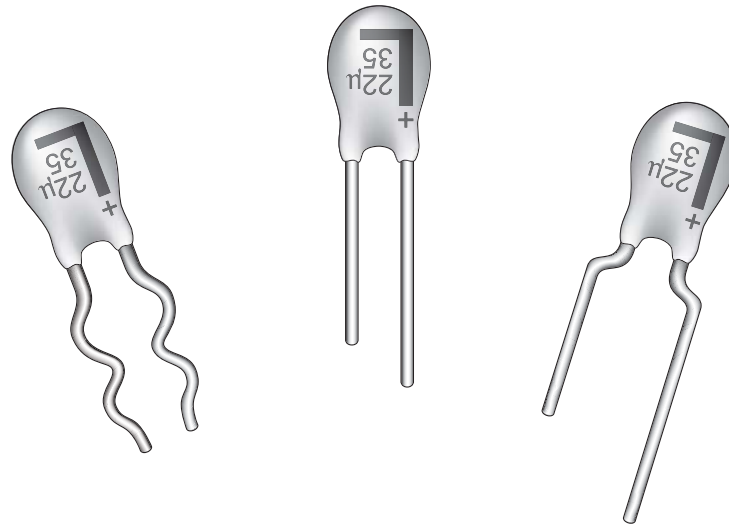


## Dipped Tantalum Capacitors



### FEATURES

- Reliable, solid tantalum construction
- Small size per C/V combination
- Capacitance range: 0.1  $\mu\text{f}$  to 330  $\mu\text{f}$
- Voltage range: 6.3 to 50 WVDC
- Surge tested for maximum robustness
- Operating temperature range  $-55^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$ ,  $2/3 \times V_r$  (linear derating) above  $+85^{\circ}\text{C}$
- Meniscus control eliminates thru-hole plugging for excellent top side solder joints
- Laser marking and bold polarity stripe
- Supplied bulk or available packaged for auto insertion
- Flame retardant, self extinguishing epoxy coating meets UL94 VO
- Lead cutting and forming is available
- Available lead-free, RoHS compliant or with 90% Sn / 10% Pb termination finish
- MSL (moisture sensitivity level) per IPC/Jedec J-STD-020B is level 1



Lead Free



RoHS  
compliant

## PART NUMBERS & SPECIFICATIONS

Capacitance (μF)	Case Size	Nemco Part No.	DCL (μA) max.	tan δ max. (%)	ESR @ 100Khz max. (Ω)
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### 6.3 V DC @ 85°C

3.3	A	TB3.3 / 6 _ 1	0.5	6	13.0
4.7	A	TB4.7 / 6 _ 1	0.5	6	10.0
6.8	A	TB6.8 / 6 _ 1	0.5	6	8.0
10.0	B	TB10 / 6 _ 1	0.5	8	6.0
15.0	C	TB15 / 6 _ 1	0.8	8	5.0
22.0	D	TB22 / 6 _ 1	1.1	8	3.7
33.0	E	TB33 / 6 _ 1	1.7	8	3.0
47.0	F	TB47 / 6 _ 1	2.4	8	2.0
68.0	G	TB68 / 6 _ 1	3.4	8	1.8
100.0	H	TB100 / 6 _ 1	5.0	10	1.6
150.0	K	TB150 / 6 _ 2	7.6	10	0.9
220.0	M	TB220 / 6 _ 2	11.0	10	0.9
330.0	N	TB330 / 6 _ 2	16.6	10	0.7

### 10 V DC @ 85°C

2.2	A	TB2.2 / 10 _ 1	0.5	6	13.0
3.3	A	TB3.3 / 10 _ 1	0.5	6	10.0
4.7	A	TB4.7 / 10 _ 1	0.5	6	8.0
6.8	B	TB6.8 / 10 _ 1	0.5	6	6.0
10.0	C	TB10 / 10 _ 1	0.8	8	5.0
15.0	D	TB15 / 10 _ 1	1.2	8	3.7
22.0	E	TB22 / 10 _ 1	1.7	8	2.7
33.0	F	TB33 / 10 _ 1	2.6	8	2.1
47.0	G	TB47 / 10 _ 1	3.7	8	1.7
68.0	H	TB68 / 10 _ 1	5.4	8	1.3
100.0	K	TB100 / 10 _ 2	8.0	10	1.0
150.0	N	TB150 / 10 _ 2	12.0	10	0.8
220.0	O	TB220 / 10 _ 2	17.6	10	0.6
330.0	O	TB330 / 10 _ 2	20.0	10	0.5

### 16 V DC @ 85°C

1.5	A	TB1.5 / 16 _ 1	0.5	4	10.0
2.2	A	TB2.2 / 16 _ 1	0.5	6	8.0
3.3	A	TB3.3 / 16 _ 1	0.5	6	6.0
4.7	B	TB4.7 / 16 _ 1	0.6	6	5.0
6.8	C	TB6.8 / 16 _ 1	0.8	6	4.0
10.0	D	TB10 / 16 _ 1	1.2	8	3.2
15.0	E	TB15 / 16 _ 1	1.9	8	2.5
22.0	F	TB22 / 16 _ 1	2.8	8	2.0
33.0	F	TB33 / 16 _ 1	4.2	8	1.6
47.0	H	TB47 / 16 _ 1	6.0	8	1.3
68.0	L	TB68 / 16 _ 2	8.7	8	1.0
100.0	M	TB100 / 16 _ 2	12.8	10	0.8
150.0	N	TB150 / 16 _ 2	19.2	10	0.6
220.0	O	TB220 / 16 _ 2	20.0	10	0.5

### 20 V DC @ 85°C

1.5	A	TB1.5 / 20 _ 1	0.5	4	9.0
2.2	A	TB2.2 / 20 _ 1	0.5	6	7.0
3.3	B	TB3.3 / 20 _ 1	0.5	6	5.5
4.7	C	TB4.7 / 20 _ 1	0.7	6	4.5
6.8	D	TB6.8 / 20 _ 1	1.0	6	3.6
10.0	E	TB10 / 20 _ 1	1.6	8	2.9
15.0	F	TB15 / 20 _ 1	2.4	8	2.3

Capacitance (μF)	Case Size	Nemco Part No.	DCL (μA) max.	tan δ max. (%)	ESR @ 100Khz max. (Ω)
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### 20 V DC @ 85°C Continued

22	H	TB22 / 20 _ 1	3.5	8	1.8
33	J	TB33 / 20 _ 2	5.2	8	1.4
47	K	TB47 / 20 _ 2	7.5	8	1.2
68	N	TB68 / 20 _ 2	10.8	8	0.9
100	N	TB100 / 20 _ 2	16.0	10	0.6

### 25 V DC @ 85°C

1.5	A	TB1.5 / 25 _ 1	0.5	4	8.0
2.2	A	TB2.2 / 25 _ 1	0.5	6	6.0
3.3	B	TB3.3 / 25 _ 1	0.6	6	5.0
4.7	C	TB4.7 / 25 _ 1	0.9	6	4.0
6.8	D	TB6.8 / 25 _ 1	1.3	6	3.1
10.0	E	TB10 / 25 _ 1	2.0	8	2.5
15.0	F	TB15 / 25 _ 1	3.0	8	2.0
22.0	H	TB22 / 25 _ 1	4.4	8	1.5
33.0	J	TB33 / 25 _ 2	6.6	8	1.2
47.0	M	TB47 / 25 _ 2	9.4	8	1.0
68.0	N	TB68 / 25 _ 2	13.6	8	0.8

### 35 V DC @ 85°C

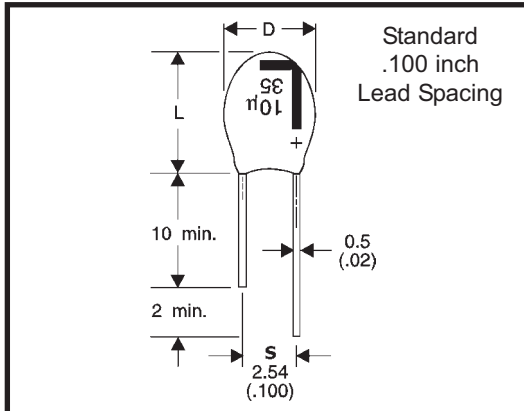
0.1	A	TB.1 / 35 _ 1	0.5	4	26.0
0.15	A	TB.15 / 35 _ 1	0.5	4	21.0
0.22	A	TB.22 / 35 _ 1	0.5	4	17.0
0.33	A	TB.33 / 35 _ 1	0.5	4	15.0
0.47	A	TB.47 / 35 _ 1	0.5	4	13.0
0.68	A	TB.68 / 35 _ 1	0.5	4	10.0
1.0	A	TB1 / 35 _ 1	0.5	4	8.0
1.5	A	TB1.5 / 35 _ 1	0.5	4	6.0
2.2	B	TB2.2 / 35 _ 1	0.6	6	5.0
3.3	C	TB3.3 / 35 _ 1	0.9	6	4.0
4.7	E	TB4.7 / 35 _ 1	1.3	6	3.0
6.8	F	TB6.8 / 35 _ 1	1.9	6	2.5
10.0	F	TB10 / 35 _ 1	2.8	8	2.0
15.0	H	TB15 / 35 _ 1	4.2	8	1.6
22.0	K	TB22 / 35 _ 2	6.1	8	1.3
33.0	M	TB33 / 35 _ 2	9.2	8	1.0
47.0	N	TB47 / 35 _ 2	10.0	8	0.8

### 50 V DC @ 85°C

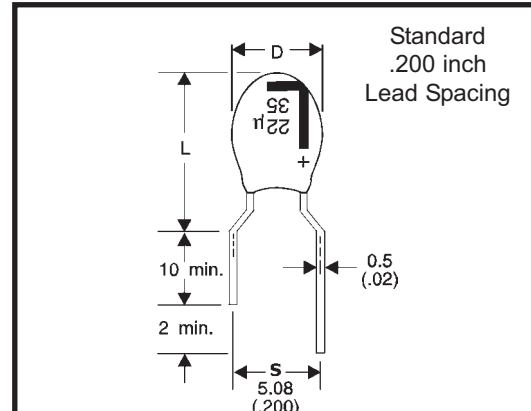
0.1	A	TB.1 / 50 _ 1	0.5	4	26.0
0.15	A	TB.15 / 50 _ 1	0.5	4	21.0
0.22	A	TB.22 / 50 _ 1	0.5	4	17.0
0.33	A	TB.33 / 50 _ 1	0.5	4	15.0
0.47	A	TB.47 / 50 _ 1	0.5	4	13.0
0.68	B	TB.68 / 50 _ 1	0.5	4	10.0
1.0	C	TB1 / 50 _ 1	0.5	4	8.0
1.5	D	TB1.5 / 50 _ 1	0.6	4	5.0
2.2	E	TB2.2 / 50 _ 1	0.8	6	3.5
3.3	F	TB3.3 / 50 _ 1	1.3	6	3.0
4.7	G	TB4.7 / 50 _ 1	1.8	6	2.5
6.8	H	TB6.8 / 50 _ 1	2.7	6	2.0
10.0	J	TB10 / 50 _ 2	4.0	8	1.6
15.0	K	TB15 / 50 _ 2	6.0	8	1.2

\_ Insert tolerance M (±20%) or K(±10%) to complete the Nemco part number

## Standard Dimensions and Lead Spacings



CASE SIZE	D max mm (inches)	L max mm (inches)	S $\pm 0.5$ mm (.02 inches) mm (inches)
A	4.5 (.177)	7.0 (.276)	2.5 (.100)
B	4.5 (.177)	7.5 (.295)	2.5 (.100)
C	5.0 (.197)	8.5 (.335)	2.5 (.100)
D	5.0 (.197)	9.0 (.354)	2.5 (.100)
E	5.5 (.217)	9.0 (.354)	2.5 (.100)
F	6.0 (.236)	10.0 (.394)	2.5 (.100)
G	6.5 (.256)	10.0 (.394)	2.5 (.100)
H	7.0 (.276)	10.5 (.413)	2.5 (.100)

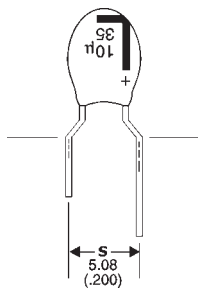


CASE SIZE	D max mm (inches)	L max mm (inches)	S $\pm 0.5$ mm (.02 inches) mm (inches)
J	8.0 (.315)	13.0 (.512)	5.0 (.200)
K	8.5 (.335)	14.0 (.550)	5.0 (.200)
L	9.0 (.354)	14.0 (.550)	5.0 (.200)
M	9.0 (.354)	14.5 (.570)	5.0 (.200)
N	9.0 (.354)	16.0 (.630)	5.0 (.200)
O	10.0 (.394)	17.0 (.670)	5.0 (.200)

NOTE: Industry standard lead spacings and lead styles shown above are a function of physical case size. Case sizes are determined by the capacitance value and voltage combination.

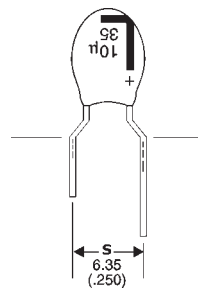
## Optional Lead Styles

.200 inch Lead Spacing



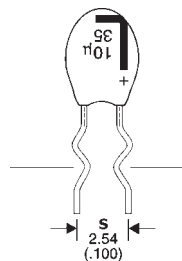
Available in  
Case Sizes A - H  
P/N Suffix Code 2

.250 inch Lead Spacing



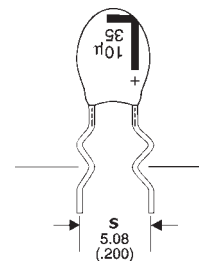
Available in  
Case Sizes A - O  
P/N Suffix Code 250

.100 inch Lead Spacing  
Snap-In



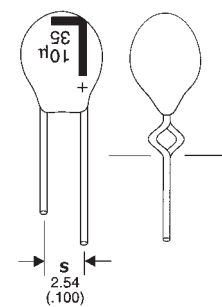
Available in  
Case Sizes A - H  
P/N Suffix Code E1  
Available in Bulk Only

.200 inch Lead Spacing  
Snap-In



Available in  
Case Sizes A - H  
P/N Suffix Code E2  
Available in Bulk Only

.100 inch Lead Spacing  
Back to Back form



Available in  
Case Sizes A - H  
P/N Suffix Code F

NOTE: Seated component heights for optional lead styles will vary based on case size. Contact your Nemco sales representative for samples of optional lead styles.