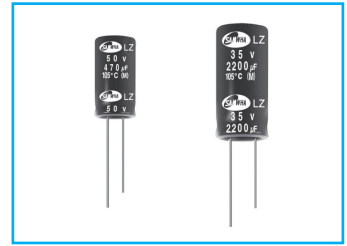


LZ Low Impedance, Long Life Series

Low Impedance
 Long Life
 Solvent Proof



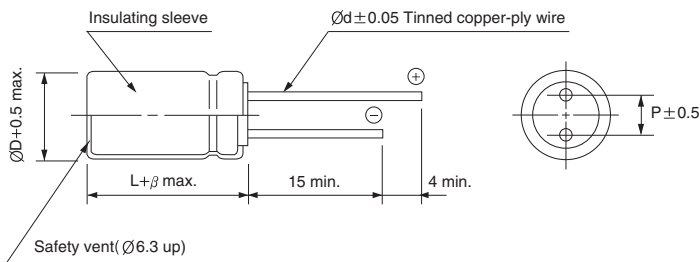
- Operating temperature range of -40 ~ +105°C
- Enabled high ripple current by a reduction of impedance at high frequency range
- High reliability withstanding 10000 hours load life at 105°C (6000 / 8000 hours for as specified below)
- Complied to the RoHS directive

MK \Rightarrow LZ
 Long life

Item	Characteristics														
Operating temperature range	-40 ~ +105°C														
Leakage current max.	I = 0.01CV or 3 μ A whichever is greater (after 2 minutes) I = 0.03CV or 4 μ A whichever is greater (after 1 minute)														
Capacitance tolerance	$\pm 20\%$ at 120Hz, 20°C														
Dissipation factor max. (at 120Hz, 20°C)	Capacitance > 1000 μ F : $\tan\delta$ increases by 0.02 for each 1000 μ F from below value. <table border="1" style="margin-left: 20px;"> <thead> <tr> <th>Rated Voltage(V)</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> </tr> </thead> <tbody> <tr> <td>$\tan\delta$</td> <td>0.22</td> <td>0.19</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.10</td> </tr> </tbody> </table>	Rated Voltage(V)	6.3	10	16	25	35	50	$\tan\delta$	0.22	0.19	0.16	0.14	0.12	0.10
Rated Voltage(V)	6.3	10	16	25	35	50									
$\tan\delta$	0.22	0.19	0.16	0.14	0.12	0.10									
Low temperature characteristics (Impedance ratio at 120Hz)	<table border="1" style="margin-left: 20px;"> <thead> <tr> <th>Z-40°C / Z+20°C</th> <th>Z-25°C / Z+20°C</th> </tr> </thead> <tbody> <tr> <td>3</td> <td>2</td> </tr> </tbody> </table>	Z-40°C / Z+20°C	Z-25°C / Z+20°C	3	2										
Z-40°C / Z+20°C	Z-25°C / Z+20°C														
3	2														
Load life	After an application of DC bias voltage plus the rated AC ripple current for 10000 hours at 105°C. The measurement shall meet the following limits. The DC voltage plus the peak AC voltage combined must not exceed the rated voltage. <table border="1" style="margin-left: 20px;"> <tbody> <tr> <td>Leakage current</td> <td>Less than specified value</td> </tr> <tr> <td>Capacitance change</td> <td>Within $\pm 25\%$ of initial value</td> </tr> <tr> <td>$\tan\delta$</td> <td>Less than 200% of specified value</td> </tr> </tbody> </table> <table border="1" style="margin-left: 20px;"> <thead> <tr> <th>$\varnothing D$</th> <th>$\varnothing D = 5, 6.3$</th> <th>$\varnothing D = 8$</th> <th>$\varnothing D \geq 10$</th> </tr> </thead> <tbody> <tr> <td>Life time</td> <td>6000 hours</td> <td>8000 hours</td> <td>10000 hours</td> </tr> </tbody> </table>	Leakage current	Less than specified value	Capacitance change	Within $\pm 25\%$ of initial value	$\tan\delta$	Less than 200% of specified value	$\varnothing D$	$\varnothing D = 5, 6.3$	$\varnothing D = 8$	$\varnothing D \geq 10$	Life time	6000 hours	8000 hours	10000 hours
Leakage current	Less than specified value														
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$\varnothing D$	$\varnothing D = 5, 6.3$	$\varnothing D = 8$	$\varnothing D \geq 10$												
Life time	6000 hours	8000 hours	10000 hours												
Shelf life (at 105°C)	After 1000 hours no load test, leakage current, capacitance and $\tan\delta$ are same as load life value. The measurement shall be performed at 20°C by the KS C IEC 60384 - 4														

● DRAWING

Unit : mm



$\varnothing D$	5	6.3	8	10	12.5	16	18
P	2.0	2.5	3.5	5.0	5.0	7.5	7.5
$\varnothing d$	0.5	0.5	0.6	0.6	0.6	0.8	0.8
β	1.5			2.0			

● FREQUENCY COEFFICIENT OF PERMISSIBLE RIPPLE CURRENT

μF \ Frequency	120Hz	1kHz	10kHz	50kHz	100kHz
~ 33	0.32	0.60	0.80	0.90	1.00
39 ~ 270	0.40	0.63	0.82	0.91	1.00
330 ~ 680	0.45	0.67	0.84	0.92	1.00
820 ~ 1800	0.50	0.70	0.86	0.93	1.00
2200 ~	0.60	0.75	0.88	0.94	1.00

MINIATURE ALUMINUM ELECTROLYTIC CAPACITORS

LZ series

● DIMENSIONS & MAXIMUM PERMISSIBLE RIPPLE CURRENT

WV Item μF	6.3			10			16		
	∅D×L (mm)	Impedance (Ω)max. 20°C 100kHz	Ripple current (mA rms) 105°C 100kHz	∅D×L (mm)	Impedance (Ω)max. 20°C 100kHz	Ripple current (mA rms) 105°C 100kHz	∅D×L (mm)	Impedance (Ω)max. 20°C 100kHz	Ripple current (mA rms) 105°C 100kHz
47	5 × 11	0.600	300	5 × 11	0.600	300	5 × 11	0.600	300
100	5 × 11	0.600	345	5 × 11	0.600	345	6.3 × 11	0.300	345
150	6.3 × 11	0.300	345	6.3 × 11	0.300	345	6.3 × 11	0.300	540
220	6.3 × 11	0.300	345	6.3 × 11	0.300	345	8 × 11.5	0.200	540
330	6.3 × 11	0.300	540	8 × 11.5	0.250	608	8 × 11.5	0.200	945
470	8 × 11.5	0.140	540	8 × 11.5	0.200	630	10 × 12.5	0.105	945
680	10 × 12.5	0.105	945	10 × 12.5	0.105	945	8 × 20	0.105	945
820	10 × 12.5	0.105	945	10 × 16	0.075	945	10 × 16	0.075	1250
1000	10 × 16	0.075	1250	8 × 20	0.105	945	8 × 20	0.075	1250
				10 × 12.5	0.105	945	10 × 20	0.054	1760
				10 × 16	0.075	1250			
				10 × 20	0.054	1650			
1200	10 × 16	0.075	1500	10 × 16	0.075	1760	10 × 20	0.054	1960
1500	10 × 20	0.054	1760	10 × 20	0.054	1760	12.5 × 20	0.050	1960
1800	10 × 20	0.054	1760	10 × 20	0.054	1760	12.5 × 20	0.050	2250
2200	12.5 × 20	0.050	1960	12.5 × 20	0.050	1960	12.5 × 25	0.040	2480
2700	12.5 × 20	0.050	2250	12.5 × 25	0.040	2250	12.5 × 25	0.040	2900
3300	12.5 × 20	0.050	2480	12.5 × 25	0.040	2480	16 × 25	0.030	3250
3900	12.5 × 25	0.040	2480	16 × 25	0.030	2480	16 × 25	0.030	3570
4700	16 × 25	0.030	3250	16 × 25	0.030	3250	16 × 31.5	0.027	3630
5600	16 × 25	0.030	3570	16 × 25	0.030	3570			
6800	16 × 25	0.030	3630	16 × 31.5	0.027	3630			
8200	16 × 31.5	0.027	3700	18 × 35.5	0.025	3700			

WV Item μF	25			35			50		
	∅D×L (mm)	Impedance (Ω)max. 20°C 100kHz	Ripple current (mA rms) 105°C 100kHz	∅D×L (mm)	Impedance (Ω)max. 20°C 100kHz	Ripple current (mA rms) 105°C 100kHz	∅D×L (mm)	Impedance (Ω)max. 20°C 100kHz	Ripple current (mA rms) 105°C 100kHz
10							5 × 11	3.000	160
22							5 × 11	1.800	240
33							5 × 11	1.800	292
47				6.3 × 11	0.450	345	6.3 × 11	1.000	450
56				6.3 × 11	0.450	345	6.3 × 11	0.700	450
68	6.3 × 11	0.300	345	6.3 × 11	0.450	345	8 × 11.5	0.500	490
100	6.3 × 11	0.300	345	6.3 × 11	0.350	500	8 × 11.5	0.300	724
				8 × 11.5	0.300	540			
120	6.3 × 11	0.300	345	8 × 11.5	0.250	540	8 × 11.5	0.200	950
150	8 × 11.5	0.250	740	8 × 11.5	0.250	945	10 × 12.5	0.120	979
180	8 × 11.5	0.200	740	8 × 11.5	0.190	945	8 × 20	0.120	1200
							10 × 12.5	0.120	1190
220	8 × 11.5	0.180	740	8 × 11.5	0.190	945	8 × 20	0.120	1370
				10 × 12.5	0.105	945	10 × 16	0.075	1370
270	10 × 12.5	0.105	945	8 × 15	0.120	945	10 × 20	0.064	1580
				10 × 16	0.085	1250			
330	10 × 12.5	0.105	945	10 × 16	0.085	1330	10 × 20	0.064	1870
390	8 × 15	0.135	1250	10 × 20	0.054	1500	10 × 20	0.064	2050
	10 × 12.5	0.105	1250						
470	10 × 16	0.075	1330	8 × 20	0.095	1430	12.5 × 20	0.050	2050
				10 × 16	0.085	1600			
				10 × 20	0.054	1760			
560	8 × 20	0.075	1700	12.5 × 20	0.050	1960	12.5 × 25	0.040	2410
	10 × 20	0.054							
680	10 × 16	0.075	1760	10 × 20	0.054	1850	12.5 × 25	0.040	2410
	10 × 20	12.5 × 20		0.050	2250				
		10 × 20		0.054					
820	10 × 20	0.054	2300	12.5 × 25	0.040	2350	16 × 20	0.040	2730
	12.5 × 20	0.050							
1000	12.5 × 20	0.050	2350	12.5 × 25	0.040	2480	16 × 25	0.036	3010
1200	12.5 × 20	0.050	2480	16 × 20	0.040	2900			
1500	16 × 20	0.040	2480	16 × 25	0.030	3250			
1800	16 × 20	0.040	2900	16 × 25	0.030	3570			
2200	12.5 × 30	0.040	2900	16 × 31.5	0.027	3630			
	16 × 25	0.030	3250						
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