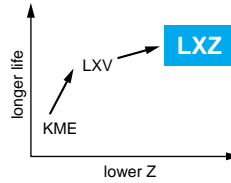


# LXZ Series

- Newly innovative electrolyte and internal architecture are employed
- Very low impedance at high frequency range
- Endurance with ripple current: 105°C 2000 to 8000 hours
- Solvent-proof type (see PRECAUTIONS AND GUIDELINES)
- Pb-free design

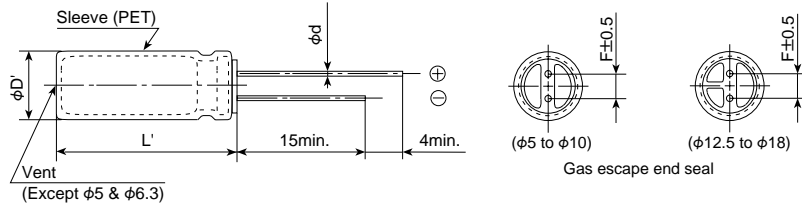


## ◆ SPECIFICATIONS

Items	Characteristics																								
Category Temperature Range	-55 to +105°C																								
Rated Voltage Range	6.3 to 63V <sub>dc</sub>																								
Capacitance Tolerance	±20% (M) (at 20°C, 120Hz)																								
Leakage Current	I = 0.01CV or 3µA, whichever is greater. Where, I : Max. leakage current (µA), C : Nominal capacitance (µF), V : Rated voltage (V) (at 20°C after 2 minutes)																								
Dissipation Factor (tanδ)	<table border="1"> <tr> <td>Rated voltage (V<sub>dc</sub>)</td> <td>6.3V</td> <td>10V</td> <td>16V</td> <td>25V</td> <td>35V</td> <td>50V</td> <td>63V</td> </tr> <tr> <td>tanδ (Max.)</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> <td>0.08</td> </tr> </table> <p>When nominal capacitance exceeds 1000µF, add 0.02 to the value above for each 1000µF increase. (at 20°C, 120Hz)</p>	Rated voltage (V <sub>dc</sub> )	6.3V	10V	16V	25V	35V	50V	63V	tanδ (Max.)	0.22	0.19	0.16	0.14	0.12	0.10	0.08								
Rated voltage (V <sub>dc</sub> )	6.3V	10V	16V	25V	35V	50V	63V																		
tanδ (Max.)	0.22	0.19	0.16	0.14	0.12	0.10	0.08																		
Endurance	<p>The following specifications shall be satisfied when the capacitors are restored to 20°C after subjected to DC voltage with the rated ripple current is applied for the specified period of time at 105°C.</p> <table border="1"> <tr> <td>Time</td> <td>φ5 &amp; 6.3 : 2000hours</td> <td>φ8 : 3000hours</td> <td>φ10 : 5000hours</td> <td>φ12.5 : 7000hours</td> <td>φ16 &amp; 18 : 8000hours</td> </tr> <tr> <td>Capacitance change</td> <td colspan="5">≤±20% of the initial value</td> </tr> <tr> <td>D.F. (tanδ)</td> <td colspan="5">≤200% of the initial specified value</td> </tr> <tr> <td>Leakage current</td> <td colspan="5">≤The initial specified value</td> </tr> </table>	Time	φ5 & 6.3 : 2000hours	φ8 : 3000hours	φ10 : 5000hours	φ12.5 : 7000hours	φ16 & 18 : 8000hours	Capacitance change	≤±20% of the initial value					D.F. (tanδ)	≤200% of the initial specified value					Leakage current	≤The initial specified value				
Time	φ5 & 6.3 : 2000hours	φ8 : 3000hours	φ10 : 5000hours	φ12.5 : 7000hours	φ16 & 18 : 8000hours																				
Capacitance change	≤±20% of the initial value																								
D.F. (tanδ)	≤200% of the initial specified value																								
Leakage current	≤The initial specified value																								
Shelf Life	<p>The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1000 hours at 105°C without voltage applied.</p> <table border="1"> <tr> <td>Capacitance change</td> <td>≤±20% of the initial value</td> </tr> <tr> <td>D.F. (tanδ)</td> <td>≤200% of the initial specified value</td> </tr> <tr> <td>Leakage current</td> <td>≤The initial specified value</td> </tr> </table>	Capacitance change	≤±20% of the initial value	D.F. (tanδ)	≤200% of the initial specified value	Leakage current	≤The initial specified value																		
Capacitance change	≤±20% of the initial value																								
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Leakage current	≤The initial specified value																								

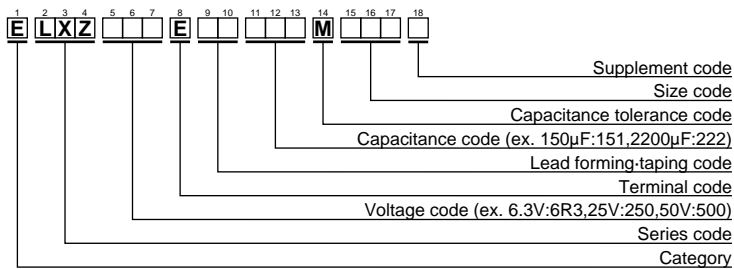
## ◆ DIMENSIONS [mm]

- Terminal Code : E



φD	5	6.3	8	10	12.5	16	18
φd	0.5	0.5	0.6	0.6	0.6	0.8	0.8
F	2.0	2.5	3.5	5.0	5.0	7.5	7.5
φD'	φD+0.5max.						
L'	L+1.5max.						

## ◆ PART NUMBERING SYSTEM



Please refer to "A guide to global code (radial lead type)"

◆STANDARD RATINGS

WV (Vdc)	Cap (μF)	Case size φD×L(mm)	Impedance (Ωmax/100kHz)		Rated ripple current (mArms/ 105°C, 100kHz)	Part No.	WV (Vdc)	Cap (μF)	Case size φD×L(mm)	Impedance (Ωmax/100kHz)		Rated ripple current (mArms/ 105°C, 100kHz)	Part No.	
			20°C	-10°C						20°C	-10°C			
6.3	150	5 × 11.5	0.50	1.0	175	ELXZ6R3E□□151MEB5D	16	3300	12.5 × 35	0.022	0.044	2510	ELXZ160E□□332MK35S	
	330	6.3 × 11.5	0.25	0.50	290	ELXZ6R3E□□331MFB5D		3900	12.5 × 40	0.017	0.034	2870	ELXZ160E□□392MK40S	
	470	6.3 × 15	0.18	0.36	400	ELXZ6R3E□□471MF15D		3900	16 × 25	0.022	0.044	2560	ELXZ160E□□392ML25S	
	680	8 × 12	0.12	0.24	555	ELXZ6R3E□□681MH12D		3900	18 × 20	0.028	0.056	2490	ELXZ160E□□392MM20S	
	820	10 × 12.5	0.090	0.18	760	ELXZ6R3E□□821MJC5S		4700	16 × 30	0.019	0.038	3010	ELXZ160E□□472ML30S	
	1000	8 × 15	0.090	0.18	730	ELXZ6R3E□□102MH15D		4700	18 × 25	0.020	0.040	2740	ELXZ160E□□472MM25S	
	1200	8 × 20	0.080	0.16	810	ELXZ6R3E□□122MH20D		5600	16 × 35	0.017	0.034	3150	ELXZ160E□□562ML35S	
	1200	10 × 16	0.068	0.136	1050	ELXZ6R3E□□122MJ16S		5600	18 × 30	0.018	0.036	3330	ELXZ160E□□562MM30S	
	1500	10 × 20	0.052	0.104	1220	ELXZ6R3E□□152MJ20S		6800	16 × 40	0.015	0.030	3710	ELXZ160E□□682ML40S	
	2200	10 × 25	0.045	0.090	1440	ELXZ6R3E□□222MJ25S		8200	18 × 35	0.016	0.032	3680	ELXZ160E□□822MM35S	
	2700	10 × 30	0.037	0.074	1690	ELXZ6R3E□□272MJ30S		10000	18 × 40	0.015	0.030	3800	ELXZ160E□□103MM40S	
	3300	12.5 × 20	0.038	0.076	1660	ELXZ6R3E□□332MK20S		25	47	5 × 11.5	0.50	1.0	175	ELXZ250E□□470MEB5D
	3900	12.5 × 25	0.030	0.060	1950	ELXZ6R3E□□392MK25S			100	6.3 × 11.5	0.25	0.50	290	ELXZ250E□□101MFB5D
	4700	12.5 × 30	0.025	0.050	2310	ELXZ6R3E□□472MK30S			150	6.3 × 15	0.18	0.36	400	ELXZ250E□□151MF15D
	5600	12.5 × 35	0.022	0.044	2510	ELXZ6R3E□□562MK35S			220	8 × 12	0.12	0.24	555	ELXZ250E□□221MH12D
	5600	16 × 20	0.029	0.058	2210	ELXZ6R3E□□562ML20S			330	8 × 15	0.090	0.18	730	ELXZ250E□□331MH15D
	6800	12.5 × 40	0.017	0.034	2870	ELXZ6R3E□□682MK40S			330	10 × 12.5	0.090	0.18	760	ELXZ250E□□331MJC5S
	6800	16 × 25	0.022	0.044	2560	ELXZ6R3E□□682ML25S			390	8 × 20	0.080	0.16	810	ELXZ250E□□391MH20D
	6800	18 × 20	0.028	0.056	2490	ELXZ6R3E□□682MM20S			470	10 × 16	0.068	0.136	1050	ELXZ250E□□471MJ16S
	8200	16 × 30	0.019	0.038	3010	ELXZ6R3E□□822ML30S			680	10 × 20	0.052	0.104	1220	ELXZ250E□□681MJ20S
10000	16 × 35	0.017	0.034	3150	ELXZ6R3E□□103ML35S	820	10 × 25		0.045	0.090	1440	ELXZ250E□□821MJ25S		
10000	18 × 25	0.020	0.040	2740	ELXZ6R3E□□103MM25S	1000	10 × 30		0.037	0.074	1690	ELXZ250E□□102MJ30S		
12000	16 × 40	0.015	0.030	3710	ELXZ6R3E□□123ML40S	1000	12.5 × 20		0.038	0.076	1660	ELXZ250E□□102MK20S		
12000	18 × 30	0.018	0.036	3330	ELXZ6R3E□□123MM30S	1500	12.5 × 25		0.030	0.060	1950	ELXZ250E□□152MK25S		
15000	18 × 35	0.016	0.032	3680	ELXZ6R3E□□153MM35S	1800	12.5 × 30		0.025	0.050	2310	ELXZ250E□□182MK30S		
18000	18 × 40	0.015	0.030	3800	ELXZ6R3E□□183MM40S	1800	16 × 20		0.029	0.058	2210	ELXZ250E□□182ML20S		
10	100	5 × 11.5	0.50	1.0	175	ELXZ100E□□101MEB5D	2200		12.5 × 35	0.022	0.044	2510	ELXZ250E□□222MK35S	
	220	6.3 × 11.5	0.25	0.50	290	ELXZ100E□□221MFB5D	2200		18 × 20	0.028	0.056	2490	ELXZ250E□□222MM20S	
	330	6.3 × 15	0.18	0.36	400	ELXZ100E□□331MF15D	2700		12.5 × 40	0.017	0.034	2870	ELXZ250E□□272MK40S	
	470	8 × 12	0.12	0.24	555	ELXZ100E□□471MH12D	2700		16 × 25	0.022	0.044	2560	ELXZ250E□□272ML25S	
	680	8 × 15	0.090	0.18	730	ELXZ100E□□681MH15D	3300		16 × 30	0.019	0.038	3010	ELXZ250E□□332ML30S	
	680	10 × 12.5	0.090	0.18	760	ELXZ100E□□681MJC5S	3300	18 × 25	0.020	0.040	2740	ELXZ250E□□332MM25S		
	1000	8 × 20	0.080	0.16	810	ELXZ100E□□102MH20D	3900	16 × 35	0.017	0.034	3150	ELXZ250E□□392ML35S		
	1000	10 × 16	0.068	0.136	1050	ELXZ100E□□102MJ16S	3900	18 × 30	0.018	0.036	3330	ELXZ250E□□392MM30S		
	1200	10 × 20	0.052	0.104	1220	ELXZ100E□□122MJ20S	4700	16 × 40	0.015	0.030	3710	ELXZ250E□□472ML40S		
	1500	10 × 25	0.045	0.090	1440	ELXZ100E□□152MJ25S	4700	18 × 35	0.016	0.032	3680	ELXZ250E□□472MM35S		
	1800	10 × 30	0.037	0.074	1690	ELXZ100E□□182MJ30S	5600	18 × 40	0.015	0.030	3800	ELXZ250E□□562MM40S		
	2200	12.5 × 20	0.038	0.076	1660	ELXZ100E□□222MK20S	35	33	5 × 11.5	0.50	1.0	175	ELXZ350E□□330MEB5D	
	3300	12.5 × 25	0.030	0.060	1950	ELXZ100E□□332MK25S		56	6.3 × 11.5	0.25	0.50	290	ELXZ350E□□560MFB5D	
	3900	12.5 × 30	0.025	0.050	2310	ELXZ100E□□392MK30S		100	6.3 × 15	0.18	0.36	400	ELXZ350E□□101MF15D	
	3900	16 × 20	0.029	0.058	2210	ELXZ100E□□392ML20S		150	8 × 12	0.12	0.24	555	ELXZ350E□□151MH12D	
	4700	12.5 × 35	0.022	0.044	2510	ELXZ100E□□472MK35S		220	8 × 15	0.090	0.18	730	ELXZ350E□□221MH15D	
	5600	12.5 × 40	0.017	0.034	2870	ELXZ100E□□562MK40S		220	10 × 12.5	0.090	0.18	760	ELXZ350E□□221MJC5S	
	5600	16 × 25	0.022	0.044	2560	ELXZ100E□□562ML25S		270	8 × 20	0.080	0.16	810	ELXZ350E□□271MH20D	
	5600	18 × 20	0.028	0.056	2490	ELXZ100E□□562MM20S		330	10 × 16	0.068	0.136	1050	ELXZ350E□□331MJ16S	
	6800	16 × 30	0.019	0.038	3010	ELXZ100E□□682ML30S		470	10 × 20	0.052	0.104	1220	ELXZ350E□□471MJ20S	
6800	18 × 25	0.020	0.040	2740	ELXZ100E□□682MM25S	560		10 × 25	0.045	0.090	1440	ELXZ350E□□561MJ25S		
8200	16 × 35	0.017	0.034	3150	ELXZ100E□□822ML35S	680		10 × 30	0.037	0.074	1690	ELXZ350E□□681MJ30S		
8200	18 × 30	0.018	0.036	3330	ELXZ100E□□822MM30S	680		12.5 × 20	0.038	0.076	1660	ELXZ350E□□681MK20S		
10000	16 × 40	0.015	0.030	3710	ELXZ100E□□103ML40S	1000		12.5 × 25	0.030	0.060	1950	ELXZ350E□□102MK25S		
10000	18 × 35	0.016	0.032	3680	ELXZ100E□□103MM35S	1200		12.5 × 30	0.025	0.050	2310	ELXZ350E□□122MK30S		
12000	18 × 40	0.015	0.030	3800	ELXZ100E□□123MM40S	1200		16 × 20	0.029	0.058	2210	ELXZ350E□□122ML20S		
16	47	5 × 11.5	0.50	1.0	175	ELXZ160E□□470MEB5D		1500	12.5 × 35	0.022	0.044	2510	ELXZ350E□□152MK35S	
	100	6.3 × 11.5	0.25	0.50	290	ELXZ160E□□101MFB5D		1800	12.5 × 40	0.017	0.034	2870	ELXZ350E□□182MK40S	
	220	6.3 × 15	0.18	0.36	400	ELXZ160E□□221MF15D		1800	16 × 25	0.022	0.044	2560	ELXZ350E□□182ML25S	
	330	8 × 12	0.12	0.24	555	ELXZ160E□□331MH12D		1800	18 × 20	0.028	0.056	2490	ELXZ350E□□182MM20S	
	470	8 × 15	0.090	0.18	730	ELXZ160E□□471MH15D		2200	16 × 30	0.019	0.038	3010	ELXZ350E□□222ML30S	
	470	10 × 12.5	0.090	0.18	760	ELXZ160E□□471MJC5S	2200	18 × 25	0.020	0.040	2740	ELXZ350E□□222MM25S		
	560	8 × 20	0.080	0.16	810	ELXZ160E□□561MH20D	2700	16 × 35	0.017	0.034	3150	ELXZ350E□□272ML35S		
	680	10 × 16	0.068	0.136	1050	ELXZ160E□□681MJ16S	2700	18 × 30	0.018	0.036	3330	ELXZ350E□□272MM30S		
	1000	10 × 20	0.052	0.104	1220	ELXZ160E□□102MJ20S	3300	16 × 40	0.015	0.030	3710	ELXZ350E□□332ML40S		
	1200	10 × 25	0.045	0.090	1440	ELXZ160E□□122MJ25S	3300	18 × 35	0.016	0.032	3680	ELXZ350E□□332MM35S		
	1500	10 × 30	0.037	0.074	1690	ELXZ160E□□152MJ30S	3900	18 × 40	0.015	0.030	3800	ELXZ350E□□392MM40S		
	1500	12.5 × 20	0.038	0.076	1660	ELXZ160E□□152MK20S	50	22	5 × 11.5	0.90	1.8	155	ELXZ500E□□220MEB5D	
	2200	12.5 × 25	0.030	0.060	1950	ELXZ160E□□222MK25S		47	6.3 × 11.5	0.45	0.90	260	ELXZ500E□□470MFB5D	
	2700	12.5 × 30	0.025	0.050	2310	ELXZ160E□□272MK30S		68	6.3 × 15	0.31	0.62	360	ELXZ500E□□680MF15D	
	2700	16 × 20	0.029	0.058	2210	ELXZ160E□□272ML20S		100	8 × 12	0.22	0.44	485	ELXZ500E□□101MH12D	

□ : Lead forming / Taping code



◆STANDARD RATINGS

WV (Vdc)	Cap (μF)	Case size φD×L(mm)	Impedance (Ωmax/100kHz)		Rated ripple current (mA <sub>rms</sub> /105°C, 100kHz)	Part No.	WV (Vdc)	Cap (μF)	Case size φD×L(mm)	Impedance (Ωmax/100kHz)		Rated ripple current (mA <sub>rms</sub> /105°C, 100kHz)	Part No.
			20°C	-10°C						20°C	-10°C		
50	120	8 × 15	0.16	0.32	635	ELXZ500E□□121MH15D	63	39	6.3 × 15	0.61	1.4	330	ELXZ630E□□390MF15D
	120	10 × 12.5	0.16	0.32	620	ELXZ500E□□121MJC5S		68	8 × 12	0.34	0.75	405	ELXZ630E□□680MH12D
	180	8 × 20	0.12	0.24	730	ELXZ500E□□181MH20D		100	8 × 15	0.27	0.65	535	ELXZ630E□□101MH15D
	180	10 × 16	0.13	0.26	850	ELXZ500E□□181MJ16S		100	10 × 12.5	0.255	0.51	540	ELXZ630E□□101MJC5S
	220	10 × 20	0.088	0.18	1050	ELXZ500E□□221MJ20S		120	10 × 16	0.19	0.38	600	ELXZ630E□□121MJ16S
	330	10 × 25	0.073	0.15	1250	ELXZ500E□□331MJ25S		150	8 × 20	0.21	0.52	690	ELXZ630E□□151MH20D
	390	10 × 30	0.054	0.11	1500	ELXZ500E□□391MJ30S		180	10 × 20	0.145	0.29	890	ELXZ630E□□181MJ20S
	390	12.5 × 20	0.059	0.12	1480	ELXZ500E□□391MK20S		220	10 × 25	0.13	0.26	1050	ELXZ630E□□221MJ25S
	560	12.5 × 25	0.044	0.088	1840	ELXZ500E□□561MK25S		330	10 × 30	0.090	0.18	1300	ELXZ630E□□331MJ30S
	680	12.5 × 30	0.039	0.078	2220	ELXZ500E□□681MK30S		330	12.5 × 20	0.085	0.17	1290	ELXZ630E□□331MK20S
	680	16 × 20	0.048	0.096	1840	ELXZ500E□□681ML20S		390	12.5 × 25	0.070	0.14	1720	ELXZ630E□□391MK25S
	820	12.5 × 35	0.033	0.066	2290	ELXZ500E□□821MK35S		470	12.5 × 30	0.055	0.11	2090	ELXZ630E□□471MK30S
	820	18 × 20	0.042	0.084	1980	ELXZ500E□□821MM20S		470	16 × 20	0.059	0.12	1770	ELXZ630E□□471ML20S
	1000	12.5 × 40	0.029	0.058	2500	ELXZ500E□□102MK40S		680	12.5 × 35	0.047	0.094	2270	ELXZ630E□□681MK35S
	1000	16 × 25	0.034	0.068	2240	ELXZ500E□□102ML25S		680	16 × 25	0.050	0.10	2160	ELXZ630E□□681ML25S
	1200	16 × 30	0.028	0.056	2700	ELXZ500E□□122ML30S		680	18 × 20	0.055	0.11	2290	ELXZ630E□□681MM20S
	1200	18 × 25	0.029	0.058	2610	ELXZ500E□□122MM25S		820	12.5 × 40	0.042	0.084	2560	ELXZ630E□□821MK40S
	1500	16 × 35	0.025	0.050	2800	ELXZ500E□□152ML35S		820	16 × 30	0.043	0.086	2670	ELXZ630E□□821ML30S
	1800	16 × 40	0.021	0.042	3200	ELXZ500E□□182ML40S		820	18 × 25	0.043	0.086	2590	ELXZ630E□□821MM25S
1800	18 × 30	0.025	0.050	3000	ELXZ500E□□182MM30S	1000	16 × 35	0.036	0.072	2770	ELXZ630E□□102ML35S		
2200	18 × 35	0.023	0.046	3100	ELXZ500E□□222MM35S	1200	16 × 40	0.030	0.060	2850	ELXZ630E□□122ML40S		
2700	18 × 40	0.020	0.040	3400	ELXZ500E□□272MM40S	1200	18 × 30	0.032	0.064	2950	ELXZ630E□□122MM30S		
63	12	5 × 11.5	1.9	4.0	145	ELXZ630E□□120MEB5D	1500	18 × 35	0.030	0.060	3100	ELXZ630E□□152MM35S	
	22	6.3 × 11.5	1.0	2.0	240	ELXZ630E□□220MFB5D	1800	18 × 40	0.025	0.050	3210	ELXZ630E□□182MM40S	

□□ : Lead forming / Taping code

◆RATED RIPPLE CURRENT MULTIPLIERS

●Frequency Multipliers

Capacitance (μF)	Frequency (Hz)			
	120	1k	10k	100k
12 to 180	0.40	0.75	0.90	1.00
220 to 560	0.50	0.85	0.94	1.00
680 to 1,800	0.60	0.87	0.95	1.00
2,200 to 3,900	0.75	0.90	0.95	1.00
4,700 to 18,000	0.85	0.95	0.98	1.00