

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 °C (with proper derating)

DC Leakage:

- +25 °C - See ratings limit
- +85 °C - 10 x Ratings limit
- +125 °C - 12.5 x Ratings limit

Capacitance Change Maximum:

- 10% @ -55 °C
- +10% @ +85 °C
- +12% @ +125 °C

Reverse Voltage (Non-continuous):

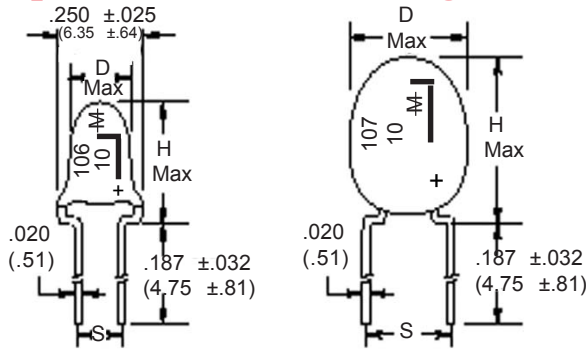
- 15% of rated voltage @ 25 °C
- 5% of rated voltage @ 85 °C
- 1% of rated voltage @ 125 °C

Reel Packaging:

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

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Capacitor Outline Drawing



E and F Case Codes:

Lead Spacing = .125 ±.025
(3.17 ±.64)

G Case Code:

Lead Spacing = .250 ±.025
(6.34 ±.64)

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
G	.350 (8.89)	.650 (16.51)	.250 (6.35) (Special)	W

Ratings

Cap (μF)	Case Code	Lead Spacing (S)	Max. DCL @ +25 °C (μA)	Max. DF % @ +25 °C 120 Hz	Catalog Part Number	Cap (μF)	Case Code	Lead Spacing (S)	Max. DCL @ +25 °C (μA)	Max. DF % @ +25 °C 120 Hz	Catalog Part Number
6 WVdc; 8 Vdc Surge @ 85 °C 4 WVdc; 5 Vdc Surge @ 125 °C						10 WVdc; 13 Vdc Surge @ 85 °C 7 WVdc; 9 Vdc Surge @ 125 °C					
3.3	E	0.125	0.5	5	TDC335*006NSE	15	F	0.125	1.2	6	TDC156*010NSF
3.9	E	0.125	0.5	5	TDC395*006NSE	18	F	0.125	1.4	6	TDC186*010NSF
4.7	E	0.125	0.5	5	TDC475*006NSE	22	F	0.125	1.8	6	TDC226*010NSF
5.6	E	0.125	0.5	5	TDC565*006NSE	27	F	0.125	2.2	6	TDC276*010NSF
6.8	E	0.125	0.5	5	TDC685*006NSE	33	F	0.125	2.6	6	TDC336*010NSF
8.2	E	0.125	0.5	6	TDC825*006NSE	39	F	0.125	3.1	6	TDC396*010NSF
10	E	0.125	0.5	6	TDC106*006NSE	47	F	0.125	3.8	6	TDC476*010NSF
12	E	0.125	0.6	6	TDC126*006NSE	56	F	0.125	4.5	6	TDC566*010NSF
15	F	0.125	0.7	6	TDC156*006NSF	68	F	0.125	5.4	6	TDC686*010NSF
18	F	0.125	0.9	6	TDC186*006NSF	82	G	0.25	6.6	8	TDC826*010WSG
22	F	0.125	1.1	6	TDC226*006NSF	100	G	0.25	8.0	8	TDC107*010WSG
27	F	0.125	1.3	6	TDC276*006NSF	120	G	0.25	9.6	8	TDC127*010WSG
33	F	0.125	1.6	6	TDC336*006NSF	150	G	0.25	10.0	8	TDC157*010WSG
39	F	0.125	1.9	6	TDC396*006NSF	180	G	0.25	10.0	8	TDC187*010WSG
47	F	0.125	2.3	6	TDC476*006NSF	220	G	0.25	10.0	8	TDC227*010WSG
56	F	0.125	2.7	6	TDC566*006NSF	15 WVdc; 20 Vdc Surge @ 85 °C 10 WVdc; 12 Vdc Surge @ 125 °C					
68	F	0.125	3.3	6	TDC686*006NSF	1.5	E	0.125	0.5	5	TDC155*015NSE
82	F	0.125	3.9	8	TDC826*006NSF	1.8	E	0.125	0.5	5	TDC185*015NSE
100	F	0.125	4.8	8	TDC107*006NSF	2.2	E	0.125	0.5	5	TDC225*015NSE
120	G	0.25	5.8	8	TDC127*006WSG	2.7	E	0.125	0.5	5	TDC275*015NSE
150	G	0.25	7.2	8	TDC157*006WSG	3.3	E	0.125	0.5	5	TDC335*015NSE
180	G	0.25	8.6	8	TDC187*006WSG	3.9	E	0.125	0.5	5	TDC395*015NSE
220	G	0.25	10	8	TDC227*006WSG	4.7	E	0.125	0.6	5	TDC475*015NSE
270	G	0.25	10	8	TDC277*006WSG	5.6	E	0.125	0.7	5	TDC565*015NSE
330	G	0.25	10	8	TDC337*006WSG	6.8	E	0.125	0.9	5	TDC685*015NSE
10 WVdc; 13 Vdc Surge @ 85 °C 7 WVdc; 9 Vdc Surge @ 125 °C						8.2	E	0.125	1.0	6	TDC825*015NSE
2.2	E	0.125	0.5	5	TDC225*010NSE	10	F	0.125	1.3	6	TDC106*015NSF
2.7	E	0.125	0.5	5	TDC275*010NSE	12	F	0.125	1.5	6	TDC126*015NSF
3.3	E	0.125	0.5	5	TDC335*010NSE	15	F	0.125	1.8	6	TDC156*015NSF
3.9	E	0.125	0.5	5	TDC395*010NSE	18	F	0.125	2.2	6	TDC186*015NSF
4.7	E	0.125	0.5	5	TDC475*010NSE	22	F	0.125	2.6	6	TDC226*015NSF
5.6	E	0.125	0.5	5	TDC565*010NSE	27	F	0.125	3.2	6	TDC276*015NSF
6.8	E	0.125	0.5	5	TDC685*010NSE	33	F	0.125	4.0	6	TDC336*015NSF
8.2	E	0.125	0.7	6	TDC825*010NSE	39	G	0.25	4.7	6	TDC396*015WSG
10	F	0.125	0.8	6	TDC106*010NSF	47	G	0.25	5.6	6	TDC476*015WSG
12	F	0.125	1.0	6	TDC126*010NSF	56	G	0.25	6.8	6	TDC566*015WSG

* 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.

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Cap (µF)	Case Code	Lead Spacing (S)	Max. DCL @ +25 °C (µA)	Max. DF % @ +25 °C 120 Hz	Catalog Part Number	Cap (µF)	Case Code	Lead Spacing (S)	Max. DCL @ +25 °C (µA)	Max. DF % @ +25 °C 120 Hz	Catalog Part Number
15 WVdc; 20 Vdc Surge @ 85 °C 10 WVdc; 12 Vdc Surge @ 125 °C						35 WVdc; 46 Vdc Surge @ 85 °C 23 WVdc; 28 Vdc Surge @ 125 °C					
68	G	0.25	8.2	6	TDC686*015WSG	0.10	E	0.125	0.5	3	TDC104*035NSE
82	G	0.25	9.8	8	TDC826*015WSG	0.12	E	0.125	0.5	3	TDC124*035NSE
100	G	0.25	10.0	8	TDC107*015WSG	0.15	E	0.125	0.5	3	TDC154*035NSE
120	G	0.25	10.0	8	TDC127*015WSG	0.18	E	0.125	0.5	3	TDC184*035NSE
150	G	0.25	10.0	8	TDC157*015WSG	0.22	E	0.125	0.5	3	TDC224*035NSE
20 WVdc; 26 Vdc Surge @ 85 °C 13 WVdc; 16 Vdc Surge @ 125 °C						0.27	E	0.125	0.5	3	TDC274*035NSE
1.0	E	0.125	0.5	3	TDC105*020NSE	0.33	E	0.125	0.5	3	TDC334*035NSE
1.2	E	0.125	0.5	5	TDC125*020NSE	0.39	E	0.125	0.5	3	TDC394*035NSE
1.5	E	0.125	0.5	5	TDC155*020NSE	0.47	E	0.125	0.5	3	TDC474*035NSE
1.8	E	0.125	0.5	5	TDC185*020NSE	0.56	E	0.125	0.5	3	TDC564*035NSE
2.2	E	0.125	0.5	5	TDC225*020NSE	0.68	E	0.125	0.5	3	TDC684*035NSE
2.7	E	0.125	0.5	5	TDC275*020NSE	0.82	E	0.125	0.5	3	TDC824*035NSE
3.3	E	0.125	0.5	5	TDC335*020NSE	1.0	E	0.125	0.5	3	TDC105*035NSE
3.9	E	0.125	0.6	5	TDC395*020NSE	1.2	E	0.125	0.5	5	TDC125*035NSE
4.7	E	0.125	0.8	5	TDC475*020NSE	1.5	E	0.125	0.5	5	TDC155*035NSE
5.6	F	0.125	0.9	5	TDC565*020NSF	1.8	E	0.125	0.5	5	TDC185*035NSE
6.8	F	0.125	1.1	5	TDC685*020NSF	2.2	E	0.125	0.6	5	TDC225*035NSE
8.2	F	0.125	1.3	6	TDC825*020NSF	2.7	F	0.125	0.7	5	TDC275*035NSF
10	F	0.125	1.6	6	TDC106*020NSF	3.3	F	0.125	0.9	5	TDC335*035NSF
12	F	0.125	1.9	6	TDC126*020NSF	3.9	F	0.125	1.0	5	TDC395*035NSF
15	F	0.125	2.4	6	TDC156*020NSF	4.7	F	0.125	1.3	5	TDC475*035NSF
18	F	0.125	2.9	6	TDC186*020NSF	5.6	F	0.125	1.6	5	TDC565*035NSF
22	F	0.125	3.5	6	TDC226*020NSF	6.8	F	0.125	1.9	5	TDC685*035NSF
33	G	0.25	5.3	6	TDC336*020WSG	8.2	F	0.125	2.3	6	TDC825*035NSF
39	G	0.25	6.2	6	TDC396*020WSG	10	F	0.125	2.8	6	TDC106*035NSF
47	G	0.25	7.5	6	TDC476*020WSG	12	G	0.25	3.4	6	TDC126*035WSG
56	G	0.25	9.0	6	TDC566*020WSG	15	G	0.25	4.2	6	TDC156*035WSG
68	G	0.25	10.0	6	TDC686*020WSG	18	G	0.25	5.0	6	TDC186*035WSG
82	G	0.25	10.0	8	TDC826*020WSG	22	G	0.25	6.2	6	TDC226*035WSG
100	G	0.25	10.0	8	TDC107*020WSG	27	G	0.25	7.6	6	TDC276*035WSG
25 WVdc; 32 Vdc Surge @ 85 °C 17 WVdc; 22 Vdc Surge @ 125 °C						33	G	0.25	9.2	6	TDC336*035WSG
1.0	E	0.125	0.50	3	TDC105*025NSE	39	G	0.25	10	6	TDC396*035WSG
1.2	E	0.125	0.50	5	TDC125*025NSE	47	G	0.25	10	6	TDC476*035WSG
1.5	E	0.125	0.50	5	TDC155*025NSE	50 WVdc; 65 Vdc Surge @ 85 °C 33 WVdc; 40 Vdc Surge @ 125 °C					
1.8	E	0.125	0.50	5	TDC185*025NSE	0.1	E	0.125	0.5	3	TDC104*050NSE
2.2	E	0.125	0.50	5	TDC225*025NSE	0.12	E	0.125	0.5	3	TDC124*050NSE
2.7	E	0.125	0.50	5	TDC275*025NSE	0.15	E	0.125	0.5	3	TDC154*050NSE
3.3	E	0.125	0.70	5	TDC335*025NSE	0.18	E	0.125	0.5	3	TDC184*050NSE
3.9	E	0.125	0.80	5	TDC395*025NSE	0.22	E	0.125	0.5	3	TDC224*050NSE
4.7	F	0.125	0.90	5	TDC475*025NSF	0.27	E	0.125	0.5	3	TDC274*050NSE
5.6	F	0.125	1.10	5	TDC565*025NSF	0.33	E	0.125	0.5	3	TDC334*050NSE
6.8	F	0.125	1.40	5	TDC685*025NSF	0.39	E	0.125	0.5	3	TDC394*050NSE
8.2	F	0.125	1.60	6	TDC825*025NSF	0.47	E	0.125	0.5	3	TDC474*050NSE
10	F	0.125	2.0	6	TDC106*025NSF	0.56	E	0.125	0.5	3	TDC564*050NSE
12	F	0.125	2.4	6	TDC126*025NSF	0.68	E	0.125	0.5	3	TDC684*050NSE
15	F	0.125	3.0	6	TDC156*025NSF	0.82	E	0.125	0.5	3	TDC824*050NSE
18	F	0.125	3.6	6	TDC186*025NSF	1	E	0.125	0.5	3	TDC105*050NSE
22	F	0.125	4.4	6	TDC226*025NSF	1.2	E	0.125	0.5	5	TDC125*050NSE
27	G	0.250	5.4	6	TDC276*025WSG	1.5	E	0.125	0.6	5	TDC155*050NSE
33	G	0.250	6.6	6	TDC336*025WSG	1.8	F	0.125	0.7	5	TDC185*050NSF
39	G	0.250	7.8	6	TDC396*025WSG	2.2	F	0.125	0.9	5	TDC225*050NSF
47	G	0.250	9.4	6	TDC476*025WSG	2.7	F	0.125	1.1	5	TDC275*050NSF
56	G	0.250	10.0	6	TDC566*025WSG	3.3	F	0.125	1.3	5	TDC335*050NSF
68	G	0.250	10.0	6	TDC686*025WSG	3.9	F	0.125	1.6	5	TDC395*050NSF

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

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Ratings

Cap (μ F)	Case Code	Lead Spacing (S)	Max. DCL @ +25 °C (μ A)	Max. DF % @ +25 °C 120 Hz	Catalog Part Number
50 WVdc; 65 Vdc Surge @ 85 °C 33 WVdc; 40 Vdc Surge @ 125 °C					
4.7	F	0.125	1.9	5	TDC475*050NSF
5.6	F	0.125	2.2	5	TDC565*050NSF
6.8	G	0.25	2.7	5	TDC685*050WSG
8.2	G	0.25	3.3	6	TDC825*050WSG
10	G	0.25	4.0	6	TDC106*050WSG
12	G	0.25	4.8	6	TDC126*050WSG
15	G	0.25	6.0	6	TDC156*050WSG
18	G	0.25	7.2	6	TDC186*050WSG
22	G	0.25	8.8	6	TDC226*050WSG

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

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Part Numbering System

TDC	107	K	015	W	S	G
Series	Capacitance	Tolerance	Voltage	Lead Spacing	Lead Length	Case Code
TDC	394 = 0.39 μ F	J = $\pm 5\%$	006 = 6 Vdc	N = .125	S = .187	E
	105 = 1.0 μ F	K = $\pm 10\%$	010 = 10 Vdc	W = .250		F
	225 = 2.2 μ F	M = $\pm 20\%$	015 = 15 Vdc			G
	186 = 18 μ F		020 = 20 Vdc			
	107 = 100 μ F		025 = 25 Vdc			
			035 = 35 Vdc			
			050 = 50 Vdc			