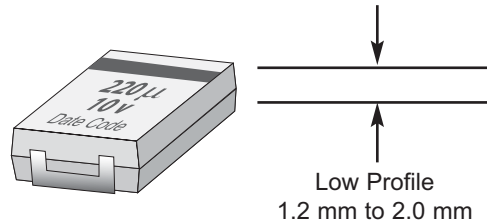


## Low Profile



## FEATURES

- **Lead-free, RoHS compliant**
- Low Profile Heights. Excellent for PCMCIA applications.
- Meets or exceeds EIA 535 BAAC and IECQ standards (QC300801/US0001, IS - 28)
- Capacitance range: 0.1  $\mu\text{f}$  to 470  $\mu\text{f}$
- Voltage range 4 to 35 WVDC
- Operating temperature range  $-55^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$ ,  $2/3 \times V_r$  (linear derating) above  $+85^{\circ}\text{C}$
- Surge tested for maximum robustness
- Precision molded case with flat surfaces for vacuum pick-up
- Laser marking and bold videcon - readable polarity stripe
- Compliant terminations
- Glue pad on underside for bonding to circuit board prior to soldering
- Encapsulant material satisfies the UL 94 VO flammability classification
- Termination finish 90% Sn / 10% Pb available
- MSL (moisture sensitivity level) per IPC/Jedec J-STD-020B is level 1

Nemco offers low profile surface mount tantalum capacitors including an **0805** (EIA 2012) size for applications where component height is a critical concern. These devices are often selected when maximum heights as small as 1.2 to 2.0 millimeters are needed to meet the heights of standard integrated circuits after mounting.

Case sizes AL, BL, CL, DL have the identical footprints of standard A, B, C, D devices.



Lead Free



RoHS  
compliant

## PART NUMBERS & SPECIFICATIONS

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

2.2	XL	PCT2.2 / 4XL	0.5	6	25.0
2.2	AL	PCT2.2 / 4AL	0.5	6	25.0
3.3	XL	PCT3.3 / 4XL	0.5	6	20.0
3.3	AL	PCT3.3 / 4AL	0.5	6	18.0
4.7	XL	PCT4.7 / 4XL	0.5	6	12.0
4.7	AL	PCT4.7 / 4AL	0.5	6	10.0
6.8	XL	PCT6.8 / 4XL	0.5	6	5.2
6.8	AL	PCT6.8 / 4AL	0.5	6	8.0
6.8	BL	PCT6.8 / 4BL	0.5	6	6.0
10.0	XL	PCT10 / 4XL	0.5	6	7.0
10.0	AL	PCT10 / 4AL	0.5	6	6.0
10.0	BL	PCT10 / 4BL	0.5	6	5.0
15.0	XL	PCT15 / 4XL	0.6	8	4.0
15.0	AL	PCT15 / 4AL	0.6	8	4.0
15.0	BL	PCT15 / 4BL	0.6	6	2.0
22.0	XL	PCT22 / 4XL	0.9	8	3.8
22.0	AL	PCT22 / 4AL	0.9	8	3.5
22.0	BL	PCT22 / 4BL	0.9	6	1.9
33.0	AL	PCT33 / 4AL	1.3	8	1.7
33.0	BL	PCT33 / 4BL	1.3	6	1.7
33.0	CL	PCT33 / 4CL	1.3	6	0.6
47.0	BL	PCT47 / 4BL	1.9	10	2.0
47.0	CL	PCT47 / 4CL	1.9	6	0.5
68.0	BL	PCT68 / 4BL	2.7	15	1.5
68.0	CL	PCT68 / 4CL	2.7	6	0.4
100.0	BL	PCT100 / 4BL	4.0	14	1.4
100.0	CL	PCT100 / 4CL	4.0	6	1.3
150.0	CL	PCT150 / 4CL	6.0	6	1.3
150.0	DL	PCT150 / 4DL	6.0	6	0.4
220.0	CL	PCT220 / 4CL	8.8	8	1.2
220.0	DL	PCT220 / 4DL	8.8	8	0.3
470.0	DL	PCT470 / 4DL	18.8	14	0.9
680.0	DL	PCT680 / 4DL	27.2	25	0.2

### 10 V DC @ 85°C

1.0	XL	PCT1 / 10XL	0.5	4	25.0
1.0	AL	PCT1 / 10AL	0.5	4	25.0
1.5	XL	PCT1.5 / 10XL	0.5	6	20.0
1.5	AL	PCT1.5 / 10AL	0.5	6	20.0
2.2	XL	PCT2.2 / 10XL	0.5	6	15.0
2.2	AL	PCT2.2 / 10AL	0.5	6	12.0
3.3	XL	PCT3.3 / 10XL	0.5	6	8.0
3.3	AL	PCT3.3 / 10AL	0.5	6	8.0
3.3	BL	PCT3.3 / 10BL	0.5	6	6.0
4.7	XL	PCT4.7 / 10XL	0.5	6	9.0
4.7	AL	PCT4.7 / 10AL	0.5	6	5.0
4.7	BL	PCT4.7 / 10BL	0.5	6	5.0
6.8	XL	PCT6.8 / 10XL	0.7	6	5.2
6.8	AL	PCT6.8 / 10AL	0.7	6	4.0
6.8	BL	PCT6.8 / 10BL	0.7	6	4.0
10.0	XL	PCT10 / 10XL	1.0	20	6.0
10.0	AL	PCT10 / 10AL	1.0	8	4.0
10.0	BL	PCT10 / 10BL	1.0	6	3.0
15.0	AL	PCT15 / 10AL	1.5	6	2.0
15.0	BL	PCT15 / 10BL	1.5	8	2.8
15.0	CL	PCT15 / 10CL	1.5	6	0.7
22.0	BL	PCT22 / 10BL	2.2	8	2.2
22.0	CL	PCT22 / 10CL	2.2	6	0.6
33.0	CL	PCT33 / 10CL	3.3	6	1.6
47.0	CL	PCT47 / 10CL	4.7	6	1.4
47.0	DL	PCT47 / 10DL	4.7	6	0.5
68.0	CL	PCT68 / 10CL	6.8	6	1.3
68.0	DL	PCT68 / 10DL	6.8	6	0.9
100.0	CL	PCT100 / 10CL	10.0	6	0.4
100.0	DL	PCT100 / 10DL	10.0	6	0.9
150.0	DL	PCT150 / 10DL	15.0	6	1.2
220.0	DL	PCT220 / 10DL	22.0	10	0.5

### 6.3 V DC @ 85°C

1.5	XL	PCT1.5 / 6XL	0.5	6	25.0
1.5	AL	PCT1.5 / 6AL	0.5	6	25.0
2.2	XL	PCT2.2 / 6XL	0.5	6	20.0
2.2	AL	PCT2.2 / 6AL	0.5	6	18.0
3.3	XL	PCT3.3 / 6XL	0.5	6	12.0
3.3	AL	PCT3.3 / 6AL	0.5	6	9.0
4.7	XL	PCT4.7 / 6XL	0.5	6	7.0
4.7	AL	PCT4.7 / 6AL	0.5	6	7.5
4.7	BL	PCT4.7 / 6BL	0.5	6	6.0
6.8	XL	PCT6.8 / 6XL	0.5	8	7.0
6.8	AL	PCT6.8 / 6AL	0.5	6	7.0
6.8	BL	PCT6.8 / 6BL	0.5	6	5.0
10.0	XL	PCT10 / 6XL	0.6	8	6.0
10.0	AL	PCT10 / 6AL	0.6	6	6.0
10.0	BL	PCT10 / 6BL	0.6	6	4.0
15.0	XL	PCT15 / 6XL	0.9	8	4.1
15.0	AL	PCT15 / 6AL	0.9	8	4.0
15.0	BL	PCT15 / 6BL	1.0	6	3.5
22.0	AL	PCT22 / 6AL	1.3	10	1.8
22.0	BL	PCT22 / 6BL	1.4	8	2.5
22.0	CL	PCT22 / 6CL	1.3	6	0.6
33.0	BL	PCT33 / 6BL	2.1	10	2.5
33.0	CL	PCT33 / 6CL	2.1	6	1.8
47.0	BL	PCT47 / 6BL	2.8	10	1.6
47.0	CL	PCT47 / 6CL	3.0	6	1.5
68.0	CL	PCT68 / 6CL	4.3	6	1.5
100.0	CL	PCT100 / 6CL	6.3	6	0.9
100.0	DL	PCT100 / 6DL	6.3	6	0.9
150.0	CL	PCT150 / 6CL	9.0	8	0.3
150.0	DL	PCT150 / 6DL	9.0	6	0.4
220.0	DL	PCT220 / 6DL	13.9	10	0.9
330.0	DL	PCT330 / 6DL	20.8	8	0.9

### 16 V DC @ 85°C

0.68	XL	PCT.68 / 16XL	0.5	4	25.0
0.68	AL	PCT.68 / 16AL	0.5	4	25.0
1.0	XL	PCT1 / 16XL	0.5	4	20.0
1.0	AL	PCT1 / 16AL	0.5	4	15.0
1.0	BL	PCT1 / 16BL	0.5	4	5.0
1.5	XL	PCT1.5 / 16XL	0.5	6	10.0
1.5	AL	PCT1.5 / 16AL	0.5	6	12.0
2.2	XL	PCT2.2 / 16XL	0.5	6	6.5
2.2	AL	PCT2.2 / 16AL	0.5	6	6.0
2.2	BL	PCT2.2 / 16BL	0.5	6	6.5
3.3	XL	PCT3.3 / 16XL	0.5	8	5.0
3.3	AL	PCT3.3 / 16AL	0.5	6	5.0
3.3	BL	PCT3.3 / 16BL	0.5	6	5.0
4.7	AL	PCT4.7 / 16AL	0.5	6	4.5
4.7	BL	PCT4.7 / 16BL	0.8	6	4.5
6.8	AL	PCT6.8 / 16AL	1.1	8	2.4
6.8	BL	PCT6.8 / 16BL	1.1	6	3.5
10.0	BL	PCT10 / 16BL	1.6	8	2.2
10.0	CL	PCT10 / 16CL	1.6	6	2.0
15.0	BL	PCT15 / 16BL	2.4	6	2.0
15.0	CL	PCT15 / 16CL	2.4	6	0.7
22.0	CL	PCT22 / 16CL	3.5	6	1.6
33.0	CL	PCT33 / 16CL	5.3	6	1.5
33.0	DL	PCT33 / 16DL	5.3	6	0.9
47.0	CL	PCT47 / 16CL	7.5	6	0.4
47.0	DL	PCT47 / 16DL	7.5	6	0.7
68.0	DL	PCT68 / 16DL	10.9	6	0.9
100.0	DL	PCT100 / 16DL	16.0	6	0.9
150.0	DL	PCT150 / 16DL	24.0	15	0.3

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

Capacitance (μF)	Case Size	Nemco Part No.	DCL (μA) max.	tan δ max. (%)	ESR @ 100Khz max. (Ω)
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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

0.1	XL	PCT.1 / 20XL _	0.5	4	25.0
0.1	AL	PCT.1 / 20AL _	0.5	4	25.0
0.15	XL	PCT.15 / 20XL _	0.5	4	25.0
0.15	AL	PCT.15 / 20AL _	0.5	4	25.0
0.22	XL	PCT.22 / 20XL _	0.5	4	25.0
0.22	AL	PCT.22 / 20AL _	0.5	4	25.0
0.33	XL	PCT.33 / 20XL _	0.5	4	25.0
0.33	AL	PCT.33 / 20AL _	0.5	4	25.0
0.47	XL	PCT.47 / 20XL _	0.5	4	25.0
0.47	AL	PCT.47 / 20AL _	0.5	4	25.0
0.68	XL	PCT.68 / 20XL _	0.5	4	25.0
0.68	AL	PCT.68 / 20AL _	0.5	4	20.0
0.68	BL	PCT.68 / 20BL _	0.5	4	15.0
1.0	XL	PCT1 / 20XL _	0.5	4	20.0
1.0	AL	PCT1 / 20AL _	0.5	4	12.0
1.0	BL	PCT1 / 20BL _	0.5	4	9.0
1.5	XL	PCT1.5 / 20XL _	0.5	6	9.6
1.5	AL	PCT1.5 / 20AL _	0.5	6	5.0
1.5	BL	PCT1.5 / 20BL _	0.5	6	6.5
2.2	AL	PCT2.2 / 20AL _	0.5	6	3.0
2.2	BL	PCT2.2 / 20BL _	0.5	6	6.0
3.3	BL	PCT3.3 / 20BL _	0.7	6	3.0
4.7	BL	PCT4.7 / 20BL _	0.9	6	3.0
6.8	BL	PCT6.8 / 20BL _	1.4	6	2.6
10.0	CL	PCT10 / 20CL _	2.0	6	1.9
15.0	CL	PCT15 / 20CL _	3.0	6	1.7
22.0	CL	PCT22 / 20CL _	4.4	6	1.6
22.0	DL	PCT22 / 20DL _	4.4	6	0.9
33.0	DL	PCT33 / 20DL _	6.6	6	0.5
47.0	DL	PCT47 / 20DL _	9.4	6	0.4
68.0	DL	PCT68 / 20DL _	13.6	6	0.4

## 35 V DC @ 85°C

0.1	XL	PCT.1 / 35XL _	0.5	4	29.0
0.1	AL	PCT.1 / 35AL _	0.5	4	24.0
0.15	XL	PCT.15 / 35XL _	0.5	4	24.0
0.15	AL	PCT.15 / 35AL _	0.5	4	21.0
0.22	XL	PCT.22 / 35XL _	0.5	4	21.0
0.22	AL	PCT.22 / 35AL _	0.5	4	18.0
0.33	XL	PCT.33 / 35XL _	0.5	4	17.0
0.33	AL	PCT.33 / 35AL _	0.5	4	15.0
0.47	XL	PCT.47 / 35XL _	0.5	4	15.0
0.47	AL	PCT.47 / 35AL _	0.5	4	12.0
0.47	BL	PCT.47 / 35BL _	0.5	4	10.0
0.68	AL	PCT.68 / 35AL _	0.5	4	8.0
0.68	BL	PCT.68 / 35BL _	0.5	4	8.0
1.0	AL	PCT1 / 35AL _	0.5	4	7.5
1.0	BL	PCT1 / 35BL _	0.5	4	6.5
1.5	BL	PCT1.5 / 35BL _	0.5	6	5.2
2.2	BL	PCT2.2 / 35BL _	0.8	6	4.2
3.3	CL	PCT3.3 / 35CL _	1.2	6	1.6
4.7	CL	PCT4.7 / 35CL _	1.6	6	2.2
6.8	DL	PCT6.8 / 35DL _	2.3	6	0.9
10.0	DL	PCT10 / 35DL _	3.5	6	1.0
15.0	DL	PCT15 / 35DL _	5.3	6	0.6
22.0	DL	PCT22 / 35DL _	7.7	6	0.5

## 25 V DC @ 85°C

0.15	XL	PCT.15 / 25XL _	0.5	4	24.0
0.22	XL	PCT.22 / 25XL _	0.5	4	21.0
0.33	XL	PCT.33 / 25XL _	0.5	4	17.0
0.47	XL	PCT.47 / 25XL _	0.5	4	15.0
0.47	AL	PCT.47 / 25AL _	0.5	4	14.0
0.68	XL	PCT.68 / 25XL _	0.5	4	13.0
0.68	AL	PCT.68 / 25AL _	0.5	5	10.0
1.0	XL	PCT1 / 25XL _	0.5	4	8.0
1.0	AL	PCT1 / 25AL _	0.5	4	8.0
1.5	AL	PCT1.5 / 25AL _	0.5	6	5.4
1.5	BL	PCT1.5 / 25BL _	0.5	6	5.0
2.2	BL	PCT2.2 / 25BL _	0.6	6	4.5
3.3	BL	PCT3.3 / 25BL _	0.8	6	3.5
3.3	CL	PCT3.3 / 25CL _	0.8	6	1.6
4.7	CL	PCT4.7 / 25CL _	1.2	6	1.2
6.8	CL	PCT6.8 / 25CL _	1.7	6	2.0
10.0	CL	PCT10 / 25CL _	2.5	6	1.8
15.0	DL	PCT15 / 25DL _	3.8	6	1.0
22.0	DL	PCT22 / 25DL _	5.5	6	0.9
33.0	DL	PCT33 / 25DL _	8.3	6	0.5

## 50 V DC @ 85°C

0.1	AL	PCT.1 / 50AL _	0.5	4	19.0
0.15	AL	PCT.15 / 50AL _	0.5	4	16.0
0.22	AL	PCT.22 / 50AL _	0.5	4	13.0
0.33	AL	PCT.33 / 50AL _	0.5	4	11.0
0.33	BL	PCT.33 / 50BL _	0.5	4	11.0
0.47	AL	PCT.47 / 50AL _	0.5	4	9.5
0.47	BL	PCT.47 / 50BL _	0.5	4	9.5
1.0	CL	PCT1 / 50CL _	0.5	6	4.4
1.5	CL	PCT1.5 / 50CL _	0.8	6	3.1
3.3	DL	PCT3.3 / 50DL _	1.7	4	1.7
4.7	DL	PCT4.7 / 50DL _	2.4	6	1.2
6.8	DL	PCT6.8 / 50DL _	3.4	6	0.9

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