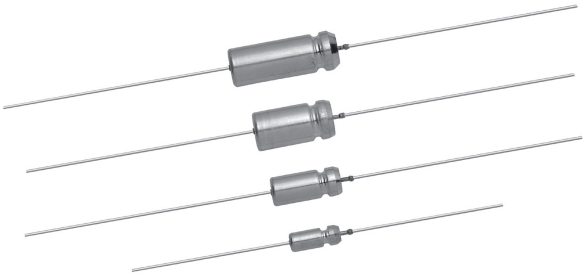
Wet Tantalum Capacitors with Glass to Tantalum Hermetic Seal, Sintered Anode TANTALEX® Capacitors



FEATURES

- Hermetic glass to tantalum seal
- High CV per unit volume
- Extremely low leakage current
- Wide temperature range: - 55 to + 175°C
- Improved reliability through the use of a glass-to- tantalum true hermetic anode seal is the prime feature of the 738D and CT9 sintered anode TANTALEX® capacitor. This construction eliminates all internal lead welds while retaining the strength of internal lead-welded parts.
- The construction offers outstanding resistance to thermal shock.

PERFORMANCE CHARACTERISTICS

Operating Temperature: - 55°C to + 85°C and with voltage derating to two-thirds the + 85°C rating at + 125°C. Capable of + 175°C operation at reduced voltage. Use of Type 135D capacitors for high temperature applications is recommended.

Capacitance Tolerance: At 120 Hz, + 25°C. ± 20% standard. ± 10%, ± 5% available as special.

DC Leakage Current (DCL Max.):

At + 25°C, + 85°C and + 125°C: Leakage current shall not exceed the values listed in the Standard Ratings Tables.

Life Test: Capacitors are capable of withstanding a 2000 hour life test at a temperature of + 85°C or + 125°C at the applicable rated DC working voltage.

APPROVALS

- CECC 30202-004 CT9 style

ORDERING INFORMATION

CT9 738D	226	X0	100	B	2
MODEL	CAPACITANCE	CAPACITANCE TOLERANCE	DC VOLTAGE RATING AT + 85°C	CASE CODE	STYLE NUMBER
	This is expressed in picofarads. The first two digits are the significant figures. The third is the number of zeros to follow.	X0 = ± 20% X9 = ± 10% X5 = ± 5% Special Order.	This is expressed in volts. To complete the three-digit block, zeros precede the voltage rating. A decimal point is indicated by an "R" (6R3 = 6.3 volts).	See Ratings and Case Codes Table.	0 = Bare case. 2 = Outer plastic film insulation. 6 = High temperature film insulation (above + 125°C).

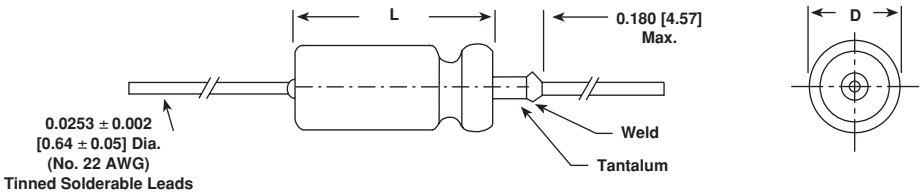
Packaging: The use of formed plastic trays for packaging these axial lead components is standard. Tape and reel is not recommended due to the unit weight.

For technical questions, contact eurowettant@vishay.com

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DIMENSIONS in inches [millimeters]



CASE CODE	BARE CASE		WITH OUTER PLASTIC - FILM INSULATION		LEAD LENGTH	Max. WEIGHT (Ounces/Grams)
	D	L	D (Max.)	L (Max.)		
A	0.187 ± 0.015 [4.75 ± 0.38]	0.453 + 0.031 - 0.015 [11.51 + 0.79 - 0.38]	0.219 [5.56]	0.515 [13.08]	1.500 ± 0.250 [38.10 ± 6.35]	0.07 [2.0]
B	0.281 ± 0.015 [7.14 ± 0.38]	0.641 + 0.031 - 0.015 [16.28 + 0.79 - 0.38]	0.312 [7.92]	0.704 [17.88]	2.250 ± 0.250 [57.15 ± 6.35]	0.18 [5.1]
C	0.375 ± 0.015 [9.53 ± 0.38]	0.765 + 0.031 - 0.015 [19.43 + 0.79 - 0.38]	0.406 [10.31]	0.828 [21.03]	2.250 ± 0.250 [57.15 ± 6.35]	0.36 [10.2]
D	0.375 ± 0.015 [9.53 ± 0.38]	1.063 + 0.031 - 0.015 [27.00 + 0.79 - 0.38]	0.406 [10.31]	1.126 [28.60]	2.250 ± 0.250 [57.15 ± 6.35]	0.49 [13.9]

738D STANDARD RATINGS

CAPACITANCE (μF)	CASE CODE	PART NUMBER*	Max. DF at + 20°C (%)	Max. IMP. at - 55°C 100 KHz (Ohms)	Max. IMP. at + 20°C 100 KHz (Ohms)	Max. DCL (μA) at		Max. CAPACITANCE CHANGE (%) at		
						+ 20°C	+ 85°C + 125°C	- 55°C	+ 85°C	+ 125°C
6.3 VDC at + 85°C, 4 VDC at + 125°C, 3 VDC at + 175°C										
68	A	738D686X06R3A2	17.1	10	1.0	1	2	-40	+10.5	+17.5
270	B	738D277X06R3B2	67.8	10	1.0	1	7	-44	+17.5	+20
560	C	738D567X06R3C2	151.9	10	1.0	2	13	-64	+17.5	+20
1000	D	738D108X06R3D2	100.5	10	1.0	3	14	-80	+25	+25
1200	D	738D128X06R3D2	120.6	10	1.0	3	14	-80	+25	+25
8 VDC at + 85°C, 5 VDC at + 125°C, 4 VDC at + 175°C										
56	A	738D566X0008A2	14.1	10	1.0	1	2	-40	+10.5	+16
220	B	738D227X0008B2	55.2	10	1.0	1	7	-44	+17.5	+20
470	C	738D477X0008C2	82.6	10	1.0	2	14	-64	+17.5	+20
820	D	738D827X0008D2	51.5	10	1.0	4	16	-80	+25	+25
10 VDC at + 85°C, 6.3 VDC at + 125°C, 5 VDC at + 175°C										
39	A	738D396X0010A2	15.1	10	1.0	1	2	-36	+12	+16
47	A	738D476X0010A2	15.1	10	1.0	1	2	-36	+14	+16
150	B	738D157X0010B2	28.2	10	1.0	1	6	-36	+14	+16
180	B	738D187X0010B2	45.2	10	1.0	1	7	-36	+14	+16
330	C	738D337X0010C2	51.9	10	1.0	2	16	-60	+17.5	+20
390	C	738D397X0010C2	73.5	10	1.0	2	16	-64	+17.5	+20
680	D	738D687X0010D2	42.7	10	1.0	4	16	-80	+25	+25
16 VDC at + 85°C, 10 VDC at + 125°C, 8 VDC at + 175°C										
27	A	738D276X0016A2	10.3	10	1.0	1	2	-28	+10.5	+16
33	A	738D336X0016A2	10.3	10	1.0	1	2	-28	+14	+16
120	B	738D127X0016B2	30.2	10	1.0	1	7	-28	+17.5	+20
220	C	738D227X0016C2	34.5	10	1.0	2	16	-50	+17.5	+18
270	C	738D277X0016C2	50.8	10	1.0	2	16	-56	+17.5	+20
470	D	738D477X0016D2	35.4	10	1.0	6	24	-80	+25	+25
560	D	738D567X0016D2	42.2	10	1.0	6	24	-80	+25	+25

738D STANDARD RATINGS

CAPACITANCE (μF)	CASE CODE	PART NUMBER*	Max. DF at + 20°C (%)	Max. IMP. at - 55°C 100 KHz (Ohms)	Max. IMP. at + 20°C 100 KHz (Ohms)	Max. DCL (μA) at		Max. CAPACITANCE CHANGE (%) at		
						+ 20°C	+ 85°C + 125°C	- 55°C	+ 85°C	+ 125°C
25 VDC at + 85°C, 16 VDC at + 125°C, 13 VDC at + 175°C										
18	A	738D186X0025A2	6.9	10	1.0	1	2	-20	+10.5	+12
22	A	738D226X0025A2	6.9	10	1.0	1	2	-20	+10.5	+12
82	B	738D826X0025B2	20.6	10	1.0	1	10	-28	+13	+15
100	B	738D107X0025B2	25.1	10	1.0	1	10	-28	+13	+15
180	C	738D187X0025C2	42.2	10	1.0	2	18	-48	+13	+15
330	D	738D337X0025D2	27.2	10	1.0	7	28	-70	+25	+25
390	D	738D397X0025D2	31.8	10	1.0	7	28	-70	+25	+25
30 VDC at + 85°C, 19 VDC at + 125°C, 15 VDC at + 175°C										
15	A	738D156X0030A2	7.5	10	1.0	1	2	-20	+10.5	+12
68	B	738D686X0030B2	25.6	10	1.0	1	8	-24	+13	+15
120	C	738D127X0030C2	24.4	10	1.0	2	17	-44	+13	+15
150	C	738D157X0030C2	37.7	10	1.0	2	18	-48	+13	+15
270	D	738D277X0030D2	27.2	10	1.0	8	32	-60	+25	+25
40 VDC at + 85°C, 25 VDC at + 125°C, 20 VDC at + 175°C										
12	A	738D126X0040A2	6.7	10	1.0	1	2	-24	+8	+10
56	B	738D566X0040B2	21.1	10	1.0	1	9	-28	+13	+15
100	C	738D107X0040C2	15.7	10	1.0	2	17	-40	+13	+15
220	D	738D227X0040D2	25.0	10	1.0	8	32	-55	+25	+25
50 VDC at + 85°C, 32 VDC at + 125°C, 25 VDC at + 175°C										
10	A	738D106X0050A2	5.7	10	1.0	1	2	-24	+8	+9
47	B	738D476X0050B2	17.7	10	1.0	1	9	-28	+12	+15
82	C	738D826X0050C2	20.6	10	1.0	2	16	-32	+12	+15
180	D	738D187X0050D2	23.7	10	1.0	8	32	-50	+25	+25
63 VDC at + 85°C, 40 VDC at + 125°C, 32 VDC at + 175°C										
8.2	A	738D825X0063A2	4.1	10	1.0	1	2	-24	+8	+9
39	B	738D396X0063B2	17.2	10	1.0	1	9	-28	+10.5	+12
68	C	738D686X0063C2	25.6	10	1.0	2	16	-32	+10.5	+12
150	D	738D157X0063D2	23.6	10	1.0	8	32	-40	+20	+20
75 VODC at + 85°C, 50 VDC at + 125°C, 38 VDC at + 175°C										
5.6	A	738D565X0075A2	3.4	10	1.0	1	2	-20	+8	+9
6.8	A	738D685X0075A2	3.4	10	1.0	1	2	-20	+8	+9
27	B	738D276X0075B2	11.8	10	1.0	1	9	-22	+11	+13
33	B	738D336X0075B2	14.5	10	1.0	1	10	-24	+15	+15
56	C	738D566X0075C2	21.8	10	1.0	2	17	-28	+15	+15
100	D	738D107X0075D2	19.5	10	1.0	9	36	-35	+20	+20
120	D	738D127X0075D2	23.3	10	1.0	9	36	-35	+20	+20
100 VDC at + 85°C, 63 VDC at + 125°C, 50 VDC at + 175°C										
4.7	A	738D475X0100A2	2.9	30	3.0	1	2	-16	+7	+8
18	B	738D186X0100B2	7.8	15	1.5	1	8	-16	+7	+8
22	B	738D226X0100B2	9.7	15	1.5	1	9	-16	+7	+8
33	C	738D336X0100C2	9.3	15	1.0	2	15	-16	+7	+8
39	C	738D396X0100C2	14.7	15	1.0	2	17	-20	+7	+8
47	C	738D476X0100C2	17.7	15	1.0	2	17	-20	+7	+8
68	D	738D686X0100D2	13.7	15	1.5	9	36	-25	+15	+15
82	D	738D826X0100D2	16.4	15	1.5	9	36	-25	+15	+15
125 VDC at + 85°C, 80 VDC at + 125°C, 63 VDC at + 175°C										
3.3	A	738D335X0125AR	3.4	30	3.0	1	2	-10	+7	+8
3.9	A	738D395X0125A2	3.4	30	3.0	1	2	-16	+7	+8
10	B	738D106X0125B2	9.4	15	1.5	1	5	-16	+7	+8
12	B	738D126X0125B2	8.3	15	1.5	1	6	-16	+7	+8
15	B	738D156X0125B2	11.2	15	1.5	1	7	-16	+7	+8
18	C	738D186X0125C2	10	15	1.0	2	9	-16	+7	+8
22	C	738D226X0125C2	12.1	15	1.0	2	11	-16	+7	+8
27	C	738D276X0125C2	16.7	15	1.0	2	13	-16	+7	+8
39	D	738D396X0125D2	7.5	15	1.5	10	40	-25	+15	+15
47	D	738D476X0125D2	9.2	15	1.5	10	40	-25	+15	+15
56	D	738D566X0125D2	14.2	15	1.5	10	40	-25	+15	+15

Wet Tantalum Capacitors
with Glass to Tantalum Hermetic Seal,
Sintered Anode TANTALEX® Capacitors

CT9 STANDARD RATINGS

CAPACITANCE (μF)	CASE CODE	PART NUMBER*	Max. DF at + 20°C (%)	Max. IMP. at - 55°C 100 KHz (Ohms)	Max. DCL (μA) at + 20°C	Max. DCL (μA) at + 85°C + 125°C	Max. CAPACITANCE CHANGE (%) at - 55°C	Max. CAPACITANCE CHANGE (%) at + 85°C	Max. CAPACITANCE CHANGE (%) at + 125°C
6.3 VDC at + 85°C, 4 VDC at + 125°C, 3 VDC at + 175°C									
68	A	CT9686X06R3A2	15	72	1	2	-40	+14	+16
270	B	CT9277X06R3B2	41	30	1	7	-44	+17.5	+20
560	C	CT9567X06R3C2	55	30	2	16	-64	+17.5	+20
1200	D	CT9128X06R3D2	94	24	4	16	-80	+25	+25
10 VDC at + 85°C, 6.3 VDC at + 125°C, 5 VDC at + 175°C									
47	A	CT9476X0010A2	14	120	1	2	-36	+14	+16
180	B	CT9187X0010B2	29	48	1	7	-36	+14	+16
390	C	CT9397X0010C2	44	30	2	16	-64	+17.5	+20
820	D	CT9827X0010D2	65	28	4	16	-80	+25	+25
16 VDC at + 85°C, 10 VDC at + 125°C, 8 VDC at + 175°C									
33	A	CT9 336X0016A2	10	108	1	2	-28	+14	+16
120	B	CT9127X0016B2	24	60	1	7	-28	+17.5	+20
270	C	CT9277X0016C2	45	36	2	16	-56	+17.5	+20
560	D	CT9567X0016D2	44	28	6	24	-80	+25	+25
25 VDC at + 85°C, 16 VDC at + 125°C, 13 VDC at + 175°C									
22	A	CT9226X0025A2	7	168	1	2	-20	+10.5	+12
100	B	CT9107X0025B2	21	60	1	10	-28	+13	+15
180	C	CT9187X0025C2	29	39	2	18	-48	+13	+15
390	D	CT9397X0025D2	40	29	7	28	-70	+25	+25
40 VDC at + 85°C, 25 VDC at + 125°C, 20 VDC at + 175°C									
12	A	CT9126X0040A2	6	234	1	2	-24	+ 8	+10
56	B	CT9566X0040B2	14	78	1	9	-28	+13	+15
100	C	CT9107X0040C2	18	48	2	17	-40	+13	+15
220	D	CT9227X0040D2	27	31	8	32	-55	+25	+25
63 VDC at + 85°C, 40 VDC at + 125°C, 32 VDC at + 175°C									
8.2	A	CT9825X0063A2	4.5	330	1	2	-24	+ 8	+ 9
39	B	CT9396X0063B2	12	108	1	9	-28	+10.5	+12
68	C	CT9686X0063C2	13	60	2	16	-32	+10.5	+12
150	D	CT9157X0063D2	18	34	8	32	-40	+20	+20
80 VDC at + 85°C, 50 VDC at + 125°C, 40 VDC at + 175°C									
6.8	A	CT9685X0080A2	5	360	1	2	-20	+ 8	+ 9
33	B	CT9336X0080B2	10	108	1	10	-24	+10.5	+15
56	C	CT9566X0080C2	11	72	2	17	-28	+10.5	+15
100	D	CT9107X0080D2	12	36	9	36	-35	+20	+20
100 VDC at + 85°C, 63 VDC at + 125°C, 50 VDC at + 175°C									
4.7	A	CT9475X0100A2	3	600	1	2	-16	+ 7	+ 8
22	B	CT9226X0100B2	8	132	1	9	-16	+ 7	+ 8
47	C	CT9476X0100C2	8	84	2	17	-20	+ 7	+ 8
82	D	CT9826X0100D2	10	40	9	36	-25	+15	+15
125 VDC at + 85°C, 80 VDC at + 125°C, 63 VDC at + 175°C									
3.9	A	CT9395X0125A2	3.5	720	1	2	-16	+ 7	+ 8
15	B	CT9156X0125B2	6	200	1	7	-16	+ 7	+8
27	C	CT9276X0125C2	6	106	2	13	-16	+ 7	+8
56	D	CT9566X0125D2	7	58	10	40	-25	+15	+15

CT9 EXTENDED RATINGS

CAPACITANCE (μF)	CASE CODE	PART NUMBER*	Max. DF at + 20°C (%)	Max. IMP. at - 55°C 100 KHz (Ohms)	Max. DCL (μA) at + 20°C	Max. DCL (μA) at + 85°C + 125°C	Max. CAPACITANCE CHANGE (%) at - 55°C	Max. CAPACITANCE CHANGE (%) at + 85°C	Max. CAPACITANCE CHANGE (%) at + 125°C
6.3 VDC at + 85°C, 4 VDC at + 125°C, 3 VDC at + 175°C									
180	A	CT9187X06R3A2	30	55	1.0	10	-60	+13	+16
820	B	CT9827X06R3B2	115	22	2.0	17	-88	+16	+20
1500	C	CT9158X06R3C2	115	22	6.0	25	-90	+20	+25
2200	D	CT9228X06R3D2	125	16	6.0	25	-90	+25	+70
10 VDC at + 85°C, 6.3 VDC at + 125°C, 5 VDC at + 175°C									
150	A	CT9157X0010A2	25	65	1.0	10	-55	+13	+16
560	B	CT9567X0010B2	80	34	2.0	17	-77	+16	+20
1200	C	CT9128X0010C2	95	22	3.0	25	-88	+20	+25
1500	D	CT9158X0010D2	85	18	6.0	25	-88	+25	+30
16 VDC at + 85°C, 10 VDC at + 125°C, 8 VDC at + 175°C									
100	A	CT9107X0016A2	25	88	1.0	10	-44	+13	+16
390	B	CT9397X0016B2	55	38	2.0	17	-66	+16	+20
820	C	CT9827X0016C2	85	27	4.0	25	-77	+20	+25
1000	D	CT9108X0016D2	60	21	6.0	35	-80	+30	+30
25 VDC at + 85°C, 16 VDC at + 125°C, 13 VDC at + 175°C									
68	A	CT9686X0025A2	17	110	1.0	10	-40	+12	+15
270	B	CT9277X0025B2	38	40	2.0	17	-62	+13	+16
560	C	CT9567X0025C2	58	25	5.0	35	-72	+20	+25
680	D	CT9687X0025D2	38	24	6.0	35	-80	+25	+30
40 VDC at + 85°C, 25 VDC at + 125°C, 20 VDC at + 175°C									
39	A	CT9396X0040A2	12	140	2.0	10	-35	+10	+12
150	B	CT9157X0040B2	22	50	4.0	35	-52	+13	+16
330	C	CT9337X0040C2	22	30	6.0	40	-60	+20	+25
470	D	CT9477X0040D2	35	28	6.0	40	-70	+25	+30
63 VDC at + 85°C, 40 VDC at + 125°C, 32 VDC at + 175°C									
27	A	CT9276X0063A2	8.0	180	2.0	15	-24	+10	+12
100	B	CT9107X0063B2	15	70	4.0	25	-36	+12	+15
220	C	CT9227X0063C2	23	36	5.0	35	-40	+16	+20
270	D	CT9277X0063D2	26	35	6.0	40	-65	+25	+30
80 VDC at + 85°C, 50 VDC at + 125°C, 40 VDC at + 175°C									
22	A	CT9226X0080A2	6.0	190	2.0	15	-19	+10	+12
82	B	CT9826X0080B2	12	80	4.0	25	-30	+12	+15
180	C	CT9187X0080C2	19	36	5.0	40	-35	+16	+20
220	D	CT9227X0080D2	21	30	6.0	40	-60	+20	+25
100 VDC at + 85°C, 63 VDC at + 125°C, 50 VDC at + 175°C									
10	A	CT9106X0100A2	4.0	250	2.0	15	-17	+10	+12
39	B	CT9396X0100B2	7.0	96	4.0	30	-20	+12	+15
68	C	CT9686X0100C2	8.0	50	5.0	50	-30	+14	+16
120	D	CT9127X0100D2	15	36	6.0	50	-40	+15	+20
125 VDC at + 85°C, 80 VDC at + 125°C, 63 VDC atπ + 175°C									
6.8	A	CT9685X0125A2	4.0	360	2.0	15	-14	+10	+12
27	B	CT9276X0125B2	5.0	110	4.0	30	-18	+12	+15
47	C	CT9476X0125C2	6.0	65	5.0	50	-26	+16	+16
82	D	CT9826X0125D2	8.0	40	6.0	50	-30	+16	+17