)	C ≤ 1.0μF	D.F ≤ 4.0%						
	1.5uF ≤ C ≤ 6.8μF	D.F ≤ 6.0%						
	10uF ≤ C ≤ 68μF	D.F ≤ 8.0%						
	C ≥ 100μF	D.F ≤ 10.0%						
Leakage Current		Between 0.01CV and 0.5μA, whichever is higher						
Rated Voltage(V_R)		4	6.3	10	16	20	25	35
Operating Voltage(V_O)	T ≤ 85°C	4	6.3	10	16	20	25	35
	85°C < T ≤ 125°C	2.5	4	6.3	10	13	16	22
Surge Voltage(V_S)	T ≤ 85°C	5.2	8	13	20	25	32	44
	85°C < T ≤ 125°C	3.2	5	8	13	16	20	28
Operating Temperature		-85°C to 125°C						

CAPACITANCE AND VOLTAGE RANGE

W.V / Cap(μF)		4	6.3	10	16	20	25	35
0.10	104							A
0.15	154							A
0.22	224							A
0.33	334						A	A
0.47	474					A	A	A,B
0.68	684				A	A	A,B	A,B
1.0	105			A	A	A,B	A,B	A,B
1.5	155			A	A,B	A,B	A,B	B,C
2.2	225	A	A	A,B	A,B	A,B	B,C	B,C
3.3	335	A	A ,B	A,B	A,B	A,B,C	B,C	B,C
4.7	475	A,B	A,B	A,B	A,B,C	B,C	B,C	C,D
6.8	685	A,B	A,B	A,B,C	B,C	B,C	C,D	C,D
10	106	A,B	A,B,C	A,B,C	A, B,C	B,C,D	C,D	D
15	156	A,B,C	B,C	B,C	B,C,D	C,D	C,D	D
22	226	A,B,C	B,C	B,C,D	B*,C,D	C,D	D	
33	336	B,C	B,C,D	C,D	C,D	D		
47	476	B,C,D	B,C,D	C,D	D	D		
68	686	C,D	C,D	C,D	D			
100	107	C,D	C,D	D				
150	157	D	D	D				
220	227	D	D					
330	337	D	D					

*Separated spec sheet available upon request.

Specifications are subject to change without notice.

Load Life: 2000 hrs +85°C (+185°F) and rated voltage
Capacitance change max :Within +10% of initial value
Dissipation Factor :Within values specified above
Leakage Current :Within values specified above

Shelf Life: After 2000 hrs no application of the rated working voltage at 85 °C capacitor shall meet the requirements of above "Load Life".

Temperature Characteristic
-55°C **C** : Within +0, -10% of initial value
tan : C 1.0μF within 6%
1.5 ≤ C ≤ 68μF within 8%

+85°C **C** : Within +10, -0% of initial value
tan : Within values specified above
I : Within 10 times of specified above

+125°C **C** : Within +15, -0% of initial value
tan : Within values specified above
I : Within 12.5 times of specified above

Humidity Test: at 40°C, 90-95% humidity, 500 hrs no voltage
C : Within +5% of initial value
tan : **Within values specified above**
I : Within values specified above

Failure Rate : 1 % / 1000hrs

Surge Voltage Test: at 85°C
C : Within +5% of initial value
tan : **Within values specified above**
I : Within values specified above

Resistance to Soldering Heat
(Solder reflow 260°C, 10 sec or solder dip 260°C, 5 sec)
C : Within +5% of initial value
tan : **Within values specified above**
I : Within values specified above

Tantalum Capacitors with Solid Electrolyte

TC Series
Surface Mount Molded Chip

MERITEK

PART NUMBER SYSTEM

TC	105	M	35	B

Meritek Series

Capacitance

CODE	473 ~ 683	105 ~ 685	106 ~ 227
μF	0.047~0.068	1.0 ~ 6.8	10 ~ 220

Tolerance

CODE	M	K
	±20%	±10%

Rated Voltage

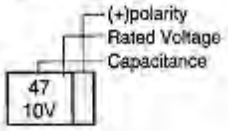
CODE	04	06	10	16	20	25	35
	4	6.3	10	16	20	25	35

Size

CODE	A	B	C	D
	3216	3528	6032	7343

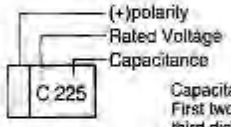
Marking

1. General Marking



ex) 10V - 47μF

2. Symbol Marking

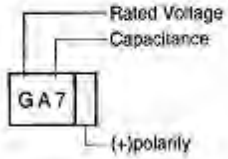


ex) 16V - 2.2μF

· Rated Voltage Code

Voltage	4	6.3	10	16	20	25	35
Code	G	J	A	C	D	E	V

Capacitance Symbol
First two digits represent capacitance and the third digit specifies the number of zeros to follow.
Capacitance unit is pF.



ex) 4V - 10μF

Capacitance Symbol

Capacitance	Code
0.47	S5
0.68	W5
1.0	A6
1.5	E6
2.2	J6
3.3	N6
4.7	S6
6.8	W6
10	A7
15	E7
22	J7
33	N7

Allowed Ripple Voltage

Cap(μF) \ W.V		4	6.3	10	16	20	25	35
0.10	104							3.5
0.15	154							3.5
0.22	224							3.5
0.33	334					3.5	3.5	3.5
0.47	474					3.5	3.5	3.5
0.68	684				3.5	3.5	3.5	3.5
1.0	105			3.5	3.5	3.5	3.5	3.5
1.5	156		3.2	3.2	3.2	3.2	3.2	3.2
2.2	226	2.9	2.9	2.9	2.9	2.9	2.9	2.9
3.3	335	2.6	2.6	2.6	2.6	2.6	2.6	2.6
4.7	475	2.4	2.4	2.4	2.4	2.4	2.4	2.4
6.8	685	2.1	2.1	2.1	2.1	2.1	2.1	2.1
10	106	1.9	1.9	1.9	1.9	1.9	1.9	
15	156	1.7	1.7	1.7	1.7	1.7		
22	226	1.5	1.5	1.5	1.5			
33	336	1.4	1.4	1.4				
47	476	1.3	1.3					
68	686	1.1						
100	107	1.0						