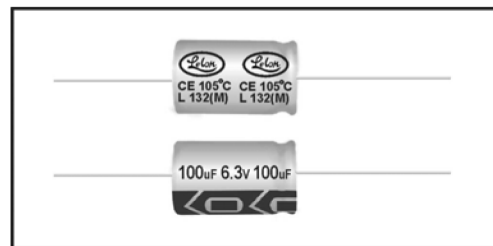


CE02 Type

Features

- 105°C, 1000 hours assured
- Excellent temperature performance



SPECIFICATIONS

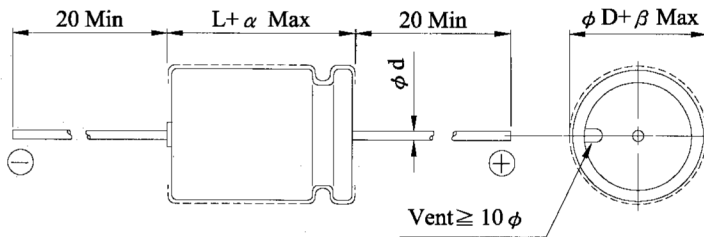
Items	Performance																
Operating Temperature Range	6.3 ~ 250V								350 ~ 450V								
	-40℃ ~ +105℃								-25℃ ~ +105℃								
Capacitance Tolerance	±20% (at 120Hz, 20℃)																
Leakage Current (at 20℃)	Rated Voltage		≤ 100V								> 100V						
	Time		after 2 minutes								after 5 minutes						
	Leakage Current		I = 0.02CV or 3 (μ A) whichever is greater								CV ≤ 1000 I = 0.03CV+15(μ A)				CV > 1000 I = 0.02CV+25(μ A)		
	Where, C= rated capacitance in μ F. V = rated DC working voltage in V.																
Dissipation Factor (Tan δ at 120 Hz, 20℃)	Rated Voltage		6.3	10	16	25	35	50	63	100	160	200	250	350	400	450	
	Tan δ (max)		0.23	0.20	0.17	0.15	0.12	0.10	0.09	0.08	0.12	0.14	0.17	0.20	0.25	0.25	
When the capacitance exceeds 1000 μ F, 0.02 shall be added every 1000 μ F increase.																	
Low Temperature Characteristics (at 120Hz)	Impedance ratio shall not exceed the values given in the table below.																
	Rated Voltage			6.3	10	16	25	35	50	63	100	160	200	250	350	400	450
	Impedance Ratio	Z(-25℃)	φ D < 16	4	3	3	2	2	2	2	2	3	6	8	12	14	16
		/Z(+20℃)	φ D ≥ 16	6	4	4	3	3	3	3	3						
		Z(-40℃)	φ D < 16	8	6	6	4	4	3	3	3	4	8	10	-	-	-
		/Z(+20℃)	φ D ≥ 16	12	10	8	8	8	8	6	6						
Load Life Test	Test Time		1000 hrs														
	Capacitance Change		Within ±20%of initial value														
	Dissipation Factor		Less than 200% of specified value														
	Leakage Current		Within specified value														
	* The above specifications shall be satisfied when the capacitors are restored to 20℃ after the rated voltage applied for 1000 hrs at 105℃.																
Shelf Life Test	Test Time		1000 hrs														
	Capacitance Change		Within ±20%of initial value														
	Dissipation Factor		Less than 200% of specified value														
	Leakage Current	6.3 ~ 100V	Within specified value														
		160 ~ 450V	Less than 200% of specified value														
	* The above specifications shall be satisfied when the capacitors are restored to 20℃ after exposing them for 1000 hrs at 105℃ without voltage applied.																
Ripple Current & Frequency Multipliers	Cap.(μ F)		60	120	500	1K	10K up										
			Under 100	0.70	1.00	1.30	1.40	1.50									
			100 to 1000	0.75	1.00	1.20	1.30	1.35									
			1000 up above	0.80	1.00	1.10	1.12	1.15									
Ripple Current & Temperature Multipliers	Temperature(℃)		85				105										
	Multiplier		1.4				1.00										
Standards	Satisfies Characteristic W of JIS C 5141																

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CE02 Type

DIAGRAM OF DIMENSIONS



Unit: mm

LEAD DIAMETER

ϕD	5	6.3	8	10	13	16	18	22	25
ϕd	0.6			0.8			1.0		
α	1.5			2.0					
β	0.5			1.0					

Dimension: $\phi D \times L$ (mm)

Ripple Current: mA/rms at 120 Hz, 105°C

DIMENSION & PERMISSIBLE RIPPLE CURRENT

μF	V.DC Contents	6.3V (0J)		10V (1A)		16V (1C)		25V (1E)		35V (1V)		50V (1H)		63V (1J)		100V (2A)	
		$\phi D \times L$	mA	$\phi D \times L$	mA	$\phi D \times L$	mA	$\phi D \times L$	mA	$\phi D \times L$	mA	$\phi D \times L$	mA	$\phi D \times L$	mA	$\phi D \times L$	mA
0.1	0R1											5 × 12	2	5 × 12	3	5 × 12	3
0.22	R22											5 × 12	3.5	5 × 12	4.5	5 × 12	5
0.33	R33											5 × 12	5	5 × 12	7.5	5 × 12	8
0.47	R47											5 × 12	6	5 × 12	9	5 × 12	9
1	010											5 × 12	10	5 × 12	15	5 × 12	15
2.2	2R2											5 × 12	20	5 × 12	30	5 × 12	30
3.3	3R3											5 × 12	34	5 × 12	32	5 × 12	32
4.7	4R7											5 × 12	34	5 × 12	36	6.3 × 13	38
10	100											5 × 12	50	6.3 × 13	56	6.3 × 13	64
22	220							5 × 12	63	6.3 × 13	73	6.3 × 13	80	6.3 × 13	90	8 × 16	106
33	330					5 × 12	73	6.3 × 13	78	6.3 × 13	96	6.3 × 13	105	8 × 13	123	10 × 17	150
47	470			5 × 12	77	6.3 × 13	93	6.3 × 13	99	6.3 × 16	114	8 × 16	140	8 × 16	162	10 × 21	180
100	101	6.3 × 13	113	6.3 × 13	121	6.3 × 13	145	8 × 13	166	8 × 16	180	10 × 17	225	10 × 17	248	13 × 22	287
220	221	6.3 × 13	172	6.3 × 13	185	8 × 13	231	8 × 16	246	10 × 17	305	10 × 21	349	13 × 22	420	13 × 27	458
330	331	8 × 16	236	8 × 16	253	8 × 16	323	10 × 17	345	10 × 21	391	13 × 22	450	13 × 27	495	13 × 36	582
470	471	8 × 16	281	8 × 16	302	10 × 17	359	10 × 21	432	13 × 22	490	13 × 22	561	13 × 27	632	16 × 32	713
1000	102	10 × 17	453	10 × 17	486	10 × 21	569	13 × 22	662	13 × 27	721	16 × 33	875	18 × 37	984	18 × 40	1096
2200	222	13 × 22	740	13 × 22	793	13 × 27	926	16 × 27	1024	16 × 37	1177	18 × 40	1408				
3300	332	13 × 22	906	13 × 27	1015	16 × 27	1173	16 × 33	1300	16 × 40	1449	22 × 43	1724				
4700	472	13 × 27	1168	16 × 27	1252	16 × 37	1443	18 × 42	1638	22 × 43	1878						

μF	V.DC Contents	160V (2C)		200V (2D)		250V (2E)		350V (2V)		400V (2G)		450V (2W)	
		$\phi D \times L$	mA	$\phi D \times L$	mA	$\phi D \times L$	mA	$\phi D \times L$	mA	$\phi D \times L$	mA	$\phi D \times L$	mA
1	010	6.3 × 13	7	6.3 × 16	9	6.3 × 16	12	8 × 16	13	8 × 16	15	8 × 16	15
2.2	2R2	6.3 × 13	15	8 × 16	16	8 × 16	17	8 × 20	19	10 × 21	23	10 × 21	23
3.3	3R3	8 × 16	21	8 × 16	26	8 × 20	31	8 × 20	33	10 × 21	36	10 × 21	36
4.7	4R7	8 × 16	31	8 × 16	33	10 × 17	38	10 × 21	44	13 × 22	46	13 × 22	46
10	100	10 × 17	60	10 × 21	66	10 × 21	72	13 × 22	77	13 × 27	82	13 × 27	82
22	220	13 × 22	121	13 × 22	121	13 × 27	126	13 × 27	132	16 × 37	143	16 × 37	143
33	330	13 × 22	154	13 × 27	167	16 × 27	178	16 × 33	186	16 × 42	201	16 × 42	201
47	470	13 × 27	198	16 × 32	214	16 × 33	241	16 × 42	253	22 × 43	402	22 × 43	402
100	101	16 × 33	345	16 × 37	368	18 × 43	391	22 × 43	402	25 × 52	448	25 × 52	448
220	221	18 × 42	586	22 × 43	609	22 × 43	632						
330	331	22 × 43	632										

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