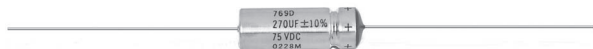


Wet Tantalum Capacitors with Epoxy End-Fill, Sintered Anode, TANTALEX[®] Capacitors CECC 30202-013 Approved



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
MODEL

306
CAPACITANCE

This is expressed in picofarads. The first two digits are the significant figures. The third is the number of zeros to follow.

X0
CAPACITANCE
TOLERANCE

X0 = ± 20%
X9 = ± 10%
X5 = ± 5%
Special Order.

006
DC VOLTAGE RATING
AT + 85°C

This is expressed in volts. To complete the three-digit block, zeros precede the voltage rating.

A
CASE CODE

See Ratings and Case Codes Table.

2
STYLE NUMBER

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.



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DIMENSIONS in inches [millimeters]				
WITH OUTER PLASTIC -FILM INSULATION				
CASE CODE	$L_1 + 0.031 - 0.078$ [+ 0.8 - 2.0]	$D \pm 0.015$ [± 0.4]	L_2 MIN.	ϕd $^{+10\%}$ $_{\pm 0.002}$ $[-0.05]$
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 (μ F)	CASE CODE	PART NUMBER*	Max. DF at + 25°C (%)	Max. IMP. at - 55°C 120 Hz (Ohms)	Max. DCL (μ A) 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 (μ F)	CASE CODE	PART NUMBER*	Max. DF at + 25°C (%)	Max. IMP. at - 55°C 120 Hz (Ohms)	Max. DCL (μ A) 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 (μ F)	CASE CODE	PART NUMBER*	Max. DF at + 25°C (%)	Max. IMP. at - 55°C 120 Hz (Ohms)	Max. DCL (μ A) 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	

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STANDARD RATINGS										
CAPACITANCE (μ F)	CASE CODE	PART NUMBER*	Max. DF at + 25°C (%)	Max. IMP. at - 55°C 120 Hz (Ohms)	Max. DCL (μ A) at		Max. CAPACITANCE CHANGE (%) at			Max. RMS RIPPLE 120 Hz (mA)
					+ 25°C	+ 85°C + 125°C	- 55°C	+ 85°C	+ 125°C	
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