Wet Tantalum Capacitors with Epoxy End-Fill, Sintered Anode, TANTALEX® Capacitors CECC 30202-013 Approved



FEATURES

- For 125°C operation
- Very high CV per unit volume
- Long shelf life in excess of ten years
- Extremely low leakage current
- Epoxy end-filled for better shock and vibration performance

PERFORMANCE CHARACTERISTICS

Operating Temperature: - 55°C to + 125°C

Capacitance Tolerance: ± 20% is standard; ± 10% and ± 5% available as specials.

Capacitance Range: 3.6μF to 2200μF

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 30202-013 (6-125 Volts)

APPLICATIONS

- Designed for industrial and telecommunications applications, offers higher microfarad value per unit volume than any other type. The epoxy resin end-fill construction also offers improved mechanical strength, outstanding resistance to temperature cycling, and trouble-free application when flow-soldering capacitors to printed circuit board.

ORDERING INFORMATION

769D	306	X0	006	A	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.	See Ratings and Case Codes Table.	0 = Bare case. 2 = Outer plastic-film insulation.

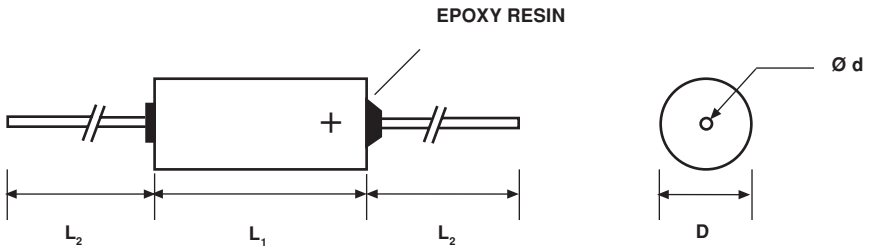
Packaging: The use of formed plastic trays for packaging these axial lead components is standard. Tape and reel is not recommended due to the unit weight.

For technical questions, contact eurowettant@vishay.com

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DIMENSIONS in inches [millimeters]



CASE CODE	WITH OUTER PLASTIC -FILM INSULATION			
	L_1 + 031 - 0.078 [+ 0.8 - 2.0]	D ± 0.015 [± 0.4]	L_2 MIN.	ø d $^{+10\%}_{\pm 0.002}$ [- 0.05]
A	0.535 [13.6]	0.192 [4.9]	0.984 [25]	0.023 [0.6]
B	0.724 [18.4]	0.283 [7.2]	0.984 [25]	0.023 [0.6]
C	0.846 [21.5]	0.377 [9.6]	0.984 [25]	0.023 [0.6]
D	1.129 [28.7]	0.377 [9.6]	0.984 [25]	0.023 [0.6]

STANDARD RATINGS

CAPACITANCE (μF)	CASE CODE	PART NUMBER*	Max. DF at + 25°C (%)	Max. IMP. at - 55°C 120 Hz (Ohms)	Max. DCL (μA) at		Max. CAPACITANCE CHANGE (%) at			Max. RMS RIPPLE 120 Hz (mA)
					+ 25°C	+ 85°C + 125°C	- 55°C	+ 85°C	+ 125°C	
6 VDC at + 85°C, 4 VDC at + 125°C										
30	A	769D306X0006A2	8	100	1	2	-40	+12	+12	70
68	A	769D686X0006A2	18	59	1	2	-40	+16	+16	80
140	B	769D147X0006B2	18	40	1	3	-40	+16	+16	300
220	A	769D227X0006A2	40	22	2	9	-65	+16	+16	90
270	B	769D277X0006B2	70	22	1	7	-44	+20	+20	270
330	C	769D337X0006C2	43	25	2	8	-44	+16	+16	500
560	C	769D567X0006C2	110	20	2	13	-64	+20	+20	500
820	B	769D827X0006B2	68	20	3	14	-80	+20	+20	280
1200	D	769D128X0006D2	60	20	3	12	-80	+25	+25	800
1500	C	769D158X0006C2	82	10	5	20	-85	+25	+25	540
2200	D	769D228X0006D2	80	15	9	30	-80	+25	+25	800
8 VDC at + 85°C, 5 VDC at + 125°C										
25	A	769D256X0008A2	7	100	1	2	-40	+12	+12	70
56	A	769D566X0008A2	15	60	1	2	-40	+12	+12	80
180	A	769D187X0008A2	36	28	2	9	-60	+16	+16	90
220	B	769D227X0008B2	57	30	1	7	-44	+20	+20	250
430	B	769D437X0008B2	42	25	3	14	-80	+20	+20	270
430	C	769D437X0008C2	84	25	2	14	-64	+20	+20	500
620	B	769D627X0008B2	53	20	3	14	-80	+20	+20	280
680	B	769D687X0008B2	55	20	3	14	-80	+20	+20	280
850	C	769D857X0008C2	65	20	4	16	-80	+25	+25	500
850	D	769D857X0008D2	50	22	4	16	-80	+25	+25	850
1200	C	769D128X0008C2	82	15	5	20	-80	+25	+25	520
1600	D	769D168X0008D2	68	18	7	25	-80	+25	+25	800
1800	D	769D188X0008D2	70	18	8	28	-80	+25	+25	800

STANDARD RATINGS

CAPACITANCE (μF)	CASE CODE	PART NUMBER*	Max. DF at + 25°C (%)	Max. IMP. at - 55°C 120 Hz (Ohms)	Max. DCL (μA) at		Max. CAPACITANCE CHANGE (%) at			Max. RMS RIPPLE 120 Hz (mA)
					+ 25°C	+ 85°C + 125°C	- 55°C	+ 85°C	+ 125°C	
10 VDC at + 85°C, 7 VDC at + 125°C										
20	A	769D206X0010A2	5	120	1	2	-32	+12	+12	70
47	A	769D476X0010A2	15	90	1	2	-36	+16	+16	80
100	A	769D107X0010A2	13	60	1	4	-36	+16	+16	80
120	A	769D127X0010A2	32	50	2	9	-50	+16	+16	80
140	A	769D147X0010A2	32	46	2	9	-50	+16	+16	90
150	A	769D157X0010A2	32	40	2	9	-50	+16	+16	90
180	B	769D187X0010B2	46	40	1	7	-36	+16	+16	250
250	C	769D257X0010C2	32	35	2	10	-40	+16	+16	500
390	C	769D397X0010C2	75	25	2	16	-64	+20	+20	500
470	B	769D477X0010B2	35	21	3	16	-70	+20	+20	280
510	B	769D517X0010B2	45	21	3	16	-70	+20	+20	280
560	B	769D567X0010B2	50	21	3	16	-70	+20	+20	280
750	D	769D757X0010D2	44	22	4	16	-80	+25	+25	850
1000	C	769D108X0010C2	67	12	5	20	-75	+25	+25	540
1300	D	769D138X0010D2	63	18	7	25	-75	+25	+25	800
1500	D	769D158X0010D2	66	17	8	28	-75	+25	+25	800
15 VDC at + 85°C, 10 VDC at + 125°C										
15	A	769DL56X0015A2	5	145	1	2	-24	+12	+12	70
33	A	769D336X0015A2	10	100	1	2	-28	+16	+16	80
70	B	769D706X0015B2	11	63	1	4	-28	+16	+16	250
100	A	769D107X0015A2	28	40	2	9	-40	+16	+16	80
120	B	769D127X0015B2	27	50	1	7	-28	+20	+20	250
170	C	769D177X0015C2	22	38	2	10	-32	+16	+16	500
270	C	769D277X0015C2	50	30	2	16	-56	+20	+20	500
360	B	769D367X0015B2	38	22	3	16	-60	+20	+20	280
390	B	769D397X0015B2	38	21	3	16	-60	+20	+20	280
540	C	769D547X0015C2	45	25	5	20	-70	+25	+25	500
540	D	769D547X0015D2	15	23	3	24	-80	+25	+25	850
680	C	769D687X0015C2	50	13	5	20	-70	+25	+25	510
750	C	769D757X0015C2	52	13	6	24	-70	+25	+25	510
820	C	769D827X0015C2	60	13	6	24	-70	+25	+25	510
1100	D	769D118X0015D2	53	18	8	25	-70	+25	+25	750
1200	D	769D128X0015D2	55	17	8	28	-70	+25	+25	750
20 VDC at + 85°C, 13 VDC at + 125°C										
82	A	769D826X0020A2	25	50	2	9	-40	+16	+16	70
330	B	769D337X0020B2	30	21	3	16	-60	+20	+20	280
560	C	769D567X0020C2	40	20	5	20	-70	+25	+25	510
1000	D	769D108X0020D2	40	21	8	28	-70	+25	+25	750
25 VDC at + 85°C, 15 VDC at + 125°C										
10	A	769D106X0025A2	4	190	1	2	-16	+9	+9	70
22	A	769D226X0025A2	7	140	1	2	-20	+12	+12	80
50	A	769D506X0025A2	18	80	2	9	-35	+15	+15	80
68	A	769D686X0025A2	22	50	2	9	-35	+15	+15	80
100	B	769D107X0025B2	15	50	1	10	-28	+15	+15	250
180	C	769D187X0025C2	46	32	2	18	-48	+15	+15	500
270	B	769D277X0025B2	24	22	3	16	-45	+16	+16	280
350	C	769D357X0025C2	27	26	7	28	-60	+25	+25	500
350	D	769D357X0025D2	25	24	7	28	-80	+25	+25	850
470	C	769D477X0025C2	33	18	6	24	-60	+25	+25	510
510	C	769D517X0025C2	33	16	7	28	-60	+25	+25	510
750	D	769D757X0025D2	36	18	8	29	-60	+25	+25	750
820	D	769D827X0025D2	40	17	9	30	-60	+25	+25	750

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STANDARD RATINGS

CAPACITANCE (μF)	CASE CODE	PART NUMBER*	Max. DF at + 25°C (%)	Max. IMP. at - 55°C 120 Hz (Ohms)	Max. DCL (μA) at		Max. CAPACITANCE CHANGE (%) at			Max. RMS RIPPLE 120 Hz (mA)
					+ 25°C	+ 85°C + 125°C	- 55°C	+ 85°C	+ 125°C	
30 VDC at + 85°C, 20 VDC at + 125°C										
8	A	769D805X0030A2	4	235	1	2	-16	+12	+12	60
15	A	769D156X0030A2	8	175	1	2	-20	+12	+12	80
40	B	769D406X0030B2	10	80	1	5	-24	+12	+12	250
56	A	769D566X0030A2	20	55	2	9	-32	+15	+15	70
68	B	769D686X0030B2	26	60	1	8	-24	+15	+15	250
100	C	769D107X0030C2	16	45	2	12	-28	+12	+12	500
150	C	769DL57X0030C2	38	35	2	18	-48	+15	+15	500
180	B	769D187X0030B2	21	27	3	16	-40	+16	+16	280
200	B	769D207X0030B2	21	25	3	16	-40	+16	+16	280
220	B	769D227X0030B2	23	25	3	16	-40	+16	+16	280
300	C	769D307X0030C2	25	18	7	28	-55	+25	+25	500
300	D	769D307X0030D2	27	25	4	31	-60	+25	+25	820
390	C	769D397X0030C2	27	15	6	24	-55	+20	+25	510
430	C	769D437X0030C2	27	15	7	28	-55	+25	+25	510
620	D	769D627X0030D2	32	22	8	29	-60	+20	+25	750
680	D	769D687X0030D2	36	20	7	25	-60	+25	+25	750
35 VDC at + 85°C, 23 VDC at + 125°C										
39	A	769D396X0035A2	18	80	2	9	-32	+15	+15	70
47	A	769D476X0035A2	18	60	2	9	-32	+15	+15	70
150	B	769D157X0035B2	20	30	3	16	-40	+16	+16	270
330	C	769D337X0035C2	26	20	6	24	-55	+25	+25	500
470	D	769D477X0035D2	28	25	7	25	-60	+25	+25	750
480	D	769D487X0035D2	28	25	8	29	-60	+25	+25	750
560	D	769D567X0035D2	29	24	8	32	-60	+25	+25	750
50 VDC at + 85°C, 30 VDC at + 125°C										
5	A	769D505X0050A2	3	355	1	2	-16	+6	+6	60
10	A	769D106X0050A2	5	250	1	2	-24	+9	+9	80
25	A	769D256X0050A2	14	135	3	12	-24	+12	+12	70
25	B	769D256X0050B2	10	90	1	5	-20	+12	+12	250
33	A	769D336X0050A2	16	120	2	9	-24	+12	+12	70
47	B	769D476X0050B2	18	70	1	9	-28	+15	+15	250
60	C	769D606X0050C2	12	50	2	12	-16	+12	+12	500
82	B	769D826X0050B2	21	45	2	16	-32	+15	+15	270
120	B	769D127X0050B2	18	26	3	18	-35	+15	+15	280
160	C	769D167X0050C2	30	35	12	48	-40	+25	+25	500
160	D	769D167X0050D2	15	27	5	40	-50	+20	+20	750
270	C	769D277X0050C2	24	16	7	28	-40	+25	+25	510
360	D	769D367X0050D2	24	22	8	32	-45	+25	+25	750
390	D	769D397X0050D2	25	20	8	32	-45	+25	+25	750
60 VDC at + 85°C, 40 VDC at + 125°C										
4	A	763D405X0060A2	3	405	1	2	-16	+6	+6	50
8.2	A	769D825X0060A2	4	275	1	2	-24	+9	+9	60
20	A	769D206X0060A2	7	120	1	5	-20	+12	+12	70
20	B	769D206X0060B2	6	105	1	5	-16	+12	+12	250
27	A	769D276X0060A2	14	90	3	12	-20	+12	+12	70
39	B	769D396X0060B2	18	90	1	9	-28	+12	+12	250
50	B	769D506X0060B2	9	75	2	12	-30	+15	+15	250
50	C	769D506X0060C2	9	55	2	12	-16	+12	+12	500
68	C	769D686X0060C2	27	50	2	16	-32	+12	+12	500
100	B	769D107X0060B2	15	28	4	20	-30	+15	+15	280
140	C	769D147X0060C2	18	32	7	28	-35	+20	+20	500
140	D	769D147X0060D2	21	28	8	32	-40	+20	+20	750
220	C	769D227X0060C2	18	17	7	28	-35	+20	+20	510
300	D	769D307X0060D2	21	21	8	32	-45	+20	+20	750
330	D	769D337X0060D2	23	23	9	36	-45	+20	+20	750

STANDARD RATINGS

CAPACITANCE (μF)	CASE CODE	PART NUMBER*	Max. DF at + 25°C (%)	Max. IMP. at - 55°C 120 Hz (Ohms)	Max. DCL (μA) at + 25°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	Max. RMS RIPPLE 120 Hz (mA)
75 VDC at + 85°C, 50 VDC at + 125°C										
6.8	A	769D685X0075A2	4	300	1	2	-20	+ 9	+ 9	60
8.2	A	769D825X0075A2	12	200	1.5	7	-16	+12	+12	60
12	A	769D126X0075A2	12	155	2	9	-16	+12	+12	70
15	A	769D156X0075A2	12	130	3	12	-16	+12	+12	70
15	B	769D156X0075B2	6	135	1	5	-16	+ 9	+ 9	250
18	A	769D186X0075A2	12	100	3	12	-16	+12	+12	70
22	A	769D226X0075A2	12	80	3	12	-16	+12	+12	70
33	B	769D336X0075B2	15	90	1	10	-24	+15	+15	250
40	C	769D406X0075C2	13	60	2	12	-16	+12	+12	500
47	B	769D476X0075B2	20	75	3.5	20	-25	+15	+15	260
56	B	769D566X0075B2	20	70	2	16	-25	+15	+15	260
56	C	769D566X0075C2	22	60	2	17	-28	+15	+15	500
68	B	769D686X0075B2	12	42	4	24	-25	+15	+15	280
82	B	769D826X0075B2	12	30	4	24	-25	+15	+15	280
100	C	769D107X0075C2	18	33	8	32	-30	+20	+20	500
110	C	769D117X0075C2	18	33	8	32	-30	+20	+20	500
110	D	769D117X0075D2	15	29	5	36	-35	+20	+20	750
120	C	769D127X0075C2	18	28	6	26	-30	+20	+20	500
150	C	769D157X0075C2	18	24	7	28	-30	+20	+20	500
180	C	769D187X0075C2	18	17	8	32	-30	+20	+20	510
220	D	769D227X0075D2	16	24	9	36	-40	+20	+20	750
240	D	769D247X0075D2	17	24	9	36	-40	+20	+20	750
270	D	769D277X0075D2	18	22	10	40	-30	+20	+20	750
100 VDC at + 85°C, 70 VDC at + 125°C										
4.7	A	769D475X0100A2	3	500	1	2	-16	+ 6	+ 6	60
10	A	769D106X0100A2	12	200	3	12	-16	+12	+12	60
11	B	769D116X0100B2	4	200	1	4	-16	+ 6	+ 6	250
22	B	769D226X0100B2	10	100	1	9	-16	+ 6	+ 6	250
30	C	769D306X0100C2	8	85	2	12	-16	+ 8	+ 8	500
39	B	769D396X0100B2	20	80	5	24	-25	+15	+15	250
43	C	769D436X0100C2	16	70	2	17	-20	+ 8	+ 8	500
68	C	769D686X0100C2	18	40	10	40	-30	+20	+20	500
86	D	769D866X0100D2	15	30	5	35	-25	+20	+20	750
120	D	769D127X0100D2	25	36	12	48	-40	+20	+20	750
125 VDC at + 85°C, 85 VDC at + 125°C										
3.6	A	769D365X0125A2	4	615	1	2	-16	+ 8	+ 8	50
6.8	A	769D685X0125A2	12	300	3	12	-16	+12	+12	50
9	A	769D905X0125A2	12	240	4	15	-16	+12	+12	50
9	B	769D905X0125B2	9	220	1	5	-16	+ 6	+ 6	250
14	B	769D146X0125B2	10	160	1	7	-16	+ 7	+ 7	250
25	C	769D256X0125C2	16	120	2	13	-16	+10	+10	500
27	B	769D276X0125B2	20	90	5	24	-25	+15	+15	250
47	C	769D476X0125C2	18	50	10	40	-30	+20	+20	500
80	D	769D806X0125D2	20	34	9	50	-20	+20	+20	750
82	D	769D826X0125D2	25	40	12	48	-40	+20	+20	750