Type TDC Solid Tantalum Capacitors

Dipped, Radial Leaded, 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 µF to 330 µF
Capacitance Tolerance	±10%, ±20%
Rated Voltage	6 WVdc to 50 WVdc at 85 °C
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	See table below
RoHS Compliant	

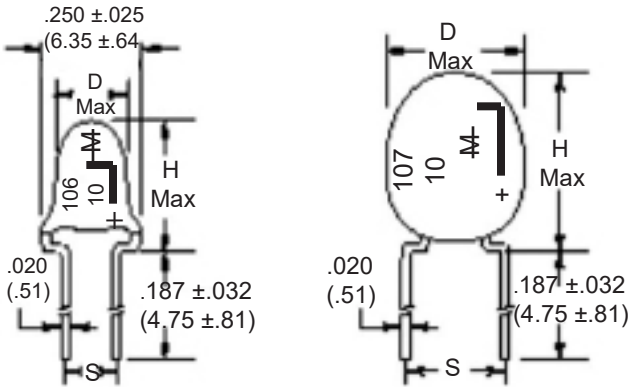
Case Code	Quantity per Reel
E	1,000
F	1,000
G	1,000

Part Numbering System

TDC	107	K	016	W	S	G	–F
Series	Capacitance	Tolerance	Voltage	Lead Spacing	Lead Length	Case Code	RoHS Compliant
TDC	**394** = 0.39 µF	**J** = ±5%	**006** = 6 Vdc	**N** = .125	**S** = .187	**E**	**–F** = Compliant
	105 = 1.0 µF	**K** = ±10%	**010** = 10 Vdc	**W** = .250	**T** = Tape & Reel	**F**	
	225 = 2.2 µF	**M** = ±20%	**016** = 16 Vdc			**G**	
	186 = 18 µF		**020** = 20 Vdc				
	107 = 100 µF		**025** = 25 Vdc				
			035 = 35 Vdc				
			050 = 50 Vdc				

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Capacitor Outline Drawing



Dimensions - Inches (Millimeters)				
Case Code	D (Max.)	H (Max.)	Leads S	Leads 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

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

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

Ratings

Cap (µF)	Catalog Part Number	Case Code	Lead Spacing (S)	Max. DCL @ +25 °C (µA)	Max. DF @ +25 °C 120 Hz (%)
16 WVdc; 20 Vdc Surge @ 85 °C 10 WVdc; 12 Vdc Surge @ 125 °C					
1.5	TDC155*016NSE-F	E	0.125	0.5	5
1.8	TDC185*016NSE-F	E	0.125	0.5	5
2.2	TDC225*016NSE-F	E	0.125	0.5	5
2.7	TDC275*016NSE-F	E	0.125	0.5	5
3.3	TDC335*016NSE-F	E	0.125	0.5	5
3.9	TDC395*016NSE-F	E	0.125	0.5	5
4.7	TDC475*016NSE-F	E	0.125	0.6	5
5.6	TDC565*016NSE-F	E	0.125	0.7	5
6.8	TDC685*016NSE-F	E	0.125	0.9	5
8.2	TDC825*016NSE-F	E	0.125	1.0	6
10	TDC106*016NSF-F	F	0.125	1.3	6
12	TDC126*016NSF-F	F	0.125	1.5	6
15	TDC156*016NSF-F	F	0.125	1.8	6
18	TDC186*016NSF-F	F	0.125	2.2	6
22	TDC226*016NSF-F	F	0.125	2.6	6
27	TDC276*016NSF-F	F	0.125	3.2	6
33	TDC336*016NSF-F	F	0.125	4.0	6
39	TDC396*016WSG-F	G	0.25	4.7	6
47	TDC476*016WSG-F	G	0.25	5.6	6
56	TDC566*016WSG-F	G	0.25	6.8	6
68	TDC686*016WSG-F	G	0.25	8.2	6
82	TDC826*016WSG-F	G	0.25	9.8	8
100	TDC107*016WSG-F	G	0.25	10.0	8
120	TDC127*016WSG-F	G	0.25	10.0	8
150	TDC157*016WSG-F	G	0.25	10.0	8
20 WVdc; 26 Vdc Surge @ 85 °C 13 WVdc; 16 Vdc Surge @ 125 °C					
1.0	TDC105*020NSE-F	E	0.125	0.5	3
1.2	TDC125*020NSE-F	E	0.125	0.5	5
1.5	TDC155*020NSE-F	E	0.125	0.5	5
1.8	TDC185*020NSE-F	E	0.125	0.5	5
2.2	TDC225*020NSE-F	E	0.125	0.5	5
2.7	TDC275*020NSE-F	E	0.125	0.5	5
3.3	TDC335*020NSE-F	E	0.125	0.5	5
3.9	TDC395*020NSE-F	E	0.125	0.6	5
4.7	TDC475*020NSE-F	E	0.125	0.8	5
5.6	TDC565*020NSF-F	F	0.125	0.9	5
6.8	TDC685*020NSF-F	F	0.125	1.1	5

Cap (µF)	Catalog Part Number	Case Code	Lead Spacing (S)	Max. DCL @ +25 °C (µA)	Max. DF @ +25 °C 120 Hz (%)
20 WVdc; 26 Vdc Surge @ 85 °C 13 WVdc; 16 Vdc Surge @ 125 °C					
8.2	TDC825*020NSF-F	F	0.125	1.3	6
10	TDC106*020NSF-F	F	0.125	1.6	6
12	TDC126*020NSF-F	F	0.125	1.9	6
15	TDC156*020NSF-F	F	0.125	2.4	6
18	TDC186*020NSF-F	F	0.125	2.9	6
22	TDC226*020NSF-F	F	0.125	3.5	6
33	TDC336*020WSG-F	G	0.25	5.3	6
39	TDC396*020WSG-F	G	0.25	6.2	6
47	TDC476*020WSG-F	G	0.25	7.5	6
56	TDC566*020WSG-F	G	0.25	9.0	6
68	TDC686*020WSG-F	G	0.25	10.0	6
82	TDC826*020WSG-F	G	0.25	10.0	8
100	TDC107*020WSG-F	G	0.25	10.0	8
25 WVdc; 32 Vdc Surge @ 85 °C 17 WVdc; 22 Vdc Surge @ 125 °C					
1.0	TDC105*025NSE-F	E	0.125	0.50	3
1.2	TDC125*025NSE-F	E	0.125	0.50	5
1.5	TDC155*025NSE-F	E	0.125	0.50	5
1.8	TDC185*025NSE-F	E	0.125	0.50	5
2.2	TDC225*025NSE-F	E	0.125	0.50	5
2.7	TDC275*025NSE-F	E	0.125	0.50	5
3.3	TDC335*025NSE-F	E	0.125	0.70	5
3.9	TDC395*025NSE-F	E	0.125	0.80	5
4.7	TDC475*025NSF-F	F	0.125	0.90	5
5.6	TDC565*025NSF-F	F	0.125	1.10	5
6.8	TDC685*025NSF-F	F	0.125	1.40	5
8.2	TDC825*025NSF-F	F	0.125	1.60	6
10	TDC106*025NSF--F	F	0.125	2.0	6
12	TDC126*025NSF-F	F	0.125	2.4	6
15	TDC156*025NSF-F	F	0.125	3.0	6
18	TDC186*025NSF-F	F	0.125	3.6	6
22	TDC226*025NSF-F	F	0.125	4.4	6
27	TDC276*025WSG-F	G	0.250	5.4	6
33	TDC336*025WSG-F	G	0.250	6.6	6
39	TDC396*025WSG-F	G	0.250	7.8	6
47	TDC476*025WSG-F	G	0.250	9.4	6
56	TDC566*025WSG-F	G	0.250	10.0	6
68	TDC686*025WSG-F	G	0.250	10.0	6

* 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

Ratings

Cap (µF)	Catalog Part Number	Case Code	Lead Spacing (S)	Max. DCL @ +25 ºC (µA)	Max. DF @ +25 ºC 120 Hz (%)
35 WVdc; 46 Vdc Surge @ 85 ºC 23 WVdc; 28 Vdc Surge @ 125 ºC					
0.10	TDC104*035NSE-F	E	0.125	0.5	3
0.12	TDC124*035NSE-F	E	0.125	0.5	3
0.15	TDC154*035NSE-F	E	0.125	0.5	3
0.18	TDC184*035NSE-F	E	0.125	0.5	3
0.22	TDC224*035NSE-F	E	0.125	0.5	3
0.27	TDC274*035NSE-F	E	0.125	0.5	3
0.33	TDC334*035NSE-F	E	0.125	0.5	3
0.39	TDC394*035NSE-F	E	0.125	0.5	3
0.47	TDC474*035NSE-F	E	0.125	0.5	3
0.56	TDC564*035NSE-F	E	0.125	0.5	3
0.68	TDC684*035NSE-F	E	0.125	0.5	3
0.82	TDC824*035NSE-F	E	0.125	0.5	3
1.0	TDC105*035NSE-F	E	0.125	0.5	3
1.2	TDC125*035NSE-F	E	0.125	0.5	5
1.5	TDC155*035NSE-F	E	0.125	0.5	5
1.8	TDC185*035NSE--F	E	0.125	0.5	5
2.2	TDC225*035NSE-F	E	0.125	0.6	5
2.7	TDC275*035NSF-F	F	0.125	0.7	5
3.3	TDC335*035NSF-F	F	0.125	0.9	5
3.9	TDC339*035NSF-F	F	0.125	1.0	5
4.7	TDC475*035NSF-F	F	0.125	1.3	5
5.6	TDC565*035NSF-F	F	0.125	1.6	5
6.8	TDC685*035NSF-F	F	0.125	1.9	5
8.2	TDC825*035NSF-F	F	0.125	2.3	6
10	TDC106*035NSF-F	F	0.125	2.8	6
12	TDC126*035WSG-F	G	0.25	3.4	6
15	TDC156*035WSG-F	G	0.25	4.2	6
18	TDC186*035WSG-F	G	0.25	5.0	6
22	TDC226*035WSG-F	G	0.25	6.2	6
27	TDC276*035WSG-F	G	0.25	7.6	6
33	TDC336*035WSG-F	G	0.25	9.2	6
39	TDC396*035WSG-F	G	0.25	10	6
47	TDC476*035WSG-F	G	0.25	10	6

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

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

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