

# CL65 (MIL-C-3965/4) Wet Tantalum Capacitors



Wet Tantalum Capacitors



- High Capacitance Per Case Size
- Extremely Low DCL
- Long Operating Life
- Rugged Mechanical Construction
- Wide Operating Temperature Range

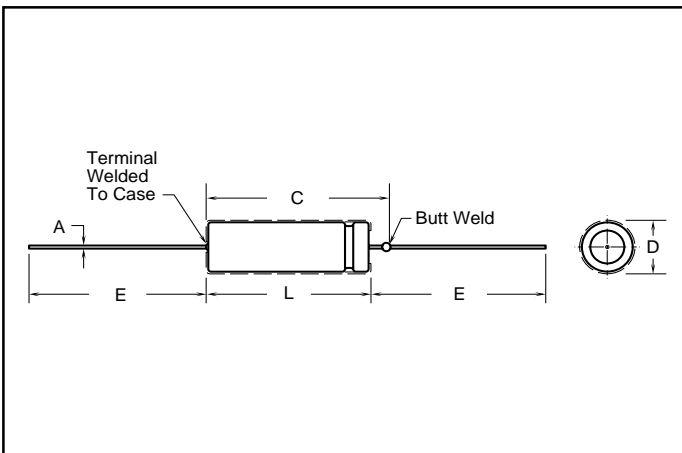
## GENERAL SPECIFICATIONS

Operating Temperature:  
-55°C to +125°C  
with voltage derating

Voltage Range:  
6 to 125 VDC @ 85°C  
4 to 85 VDC @ 125°C

Capacitance:  
1.7 μF to 560 μF

Tolerance Range:  
±10%, ±20%  
(±5% on special order)



## Part Number Nomenclature

- | CL65   | B   | E   | 271 | M   | P   | E   |
|--|-----|-----|-----|-----|-----|-----|
| (1)  | (2) | (3) | (4) | (5) | (6) | (7) |
| 1. CL65 Series - Silver Case/Mylar Sleeve<br>CL64 Series - Silver Case/Uninsulated   |     |     |     |     |     |     |
| 2. Operating Temperature Code:<br>B = -55°C to +85°C   |     |     |     |     |     |     |
| 3. Voltage Code @ 85°C: B = 6 C = 8 D = 10 E = 15<br>G = 25 H = 30 J = 50 K = 60<br>L = 75 N = 100 P = 125                                   |     |     |     |     |     |     |
| 4. Capacitance Code (Expressed in Microfarads)<br>First 2 digits: Significant Figures<br>Third digit: Number of zeros (Example: 271 = 270μF) |     |     |     |     |     |     |
| 5. Capacitance Tolerance:<br>J, , M = ±20%, K = ±10%, J = ±5%  |     |     |     |     |     |     |
| 6. P = Polarized   |     |     |     |     |     |     |
| 7. Seal & Vibration Code: E = 10 to 2000 cps   |     |     |     |     |     |     |

INCHES

DIMENSIONS

MILLIMETERS

Case Code	D		L	C	A		E	Approximate Weight (Grams) (1 gram = .035 Oz.)	Case Code	D		L	C	A		E
	Max	Max			Max	Nom				AWG	Lead Dia			Lead Lgth	Max	
T1	.219	.608	.734	.025 #22	1.500	1.4	T1	5.56	15.45	18.64	.64 #22	38.10				
T2	.312	.796	.922	.025 #22	2.250	3.0	T2	7.92	20.22	23.41	.64 #22	57.15				
T3	.4062	.921	1.047	.025 #22	2.250	5.6	T3	10.31	23.40	26.59	.64 #22	57.15				

Cap μF	Case Code	Catalog Number	Max DCL μA		Max DF	Max % Cap Change From 25°C		
			25°C	85°C		-55°C	+55°C	+125°C

### 6 WVDC; 6.9 VDC Surge @ 85°C 4 WVDC; 4.7 VDC Surge @ 125°C

30	T1	CL65BB300*PE	1	2	9.1	100	-40	+10.5	+12
68	T1	CL65BB680*PE	1	2	20.4	60	-40	+14	+16
140	T2	CL65BB141*PE	1	3	21.3	40	-40	+14	+16
270	T2	CL65BB271*PE	1	6.5	81.8	25	-44	+17.5	+20
330	T3	CL65BB331*PE	2	7.9	49.6	20	-44	+14	+16
560	T3	CL65BB561*PE	2	13	128	25	-64	+17.5	+20

### 8 WVDC; 9.2 VDC Surge @ 85°C 5 WVDC; 5.7 VDC Surge @ 125°C

25	T1	CL65BC250*PE	1	2	7.6	100	-40	+10.5	+12
56	T1	CL65BC560*PE	1	2	17	59	-40	+14	+16
220	T2	CL65BC221*PE	1	7	66.4	30	-44	+17.5	+20
430	T3	CL65BC431*PE	2	14	91.5	25	-64	+17.5	+20

### 10 WVDC; 11.5 VDC Surge @ 85°C 7 WVDC; 8 VDC Surge @ 125°C

20	T1	CL65BD200*PE	1	2	6.1	175	-32	+10.5	+12
47	T1	CL65BD470*PE	1	2	18.1	100	-36	+14	+16
100	T2	CL65BD101*PE	1	4	15.2	60	-36	+14	+16
180	T2	CL65BD181*PE	1	7	54.4	40	-36	+14	+16
250	T3	CL65BD251*PE	2	10	37.8	30	-40	+14	+16
390	T3	CL65BD391*PE	2	16	87.6	25	-64	+17.5	+20

Cap μF	Case Code	Catalog Number	Max DCL μA		Max DF	Max % Cap Change From 25°C		
			25°C	85°C		-55°C	+55°C	+125°C

### 15 WVDC; 17.2 VDC Surge @ 85°C 10 WVDC; 11.5 VDC Surge @ 125°C

15	T1	CL65BE150*PE	1	2	5.7	155	-24	+10.5	+12
33	T1	CL65BE330*PE	1	2	12.5	90	-28	+14	+16
70	T2	CL65BE700*PE	1	4	13.1	75	-28	+14	+16
120	T2	CL65BE121*PE	1	7	36.8	50	-28	+17.5	+20
170	T3	CL65BE171*PE	2	10	25.4	35	-32	+14	+16
270	T3	CL65BE271*PE	2	16	60.9	30	-56	+17.5	+20

### 25 WVDC; 28.8 VDC Surge @ 85°C 15 WVDC; 17.2 VDC Surge @ 125°C

10	T1	CL65BG100*PE	1	2	4.6	220	-16	+8	+9
22	T1	CL65BG220*PE	1	2	8.3	140	-20	+10.5	+12
100	T2	CL65BG101*PE	1	10	31.5	50	-28	+13	+15
180	T3	CL65BG181*PE	2	18	54.3	32	-48	+13	+15

### 30 WVDC; 34.5 VDC Surge @ 85°C 20 WVDC; 23 VDC Surge @ 125°C

8	T1	CL65BH080*PE	1	2	4.5	275	-16	+8	+12
15	T1	CL65BH150*PE	1	2	9.1	175	-20	+10.5	+12
40	T2	CL65BH400*PE	1	5	12.2	65	-24	+10.5	+12
68	T2	CL65BH680*PE	1	8	31	60	-24	+13	+15
100	T3	CL65BH101*PE	2	12	19	40	-28	+10.5	+12
150	T3	CL65BH151*PE	2	18	46	35	-48	+13	+15

\* Insert Proper Letter Code For Tolerance: M = ±20%, K = ±10%, J = ±5%

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Cap $\mu$ F	Case Code	Catalog Number	Max DCL $\mu$ A		Max DF + 25°C	Max Z $\Omega$ -55°C	Max % Cap Change From 25°C		
			25°C	85°C/ 125°C			-55°C	+85°C	+125°C
<b>50 WVDC; 57.5 VDC Surge @ 85°C 30 WVDC; 34.5 VDC Surge @ 125°C</b>									
5	T1	CL65BJ050*PE	1	2	3.4	400	-16	+5	+6
10	T1	CL65BJ100*PE	1	2	6	250	-24	+8	+9
25	T2	CL65BJ250*PE	1	5	11.2	95	-20	+10.5	+12
47	T2	CL65BJ470*PE	1	9	21.4	70	-28	+13	+15
60	T3	CL65BJ600*PE	2	12	13.6	45	-16	+10.5	+12
82	T3	CL65BJ820*PE	2	16	24.9	45	-32	+13	+15
<b>60 WVDC; 69 VDC Surge @ 85°C 40 WVDC; 46 VDC Surge @ 125°C</b>									
4	T1	CL65BK040*PE	1	2	3	550	-16	+5	+6
8.2	T1	CL65BK8R2*PE	1	2	5	275	-24	+8	+9
20	T2	CL65BK200*PE	1	5	7.6	105	-16	+10.5	+12
39	T2	CL65BK390*PE	1	9	20.7	90	-24	+10.5	+12
50	T3	CL65BK500*PE	2	12	15.3	50	-16	+10.5	+12
68	T3	CL65BK680*PE	2	16	30.7	50	-32	+10.5	+12
<b>75 WVDC; 86.2 VDC Surge @ 85°C 50 WVDC; 57.5 VDC Surge @ 125°C</b>									
3.5	T1	CL65BL3R5*PE	1	2	2.5	650	-16	+5	+6
6.8	T1	CL65BL6R8*PE	1	2	4.1	300	-20	+8	+9
15	T2	CL65BL150*PE	1	5	7.5	150	-16	+8	+9
33	T2	CL65BL330*PE	1	10	17.5	90	-24	+10.5	+15
40	T3	CL65BL400*PE	2	12	15.2	60	-16	+10.5	+12
56	T3	CL65BL560*PE	2	17	26	60	-28	+10.5	+15

\* Insert Proper Letter Code For Tolerance: M =  $\pm$ 20%, K =  $\pm$ 10%, J =  $\pm$ 5%

Cap $\mu$ F	Case Code	Catalog Number	Max DCL $\mu$ A		Max DF + 25°C	Max Z $\Omega$ -55°C	Max % Cap Change From 25°C		
			25°C	85°C/ 125°C			-55°C	+85°C	+125°C
<b>100 WVDC; 115 VDC Surge @ 85°C 65 WVDC; 74.8 VDC Surge @ 125°C</b>									
2.5	T1	CL65BN2R5*PE	1	2	5	950	-16	+7	+8
4.7	T1	CL65BN4R7*PE	1	2	3.6	500	-16	+7	+8
11	T2	CL65BN110*PE	1	4	5	200	-16	+7	+8
22	T2	CL65BN220*PE	1	9	11.8	100	-16	+7	+8
30	T3	CL65BN300*PE	2	12	9.1	80	-16	+7	+8
43	T3	CL65BN430*PE	2	17	10.7	70	-20	+7	+8
<b>125 WVDC; 144 VDC Surge @ 85°C 85 WVDC; 97.8 VDC Surge @ 125°C</b>									
1.7	T1	CL65BP1R7*PE	1	2	7	1250	-16	+7	+8
3.6	T1	CL65BP3R6*PE	1	2	4.1	600	-16	+7	+8
9	T2	CL65BP090*PE	1	5	10.2	240	-16	+7	+8
14	T2	CL65BP140*PE	1	7	12.7	167	-16	+7	+8
25	T3	CL65BP250*PE	2	13	19	93	-16	+7	+8