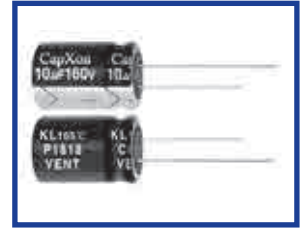


KL Series Long Life 5,000 hrs



Features

- ◆ Used in electronic ballast, switching power supply, industrial measuring instruments.
- ◆ Endurance 5000 Hrs at 105°C
- ◆ Safety vent construction design.
- ◆ RoHS Compliant

Specifications

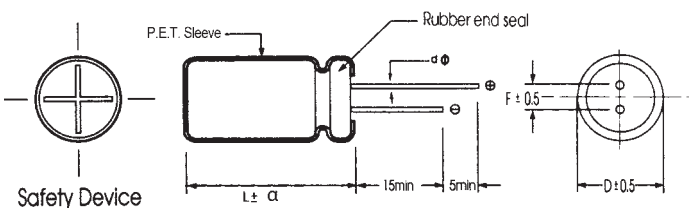
Item	Performance Characteristics																	
Operating Temperature Range	-40 to +105°C	-25 to +105°C																
Rated Voltage Range	160 to 400 VDC	450 to 500 VDC																
Capacitance Range	3.3 to 330 μF	2.2 to 180 μF																
Capacitance Tolerance	±20%(120Hz,+20°C)																	
Leakage Current (+20°C,max.)	(CV ≤ 1000) I ≤ 0.1CV+40(μA)	(CV > 1000) I ≤ 0.04CV+100(μA) After 1minute with rated working voltage applied. C: rated Capacitance (μF) · V: working voltage(V)																
Dissipation Factor (tan δ · at 20°C · 120Hz)	<table border="1"> <tr> <th>Working Voltage(VDC)</th> <th>160</th> <th>200</th> <th>250</th> <th>350</th> <th>400</th> <th>450</th> <th>500</th> </tr> <tr> <td>D. F.(%) max.</td> <td>12</td> <td>12</td> <td>12</td> <td>15</td> <td>15</td> <td>17</td> <td>20</td> </tr> </table>		Working Voltage(VDC)	160	200	250	350	400	450	500	D. F.(%) max.	12	12	12	15	15	17	20
Working Voltage(VDC)	160	200	250	350	400	450	500											
D. F.(%) max.	12	12	12	15	15	17	20											
Low Temperature Characteristics (at 120Hz)	Impedance ratio max <table border="1"> <tr> <th>Working Voltage(VDC)</th> <th>160</th> <th>200</th> <th>250</th> <th>350</th> <th>400</th> <th>450</th> <th>500</th> </tr> <tr> <td>Z-25°C / Z+20°C</td> <td>3</td> <td>3</td> <td>3</td> <td>6</td> <td>6</td> <td>6</td> <td>6</td> </tr> </table>		Working Voltage(VDC)	160	200	250	350	400	450	500	Z-25°C / Z+20°C	3	3	3	6	6	6	6
Working Voltage(VDC)	160	200	250	350	400	450	500											
Z-25°C / Z+20°C	3	3	3	6	6	6	6											
Endurance	Test conditions Duration time : 5000Hrs Ambient temperature : +105°C Applied voltage : Rated DC working voltage After test requirement at +20°C Capacitance change : ≤ ±20% of the initial measured value Dissipation factor : ± 200% of the initial specified value Leakage current : ± The initial specified value																	
Shelf Life	Test conditions Duration time : 1000Hrs Ambient temperature : +105°C Applied voltage : None After test requirement at +20°C: Same limits as Endurance. Pre-treatment for measurements shall be conducted after application of DC working voltage for 30 minutes.																	

Radial

Multiplier for Ripple Current vs. Frequency

Frequency(Hz)	120	1K	10K	≥50K
Multiplier	1	1.5	1.7	1.9

Diagram of Dimensions:(unit:mm)



φ D	10	13	16	18	22
F	5.0	5.0	7.5	7.5	10
φ d	0.6		0.8		
α	D < 16	D = 16		D = 18	
	L: 25~35.5	L < 25 and L ≥ 40	L: 25~31.5	L < 25 and L ≥ 35.5	D > 18
	1.5	1.5	2.0	1.5	2.0

Case Size

WV (Vdc)	Cap (uF)	Size (mm)	Rated Ripple current (mArms/105°C /120Hz)
160	3.3	10x12.5	52
160	4.7	10x12.5	60
160	10	10x12.5	104
160	10	10x16	115
160	15	10x16	150
160	22	10x16	190
160	22	10x20	210
160	33	10x16	235
160	33	10x20	258
160	33	13x20	300
160	47	10x20	270
160	47	13x20	310
160	68	13x20	430
160	68	13x25	470
160	100	13x25	540
160	100	16x20	540
160	100	16x25	590
160	120	16x20	560
160	150	16x25	650
160	180	16x31.5	750
160	220	16x31.5	820
160	220	18x25	710
160	270	18x31.5	880
160	330	18x31.5	930
160	330	18x40	1000
200	3.3	10x12.5	52
200	4.7	10x12.5	60
200	6.8	10x12.5	70
200	10	10x12.5	104
200	10	10x16	115
200	10	10x20	125
200	15	10x16	150
200	22	10x16	210
200	22	10x20	230
200	33	10x20	290
200	33	13x20	350
200	47	13x20	380
200	68	13x25	530
200	68	16x20	530
200	100	16x20	570
200	100	16x25	610
200	120	16x25	700
200	150	16x25	700
200	150	16x31.5	750
200	180	18x31.5	830
200	220	18x31.5	970
200	270	18x40	1100
200	330	18x45	1250
250	4.7	10x12.5	60
250	6.8	10x12.5	75
250	10	10x16	160
250	10	10x20	170
250	15	10x16	180
250	22	10x20	250
250	22	13x20	290
250	33	13x20	360
250	33	13x25	380
250	47	13x25	430
250	68	16x20	530
250	68	16x25	550

WV (Vdc)	Cap (uF)	Size (mm)	Rated Ripple current (mArms/105°C /120Hz)
250	68	18x20	550
250	100	16x25	630
250	100	16x31.5	700
250	100	18x25	680
250	100	18x31.5	750
250	120	18x31.5	790
250	150	18x31.5	840
250	150	18x35.5	880
250	180	18x40	980
250	220	18x35.5	960
250	220	18x40	1020
350	4.7	10x12.5	65
350	6.8	10x16	100
350	10	10x20	170
350	10	13x20	180
350	15	13x20	200
350	22	13x20	290
350	33	13x25	320
350	33	16x20	320
350	47	16x25	430
350	47	16x31.5	440
350	68	16x35.5	550
350	100	18x31.5	750
350	100	18x35.5	780
400	3.3	10x12.5	55
400	4.7	10x16	100
400	6.8	10x16	120
400	6.8	10x20	125
400	10	10x16	156
400	10	10x20	170
400	10	13x20	200
400	15	10x16	156
400	15	13x20	200
400	22	13x25	320
400	22	16x20	320
400	33	16x20	400
400	33	16x25	430
400	47	16x20	420
400	47	16x25	450
400	47	16x31.5	530
400	68	16x25	480
400	68	16x31.5	530
400	82	16x31.5	580
400	100	16x31.5	710
400	100	18x35.5	750
400	120	16x35.5	800
400	120	18x31.5	800
400	150	16x40	920
400	150	18x31.5	890
400	180	18x40	1060
400	220	18x45	1200
450	2.2	10x12.5	45
450	3.3	10x16	65
450	4.7	10x12.5	95
450	4.7	10x16	105
450	6.8	10x16	125
450	6.8	10x20	140
450	10	10x20	170
450	10	13x20	190
450	10	13x25	220

WV (Vdc)	Cap (uF)	Size (mm)	Rated Ripple current (mA _{rms} /105°C /120Hz)
450	15	16x20	270
450	22	13x20	280
450	22	16x20	320
450	22	16x25	360
450	33	16x25	440
450	33	18x25	460
450	47	16x31.5	480
450	47	18x25	450
450	56	16x31.5	530
450	68	16x35.5	600
450	68	18x25	580
450	68	18x31.5	620
450	82	16x35.5	680
450	100	16x35.5	750
450	120	18x35.5	840
450	150	18x40	970
450	180	18x45	1090

WV (Vdc)	Cap (uF)	Size (mm)	Rated Ripple current (mA _{rms} /105°C /120Hz)
500	4.7	13x20	82
500	6.8	13x20	96
500	10	13x25	130
500	22	16x25	210
500	33	16x31.5	280
500	47	16x35.5	360
500	47	18x31.5	360
500	56	16x40	420
500	56	18x31.5	400
500	68	16x45	480
500	68	18x35.5	460
500	68	18x40	490
500	82	18x40	540
500	100	18x45	630
500	100	20x40	660
500	120	22x45	800