

Type TDC Solid Tantalum Capacitors

Molded, Radial Lead, Solid Tantalum Capacitors



As a low cost alternative to molded solid tantalum capacitors, the Type TDC, constructed in a tough, radial dipped flame retardant plastic case, assures the user that it is a top performer with such attributes as low DCL, low ESR, low impedance and a great value with low in-place cost. The Type TDC is high shock and vibration resistant and is available in bulk or on radial tape and reel.

Highlights

- ♦ Tough plastic case
- ♦ Low DCL
- ♦ Low ESR and impedance
- ♦ Low cost
- ♦ Temperature stable
- ♦ UL94VO flammability rating
- ♦ Resistant to shock and vibration

Specifications

Capacitance Range: 0.10 μ F to 330 μ F

Voltage Range: 6 WVdc to 50 WVdc at 85 °C

Tolerance: $\pm 10\%$, $\pm 20\%$

Operating Temperature Range: -55°C to $+125^{\circ}\text{C}$ (with proper derating)

DC Leakage:

- $+25^{\circ}\text{C}$ - See ratings limit
- $+85^{\circ}\text{C}$ - 10 x Ratings limit
- $+125^{\circ}\text{C}$ - 12.5 x Ratings limit

Capacitance Change Maximum:

- -10% @ -55°C
- $+10\%$ @ $+85^{\circ}\text{C}$
- $+12\%$ @ $+125^{\circ}\text{C}$

Reverse Voltage (Non-continuous):

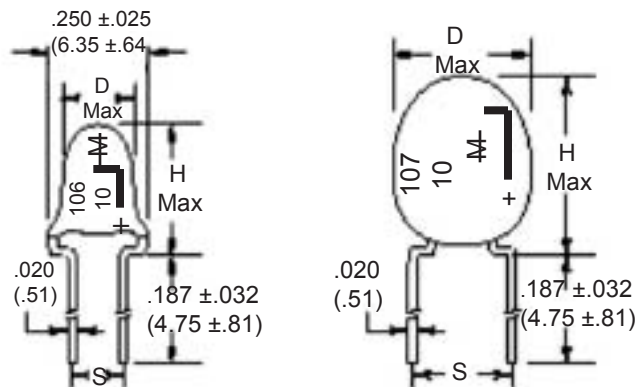
- 15% of rated voltage @ 25°C
- 5% of rated voltage @ 85°C
- 1% of rated voltage @ 125°C

Reel Packaging:

Case Code	Quantity per Reel
E	1,000
F	1,000
G	1,000

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Capacitor Outline Drawing



Dimensions - Inches (Millimeters)				
Case Code	D (Max.)	H (Max.)	Leads	
			S	Code
E	.175 (4.45)	.350 (8.89)	.125 (3.17) (Standard)	N
			.250 (6.35) (Special)	W
F	.250 (6.35)	.500 (12.7)	.125 (3.17) (Standard)	N
			.250 (6.35) (Special)	W

E and F Case Codes:

Lead Spacing = .125 ± .025
(3.17 ± .64)

G Case Code:

Lead Spacing = .250 ± .025
(6.34 ± .64)

Ratings

Cap (μF)	Catalog Part Number	Case Code	Lead Spacing (S)	Max. DCL @ +25 °C (μA)	Max. DF @ +25 °C 120 Hz (%)
6 WVdc; 8 Vdc Surge @ 85 °C 4 WVdc; 5 Vdc Surge @ 125 °C					
3.3	TDC335*006NSE	E	0.125	0.5	5
3.9	TDC395*006NSE	E	0.125	0.5	5
4.7	TDC475*006NSE	E	0.125	0.5	5
5.6	TDC565*006NSE	E	0.125	0.5	5
6.8	TDC685*006NSE	E	0.125	0.5	5
8.2	TDC825*006NSE	E	0.125	0.5	6
10	TDC106*006NSE	E	0.125	0.5	6
12	TDC126*006NSE	E	0.125	0.6	6
15	TDC156*006NSF	F	0.125	0.7	6
18	TDC186*006NSF	F	0.125	0.9	6
22	TDC226*006NSF	F	0.125	1.1	6
27	TDC276*006NSF	F	0.125	1.3	6
33	TDC336*006NSF	F	0.125	1.6	6
39	TDC396*006NSF	F	0.125	1.9	6
47	TDC476*006NSF	F	0.125	2.3	6
56	TDC566*006NSF	F	0.125	2.7	6
68	TDC686*006NSF	F	0.125	3.3	6
82	TDC826*006NSF	F	0.125	3.9	8
100	TDC107*006NSF	F	0.125	4.8	8
120	TDC127*006WSG	G	0.25	5.8	8
150	TDC157*006WSG	G	0.25	7.2	8
180	TDC187*006WSG	G	0.25	8.6	8
220	TDC227*006WSG	G	0.25	10	8
270	TDC277*006WSG	G	0.25	10	8
330	TDC337*006WSG	G	0.25	10	8

Cap (μF)	Catalog Part Number	Case Code	Lead Spacing (S)	Max. DCL @ +25 °C (μA)	Max. DF @ +25 °C 120 Hz (%)
10 WVdc; 13 Vdc Surge @ 85 °C 7 WVdc; 9 Vdc Surge @ 125 °C					
2.2	TDC225*010NSE	E	0.125	0.5	5
2.7	TDC275*010NSE	E	0.125	0.5	5
3.3	TDC335*010NSE	E	0.125	0.5	5
3.9	TDC395*010NSE	E	0.125	0.5	5
4.7	TDC475*010NSE	E	0.125	0.5	5
5.6	TDC565*010NSE	E	0.125	0.5	5
6.8	TDC685*010NSE	E	0.125	0.5	5
8.2	TDC825*010NSE	E	0.125	0.7	6
10	TDC106*010NSF	F	0.125	0.8	6
12	TDC126*010NSF	F	0.125	1.0	6
15	TDC156*010NSF	F	0.125	1.2	6
18	TDC186*010NSF	F	0.125	1.4	6
22	TDC226*010NSF	F	0.125	1.8	6
27	TDC276*010NSF	F	0.125	2.2	6
33	TDC336*010NSF	F	0.125	2.6	6
39	TDC396*010NSF	F	0.125	3.1	6
47	TDC476*010NSF	F	0.125	3.8	6
56	TDC566*010NSF	F	0.125	4.5	6
68	TDC686*010NSF	F	0.125	5.4	6
82	TDC826*010WSG	G	0.25	6.6	8
100	TDC107*010WSG	G	0.25	8.0	8
120	TDC127*010WSG	G	0.25	9.6	8
150	TDC157*010WSG	G	0.25	10.0	8
180	TDC187*010WSG	G	0.25	10.0	8
220	TDC227*010WSG	G	0.25	10.0	8

* Indicates capacitance tolerance: K = ±10%, M = ±20%, (J = ±5%, Special Order)

CDE reserves the right to substitute a tighter tolerance, higher voltage capacitor within the same case size.

Type TDC Solid Tantalum Capacitors

Cap (μ F)	Catalog Part Number	Case Code	Lead Spacing (S)	Max. DCL @ +25 °C (μ A)	Max. DF @ +25 °C 120 Hz (%)
20 WVdc; 26 Vdc Surge @ 85 °C 13 WVdc; 16 Vdc Surge @ 125 °C					
1.0	TDC105*020NSE	E	0.125	0.5	3
1.2	TDC125*020NSE	E	0.125	0.5	5
1.5	TDC155*020NSE	E	0.125	0.5	5
1.8	TDC185*020NSE	E	0.125	0.5	5
2.2	TDC225*020NSE	E	0.125	0.5	5
2.7	TDC275*020NSE	E	0.125	0.5	5
3.3	TDC335*020NSE	E	0.125	0.5	5
3.9	TDC395*020NSE	E	0.125	0.6	5
4.7	TDC475*020NSE	E	0.125	0.8	5
5.6	TDC565*020NSF	F	0.125	0.9	5
6.8	TDC685*020NSF	F	0.125	1.1	5
8.2	TDC825*020NSF	F	0.125	1.3	6
35 WVdc; 46 Vdc Surge @ 85 °C 23 WVdc; 28 Vdc Surge @ 125 °C					
0.10	TDC104*035NSE	E	0.125	0.5	3
0.12	TDC124*035NSE	E	0.125	0.5	3
0.15	TDC154*035NSE	E	0.125	0.5	3
0.18	TDC184*035NSE	E	0.125	0.5	3
0.22	TDC224*035NSE	E	0.125	0.5	3
0.27	TDC274*035NSE	E	0.125	0.5	3
0.33	TDC334*035NSE	E	0.125	0.5	3
0.39	TDC394*035NSE	E	0.125	0.5	3
0.47	TDC474*035NSE	E	0.125	0.5	3
0.56	TDC564*035NSE	E	0.125	0.5	3
0.68	TDC684*035NSE	E	0.125	0.5	3
0.82	TDC824*035NSE	E	0.125	0.5	3
1.0	TDC105*035NSE	E	0.125	0.5	3
1.2	TDC125*035NSE	E	0.125	0.5	5
1.5	TDC155*035NSE	E	0.125	0.5	5
1.8	TDC185*035NSE	E	0.125	0.5	5
2.2	TDC225*035NSE	E	0.125	0.6	5
2.7	TDC275*035NSF	F	0.125	0.7	5
3.3	TDC335*035NSF	F	0.125	0.9	5
3.9	TDC395*035NSF	F	0.125	1.0	5
4.7	TDC475*035NSF	F	0.125	1.3	5
5.6	TDC565*035NSF	F	0.125	1.6	5
6.8	TDC685*035NSF	F	0.125	1.9	5
8.2	TDC825*035NSF	F	0.125	2.3	6
10	TDC106*035NSF	F	0.125	2.8	6
12	TDC126*035WSG	G	0.25	3.4	6
15	TDC156*035WSG	G	0.25	4.2	6

Cap (μ F)	Catalog Part Number	Case Code	Lead Spacing (S)	Max. DCL @ +25 °C (μ A)	Max. DF @ +25 °C 120 Hz (%)
35 WVdc; 46 Vdc Surge @ 85 °C 23 WVdc; 28 Vdc Surge @ 125 °C					
18	TDC186*035WSG	G	0.25	5.0	6
22	TDC226*035WSG	G	0.25	6.2	6
27	TDC276*035WSG	G	0.25	7.6	6
33	TDC336*035WSG	G	0.25	9.2	6
39	TDC396*035WSG	G	0.25	10	6
47	TDC476*035WSG	G	0.25	10	6
50 WVdc; 65 Vdc Surge @ 85 °C 33 WVdc; 40 Vdc Surge @ 125 °C					
.10	TDC104*050NSE	E	0.125	0.5	3
.12	TDC124*050NSE	E	0.125	0.5	3
.15	TDC154*050NSE	E	0.125	0.5	3
.18	TDC184*050NSE	E	0.125	0.5	3
.22	TDC224*050NSE	E	0.125	0.5	3
.27	TDC274*050NSE	E	0.125	0.5	3
.33	TDC334*050NSE	E	0.125	0.5	3
.39	TDC394*050NSE	E	0.125	0.5	3
.47	TDC474*050NSE	E	0.125	0.5	3
.56	TDC564*050NSE	E	0.125	0.5	3
.68	TDC684*050NSE	E	0.125	0.5	3
.82	TDC824*050NSE	E	0.125	0.5	3
1.0	TDC105*050NSE	E	0.125	0.5	3
1.2	TDC125*050NSE	E	0.125	0.5	5
1.5 TDC155*050NSE E 0.125 0.6 5					
1.8 TDC185*050NSF F 0.125 0.7 5					
2.2 TDC225*050NSF F 0.125 0.9 5					
2.7 TDC275*050NSF F 0.125 1.1 5					
3.3 TDC335*050NSF F 0.125 1.3 5					
3.9 TDC395*050NSF F 0.125 1.6 5					
4.7 TDC475*050NSF F 0.125 1.9 5					
5.6 TDC565*050NSF F 0.125 2.2 5					
6.8 TDC685*050WSG G 0.25 2.7 5					
8.2 TDC825*050WSG G 0.25 3.3 6					
10 TDC106*050WSG G 0.25 4.0 6					
12 TDC126*050WSG G 0.25 4.8 6					
15 TDC156*050WSG G 0.25 6.0 6					
18 TDC186*050WSG G 0.25 7.2 6					
22 TDC226*050WSG G 0.25 8.8 6					

* Indicates capacitance tolerance: K = $\pm$ 10%, M = $\pm$ 20%, (J = $\pm$ 5%, Special Order)

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Part Numbering System

TDC Series TDC	07 Capacitance 394 = 0.39 μ F 105 = 1.0 μ F 225 = 2.2 μ F 186 = 18 μ F 107 = 100 μ F	K Tolerance J = $\pm 5\%$ K = $\pm 10\%$ M = $\pm 20\%$	015 Voltage 006 = 6 Vdc 010 = 10 Vdc 020 = 20 Vdc 025 = 25 Vdc 035 = 35 Vdc 050 = 50 Vdc	P Lead Spacing N = .125 W = .250	0 Lead Length S = .187	G Case Code E F G
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