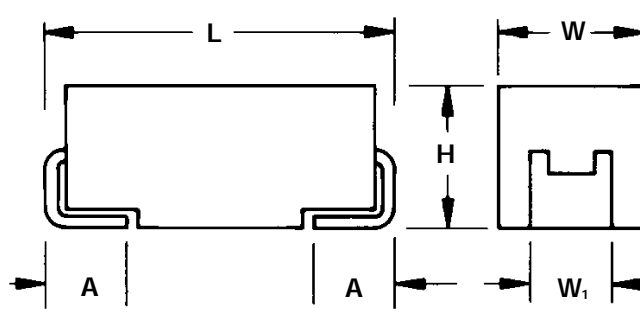


Chip Tantalum Capacitors

RGA manufactures Chip Tantalum Capacitors to meet or exceed EIA, BAAC and IECQ standards.

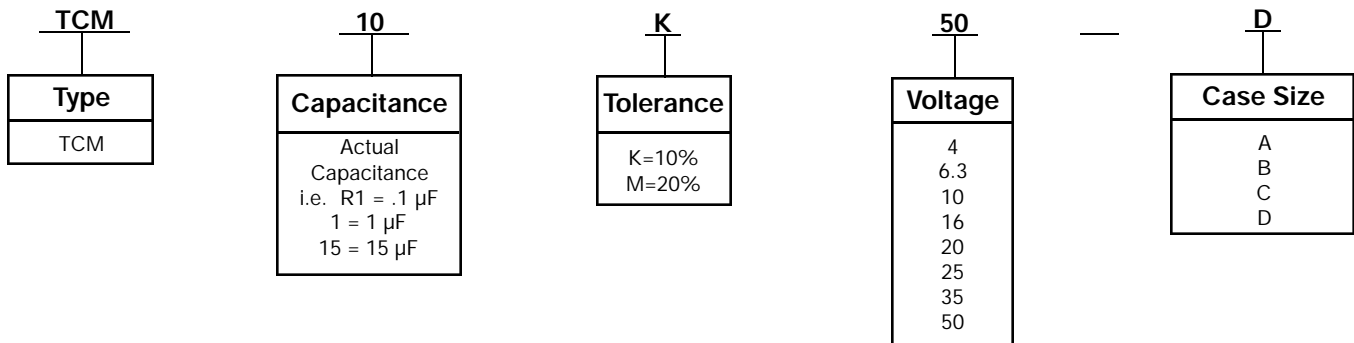
Features:

- Standard tolerances are $\pm 10\%$ (K), $\pm 20\%$ (M)
- Operational temperature $-55^{\circ}\text{C} \sim +125^{\circ}\text{C}$
- Satisfies UL94V0 flammability classification
- Case sizes A, B, C, D
- Voltage range 4VDC - 50VDC
- Wide Capacitance range from $.1\mu\text{F} \sim 470\mu\text{F}$



RGA Case Size	EIA IECQ	L ± 0.2 (± 0.008)	W ± 0.2 (± 0.008)	W ₁ ± 0.1 (± 0.004)	H ± 0.2 (± 0.008)	A ± 0.3 (± 0.012)
A	*3216 (1206)	3.2 (.126)	1.6 (.063)	1.2 (.047)	1.6 (.063)	0.8 (.031)
B	3528	3.5 (.138)	2.8 (.110)	2.2 (.087)	1.9 (.075)	0.8 (.031)
C	6032	6.0 (.236)	3.2 (.126)	2.2 (.087)	2.6 (.102)	1.3 (.051)
D	7343	7.3 (.287)	4.3 (.169)	2.4 (.094)	2.9 (.114)	1.3 (.051)

Part Numbering System



Chip Tantalum Capacitors

4VDC

Capacitance (μ F)	Case Size	DCL (μ F) max.	DF max. (%)	ESR @ 100kHz max. (ohms)
4.7	A	0.5	6	7.5
6.8	A	0.5	6	6.0
10	A	0.5	6	6.0
15	A	0.6	6	4.0
15	B	0.6	6	3.0
22	A	0.9	6	3.5
33	A	1.3	6	3.0
33	B	1.4	6	2.8
47	B	1.9	6	2.4
68	B	2.7	8	2.4
68	C	2.7	6	1.6
100	B	4.0	8	1.6
100	C	4.0	6	1.2
220	C	8.8	8	1.2
220	D	8.8	8	0.8



Chip Tantalum Capacitors

6.3VDC

Capacitance (μF)	Case Size	DCL (μF) max.	DF max. (%)	ESR @ 100kHz max. (ohms)
2.2	A	0.5	6	8.0
3.3	A	0.5	6	7.0
4.7	A	0.5	6	6.0
6.8	A	0.5	6	5.0
6.8	B	0.5	6	3.5
10	A	0.6	6	4.0
10	B	0.6	6	3.0
15	A	1.0	6	3.5
15	B	1.0	6	2.5
22	A	1.4	6	3.0
22	B	1.4	6	2.5
22	C	1.4	6	1.8
33	B	2.1	6	2.2
33	C	2.1	6	1.8
47	B	3.0	6	2.0
47	C	3.0	6	1.6
47	D	3.0	6	0.8
68	B	4.3	8	1.8
68	C	4.3	6	1.2
68	D	4.3	6	0.8
100	C	6.3	6	1.4
100	D	6.3	8	0.8
150	C	9.5	6	1.3
150	D	9.5	6	0.8
220	C	13.9	10	1.2
220	D	13.9	8	0.8
470	D	29.6	10	0.8

Chip Tantalum Capacitors

10VDC

Capacitance (μ F)	Case Size	DCL (μ F) max.	DF max. (%)	ESR @ 100kHz max. (ohms)
1.5	A	0.5	6	8.0
2.2	A	0.5	6	7.0
3.3	A	0.5	6	5.5
4.7	A	0.5	6	5.0
4.7	B	0.5	6	3.5
6.8	A	0.7	6	4.0
6.8	B	0.7	6	3.0
10	A	1.0	6	3.0
10	B	1.0	6	2.5
10	C	1.0	6	1.8
15	A	1.5	6	3.2
15	B	1.6	6	2.8
15	C	1.5	6	1.8
22	B	2.2	6	2.4
22	C	2.2	6	1.8
33	B	3.3	6	1.8
33	C	3.3	6	1.6
33	D	3.3	6	0.8
47	B	4.8	6	1.6
47	C	4.7	6	1.2
47	D	4.7	6	0.8
68	C	6.8	6	1.2
68	D	6.8	8	0.8
100	C	10.0	6	1.2
100	D	10.0	8	0.7
150	D	15.0	6	0.9
220	D	22.0	8	0.9
330	D	33.0	8	0.8



Chip Tantalum Capacitors

16VDC

Capacitance (μF)	Case Size	DCL (μF) max.	DF max. (%)	ESR @ 100kHz max. (ohms)
1.0	A	0.5	4	10.0
1.5	A	0.5	6	8.0
2.2	A	0.5	6	6.0
2.2	B	0.5	6	5.5
3.3	A	0.5	6	5.0
3.3	B	0.5	6	3.5
4.7	A	0.8	6	4.0
4.7	B	0.8	6	3.5
6.8	A	1.1	6	3.5
6.8	B	1.1	6	2.5
6.8	C	1.1	6	1.9
10	A	1.6	6	3.0
10	B	1.6	6	2.8
10	C	1.6	6	1.8
15	B	2.4	6	2.5
15	C	2.4	6	1.8
22	B	3.5	6	2.3
22	C	3.5	6	1.6
22	D	3.5	6	0.8
33	C	5.3	6	1.2
33	D	5.3	6	0.8
47	C	7.5	6	1.4
47	D	7.5	6	0.8
68	D	10.8	6	0.7
100	D	16.0	6	0.9
150	D	24.0	6	0.9

Chip Tantalum Capacitors

20VDC

Capacitance (μ F)	Case Size	DCL (μ F) max.	DF max. (%)	ESR @ 100kHz max. (ohms)
0.68	A	0.5	4	12.0
1	A	0.5	4	9.0
1.5	A	0.5	6	6.5
2.2	A	0.5	6	5.3
2.2	B	0.5	6	3.5
3.3	A	0.7	6	4.5
3.3	B	0.7	6	3.0
4.7	A	1.0	6	4.0
4.7	B	1.0	6	3.0
4.7	C	1.0	6	2.4
6.8	B	1.4	6	2.4
6.8	C	1.4	6	1.9
10	B	2.0	6	2.1
10	C	2.0	6	1.8
15	B	3.0	6	2.0
15	C	3.0	6	1.7
15	D	3.0	6	1.0
22	B	4.5	6	1.8
22	C	4.4	6	1.2
22	D	4.4	6	0.8
33	C	6.6	6	1.5
33	D	6.6	6	0.8
47	D	9.4	6	0.7
68	D	13.6	6	0.9



Chip Tantalum Capacitors

25VDC

Capacitance (μ F)	Case Size	DCL (μ F) max.	DF max. (%)	ESR @ 100kHz max. (ohms)
0.47	A	0.5	4	14.0
0.68	A	0.5	4	10.0
1	A	0.5	4	8.0
1.5	A	0.5	6	7.5
1.5	B	0.5	6	5.0
2.2	A	0.6	6	7.0
2.2	B	0.6	6	4.5
3.3	B	0.8	6	3.5
3.3	C	0.9	6	2.5
4.7	B	1.2	6	3.2
4.7	C	1.2	6	2.4
6.8	B	1.7	6	2.8
6.8	C	1.7	6	2.0
10	C	2.5	6	1.5
10	D	2.5	6	1.2
15	C	5.3	6	1.4
15	D	3.8	6	1.0
22	C	5.5	6	1.4
22	D	5.5	6	0.8
33	D	8.3	6	0.9
47	D	11.8	6	0.9

Chip Tantalum Capacitors

35VDC

Capacitance (μ F)	Case Size	DCL (μ F) max.	DF max. (%)	ESR @ 100kHz max. (ohms)
0.1	A	0.5	4	20.0
0.15	A	0.5	4	19.0
0.22	A	0.5	4	18.0
0.33	A	0.5	4	15.0
0.47	A	0.5	4	12.0
0.47	B	0.5	4	8.0
0.68	A	0.5	4	8.0
0.68	B	0.5	4	6.5
1	A	0.5	44	7.5
1	B	0.5	6	5.0
1.5	A	0.5	4	7.2
1.5	B	0.5	6	5.0
1.5	C	0.5	6	4.5
2.2	B	0.8	6	4.0
2.2	C	0.8	6	3.5
3.3	B	1.2	6	3.2
3.3	C	1.2	6	2.5
3.3	D	1.2	6	2.5
4.7	B	1.7	6	2.8
4.7	C	1.6	6	2.2
4.7	D	1.6	6	1.5
6.8	C	2.4	6	1.8
6.8	D	2.4	6	1.3
10	C	3.5	6	1.6
10	D	3.5	6	1.0
15	C	5.3	6	1.4
15	D	5.3	6	0.8
22	D	7.7	6	0.9



Chip Tantalum Capacitors

50VDC

Capacitance (μ F)	Case Size	DCL (μ F) max.	DF max. (%)	ESR @ 100kHz max. (ohms)
0.1	A	0.5	4	20.0
0.15	A	0.5	4	15.0
0.15	B	0.5	4	16.0
0.22	A	0.5	4	18.0
0.22	B	0.5	4	14.0
0.33	B	0.5	4	10.0
0.47	C	0.5	4	8.0
0.68	C	0.5	4	7.0
1	C	0.5	4	5.5
1.5	C	0.8	6	4.5
1.5	D	0.8	6	3.5
2.2	D	1.1	6	2.5
3.3	D	1.7	6	2.0
4.7	D	2.4	6	1.4
6.8	D	3.4	6	1.0

Chip Tantalum Capacitors

Tape and reel packaging for automatic component placement.

Loose products supplied on request.

Case Size Reference	Tape width mm	P mm	7"(178mm) reel	13"(330mm) reel
			Qty.	Qty.
A	8	4	2000	9000
B	8	4	2000	8000
C	12	8	500	3000
D	12	8	500	2500

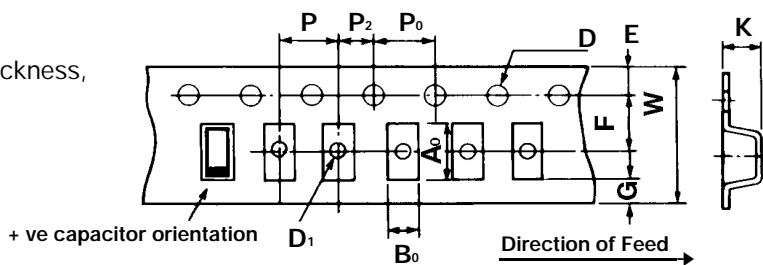
Tape Specification

Tape dimensions comply to EIA RS 481 A

Dimensions A_0 and B_0 of the pocket and the tape thickness, K, are dependent on the component size.

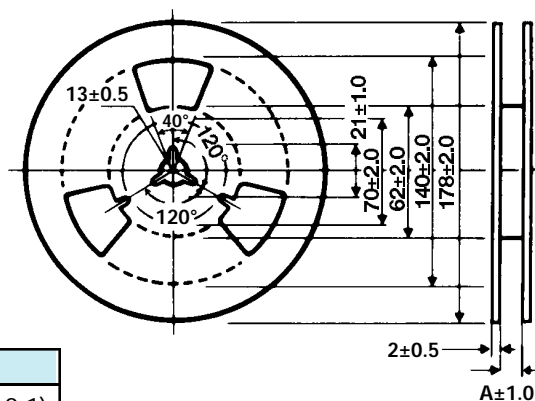
Tape materials do not affect component solderability during storage.

Carrier Tape Thickness < 0.4mm



Total Tape Thickness-K max	
Case size reference	Dims.
A	0.090(2.3)
B	0.102(2.6)
C	0.130(3.3)
D	0.142(3.6)

Plastic Tape Reel Dimensions



Code	8mm Tape		12mm Tape	
P*	0.157±0.004 or 0.315±0.004	(4±0.1) (8±0.1)	0.157±0.004 or 0.315±0.004	(4±0.1) (8±0.1)
G	0.03 min.	1.75 min.	0.03 min.	1.75 min.
F	0.138±0.002	3.5±0.05	0.22±0.002	5.5±0.05
E	0.069±0.004	1.75±0.1	0.069±0.004	1.75±0.1
W	0.315±0.012	8±0.3	0.315±0.012	12±0.3
P ₂	0.079±0.002	2±0.05	0.079±0.002	2±0.05
P ₀	0.157±0.004	4±0.1	0.157±0.004	4±0.1
D	0.059±0.004 -0	1.5±0.1 -0	0.059±0.004 -0	1.5±0.1 -0
D ₁	0.039 min.	1.0 min.	0.059 min.	1.5 min.

Standard Dimensions mm

A: 9.5mm (8mm tape)
13.0mm (12mm tape)

Cover Tape Dimensions

Thickness: 75±25μ
Width of tape:
5.5mm+0.2mm (8mm tape)
9.5mm+0.2mm (12mm tape)

*See taping suffix tables for actual P dimension (component pitch).