

# LXZ Series

- Adoption of innovative electrolyte and new technologies
- Very low impedance at high frequency
- Endurance with ripple current: 2,000 to 8,000 hours at 105°C
- Solvent resistant type (see PRECAUTIONS AND GUIDELINES)
- RoHS Compliant

LXZ

↑ Lower Z  
Downsized  
LXY P174  
↑ Lower Z  
LXV P176

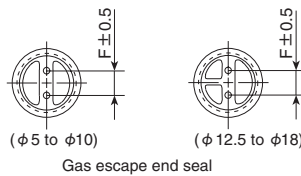
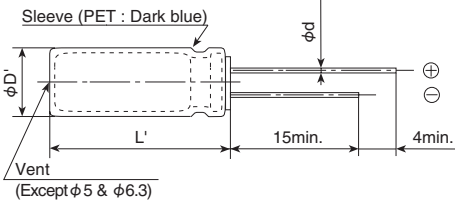


## ◆ SPECIFICATIONS

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 (tan δ)	Rated voltage (V <sub>dc</sub> )	6.3V 10V 16V 25V 35V 50V 63V
	tan δ (Max.)	0.22 0.19 0.16 0.14 0.12 0.10 0.08
Endurance	When nominal capacitance exceeds 1,000µF, add 0.02 to the value above for each 1,000µF increase. (at 20°C, 120Hz)	
	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 (the peak voltage shall not exceed the rated voltage) for the specified period of time at 105°C.	
	Time	φ 5 & 6.3 : 2,000hours φ 8 : 3,000hours φ 10 : 5,000hours φ 12.5 : 7,000hours φ 16 & 18 : 8,000hours
	Capacitance change	≦ ±20% of the initial value
	D.F. (tan δ)	≦ 200% of the initial specified value
Shelf Life	The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1,000 hours at 105°C without voltage applied. Before the measurement, the capacitor shall be preconditioned by applying voltage according to Item 4.1 of JIS C 5101-4.	
	Capacitance change	≦ ±20% of the initial value
	D.F. (tan δ)	≦ 200% of the initial specified value
	Leakage current	≦ The initial specified value

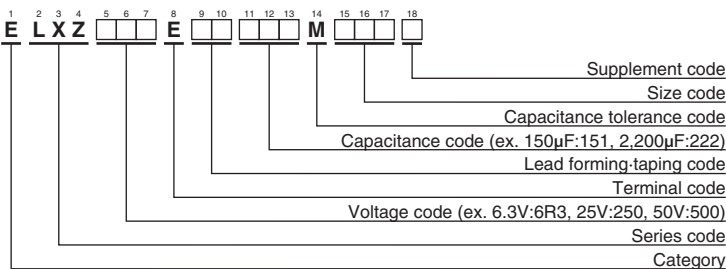
## ◆ DIMENSIONS [mm]

### ● 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 "Product code guide (radial lead type)"



◆STANDARD RATINGS

WV (V <sub>dc</sub> )	Cap (μF)	Case size φD×L(mm)	Impedance (Ω max./100kHz)		Rated ripple current (mA rms/105°C, 100kHz)	Part No.	WV (V <sub>dc</sub> )	Cap (μF)	Case size φD×L(mm)	Impedance (Ω max./100kHz)		Rated ripple current (mA rms/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	3,300	12.5×35	0.022	0.044	2,510	ELXZ160E□□332MK35S
	330	6.3×11.5	0.25	0.50	290	ELXZ6R3E□□331MFB5D		3,900	12.5×40	0.017	0.034	2,870	ELXZ160E□□392MK40S
	470	6.3×15	0.18	0.36	400	ELXZ6R3E□□471MF15D		3,900	16×25	0.022	0.044	2,560	ELXZ160E□□392ML25S
	680	8×12	0.12	0.24	555	ELXZ6R3E□□681MH12D		3,900	18×20	0.028	0.056	2,490	ELXZ160E□□392MM20S
	820	10×12.5	0.090	0.18	760	ELXZ6R3E□□821MJC5S		4,700	16×30	0.019	0.038	3,010	ELXZ160E□□472ML30S
	1,000	8×15	0.090	0.18	730	ELXZ6R3E□□102MH15D		4,700	18×25	0.020	0.040	2,740	ELXZ160E□□472MM25S
	1,200	8×20	0.080	0.16	810	ELXZ6R3E□□122MH20D		5,600	16×35	0.017	0.034	3,150	ELXZ160E□□562ML35S
	1,200	10×16	0.068	0.136	1,050	ELXZ6R3E□□122MJ16S		5,600	18×30	0.018	0.036	3,330	ELXZ160E□□562MM30S
	1,500	10×20	0.052	0.104	1,220	ELXZ6R3E□□152MJ20S		6,800	16×40	0.015	0.030	3,710	ELXZ160E□□682ML40S
	2,200	10×25	0.045	0.090	1,440	ELXZ6R3E□□222MJ25S		8,200	18×35	0.016	0.032	3,680	ELXZ160E□□822MM35S
	2,700	10×30	0.037	0.074	1,690	ELXZ6R3E□□272MJ30S		10,000	18×40	0.015	0.030	3,800	ELXZ160E□□103MM40S
	3,300	12.5×20	0.038	0.076	1,660	ELXZ6R3E□□332MK20S		47	5×11.5	0.50	1.0	175	ELXZ250E□□470MEB5D
	3,900	12.5×25	0.030	0.060	1,950	ELXZ6R3E□□392MK25S		100	6.3×11.5	0.25	0.50	290	ELXZ250E□□101MFB5D
	4,700	12.5×30	0.025	0.050	2,310	ELXZ6R3E□□472MK30S		150	6.3×15	0.18	0.36	400	ELXZ250E□□151MF15D
	5,600	12.5×35	0.022	0.044	2,510	ELXZ6R3E□□562MK35S		220	8×12	0.12	0.24	555	ELXZ250E□□221MH12D
	5,600	16×20	0.029	0.058	2,210	ELXZ6R3E□□562ML20S		330	8×15	0.090	0.18	730	ELXZ250E□□331MH15D
	6,800	12.5×40	0.017	0.034	2,870	ELXZ6R3E□□682MK40S		330	10×12.5	0.090	0.18	760	ELXZ250E□□331MJC5S
	6,800	16×25	0.022	0.044	2,560	ELXZ6R3E□□682ML25S		390	8×20	0.080	0.16	810	ELXZ250E□□391MH20D
6,800	18×20	0.028	0.056	2,490	ELXZ6R3E□□682MM20S	470	10×16	0.068	0.136	1,050	ELXZ250E□□471MJ16S		
8,200	16×30	0.019	0.038	3,010	ELXZ6R3E□□822ML30S	680	10×20	0.052	0.104	1,220	ELXZ250E□□681MJ20S		
10,000	16×35	0.017	0.034	3,150	ELXZ6R3E□□103ML35S	820	10×25	0.045	0.090	1,440	ELXZ250E□□821MJ25S		
10,000	18×25	0.020	0.040	2,740	ELXZ6R3E□□103MM25S	1,000	10×30	0.037	0.074	1,690	ELXZ250E□□102MJ30S		
12,000	16×40	0.015	0.030	3,710	ELXZ6R3E□□123ML40S	1,000	12.5×20	0.038	0.076	1,660	ELXZ250E□□102MK20S		
12,000	18×30	0.018	0.036	3,330	ELXZ6R3E□□123MM30S	1,500	12.5×25	0.030	0.060	1,950	ELXZ250E□□152MK25S		
15,000	18×35	0.016	0.032	3,680	ELXZ6R3E□□153MM35S	1,800	12.5×30	0.025	0.050	2,310	ELXZ250E□□182MK30S		
18,000	18×40	0.015	0.030	3,800	ELXZ6R3E□□183MM40S	1,800	16×20	0.029	0.058	2,210	ELXZ250E□□182ML20S		
10	100	5×11.5	0.50	1.0	175	ELXZ100E□□101MEB5D	2,200	12.5×35	0.022	0.044	2,510	ELXZ250E□□222MK35S	
	220	6.3×11.5	0.25	0.50	290	ELXZ100E□□221MFB5D	2,200	18×20	0.028	0.056	2,490	ELXZ250E□□222MM20S	
	330	6.3×15	0.18	0.36	400	ELXZ100E□□331MF15D	2,700	12.5×40	0.017	0.034	2,870	ELXZ250E□□272MK40S	
	470	8×12	0.12	0.24	555	ELXZ100E□□471MH12D	2,700	16×25	0.022	0.044	2,560	ELXZ250E□□272ML25S	
	680	8×15	0.090	0.18	730	ELXZ100E□□681MH15D	3,300	16×30	0.019	0.038	3,010	ELXZ250E□□332ML30S	
	680	10×12.5	0.090	0.18	760	ELXZ100E□□681MJC5S	3,300	18×25	0.020	0.040	2,740	ELXZ250E□□332MM25S	
	1,000	8×20	0.080	0.16	810	ELXZ100E□□102MH20D	3,900	16×35	0.017	0.034	3,150	ELXZ250E□□392ML35S	
	1,000	10×16	0.068	0.136	1,050	ELXZ100E□□102MJ16S	3,900	18×30	0.018	0.036	3,330	ELXZ250E□□392MM30S	
	1,200	10×20	0.052	0.104	1,220	ELXZ100E□□122MJ20S	4,700	16×40	0.015	0.030	3,710	ELXZ250E□□472ML40S	
	1,500	10×25	0.045	0.090	1,440	ELXZ100E□□152MJ25S	4,700	18×35	0.016	0.032	3,680	ELXZ250E□□472MM35S	
	1,800	10×30	0.037	0.074	1,690	ELXZ100E□□182MJ30S	5,600	18×40	0.015	0.030	3,800	ELXZ250E□□562MM40S	
	2,200	12.5×20	0.038	0.076	1,660	ELXZ100E□□222MK20S	33	5×11.5	0.50	1.0	175	ELXZ350E□□330MEB5D	
	3,300	12.5×25	0.030	0.060	1,950	ELXZ100E□□332MK25S	56	6.3×11.5	0.25	0.50	290	ELXZ350E□□560MFB5D	
	3,900	12.5×30	0.025	0.050	2,310	ELXZ100E□□392MK30S	100	6.3×15	0.18	0.36	400	ELXZ350E□□101MF15D	
	3,900	16×20	0.029	0.058	2,210	ELXZ100E□□392ML20S	150	8×12	0.12	0.24	555	ELXZ350E□□151MH12D	
	4,700	12.5×35	0.022	0.044	2,510	ELXZ100E□□472MK35S	220	8×15	0.090	0.18	730	ELXZ350E□□221MH15D	
	5,600	12.5×40	0.017	0.034	2,870	ELXZ100E□□562MK40S	220	10×12.5	0.090	0.18	760	ELXZ350E□□221MJC5S	
	5,600	16×25	0.022	0.044	2,560	ELXZ100E□□562ML25S	270	8×20	0.080	0.16	810	ELXZ350E□□271MH20D	
5,600	18×20	0.028	0.056	2,490	ELXZ100E□□562MM20S	330	10×16	0.068	0.136	1,050	ELXZ350E□□331MJ16S		
6,800	16×30	0.019	0.038	3,010	ELXZ100E□□682ML30S	470	10×20	0.052	0.104	1,220	ELXZ350E□□471MJ20S		
6,800	18×25	0.020	0.040	2,740	ELXZ100E□□682MM25S	560	10×25	0.045	0.090	1,440	ELXZ350E□□561MJ25S		
8,200	16×35	0.017	0.034	3,150	ELXZ100E□□822ML35S	680	10×30	0.037	0.074	1,690	ELXZ350E□□182MJ30S		
8,200	18×30	0.018	0.036	3,330	ELXZ100E□□822MM30S	680	12.5×20	0.038	0.076	1,660	ELXZ350E□□681MK20S		
10,000	16×40	0.015	0.030	3,710	ELXZ100E□□103ML40S	1,000	12.5×25	0.030	0.060	1,950	ELXZ350E□□102MK25S		
10,000	18×35	0.016	0.032	3,680	ELXZ100E□□103MM35S	1,200	12.5×30	0.025	0.050	2,310	ELXZ350E□□122MK30S		
12,000	18×40	0.015	0.030	3,800	ELXZ100E□□123MM40S	1,200	16×20	0.029	0.058	2,210	ELXZ350E□□122ML20S		
16	47	5×11.5	0.50	1.0	175	ELXZ160E□□470MEB5D	1,500	12.5×35	0.022	0.044	2,510	ELXZ350E□□152MK35S	
	100	6.3×11.5	0.25	0.50	290	ELXZ160E□□101MFB5D	1,800	12.5×40	0.017	0.034	2,870	ELXZ350E□□182MK40S	
	220	6.3×15	0.18	0.36	400	ELXZ160E□□221MF15D	1,800	16×25	0.022	0.044	2,560	ELXZ350E□□182ML20S	
	330	8×12	0.12	0.24	555	ELXZ160E□□331MH12D	1,800	18×20	0.028	0.056	2,490	ELXZ350E□□182MM20S	
	470	8×15	0.090	0.18	730	ELXZ160E□□471MH15D	2,200	16×30	0.019	0.038	3,010	ELXZ350E□□222ML30S	
	470	10×12.5	0.090	0.18	760	ELXZ160E□□471MJC5S	2,200	18×25	0.020	0.040	2,740	ELXZ350E□□222MM25S	
	560	8×20	0.080	0.16	810	ELXZ160E□□561MH20D	2,700	16×35	0.017	0.034	3,150	ELXZ350E□□272ML35S	
	680	10×16	0.068	0.136	1,050	ELXZ160E□□681MJ16S	2,700	18×30	0.018	0.036	3,330	ELXZ350E□□272MM30S	
	1,000	10×20	0.052	0.104	1,220	ELXZ160E□□102MJ20S	3,300	16×40	0.015	0.030	3,710	ELXZ350E□□332ML40S	
	1,200	10×25	0.045	0.090	1,440	ELXZ160E□□122MJ25S	3,300	18×35	0.016	0.032	3,680	ELXZ350E□□332MM35S	
	1,500	10×30	0.037	0.074	1,690	ELXZ160E□□152MJ30S	3,900	18×40	0.015	0.030	3,800	ELXZ350E□□392MM40S	
	1,500	12.5×20	0.038	0.076	1,660	ELXZ160E□□152MK20S	22	5×11.5	0.90	1.8	155	ELXZ500E□□220MEB5D	
	2,200	12.5×25	0.030	0.060	1,950	ELXZ160E□□222MK25S	47	6.3×11.5	0.45	0.90	260	ELXZ500E□□470MFB5D	
	2,700	12.5×30	0.025	0.050	2,310	ELXZ160E□□272MK30S	68	6.3×15	0.31	0.62	360	ELXZ500E□□680MF15D	
	2,700	16×20	0.029	0.058	2,210	ELXZ160E□□272ML20S	100	8×12	0.22	0.44	485	ELXZ500E□□101MH12D	

□□ : Enter the appropriate lead forming or taping code.

◆STANDARD RATINGS

WV (V <sub>dc</sub> )	Cap (μF)	Case size φD×L(mm)	Impedance (Ω max./100kHz)		Rated ripple current (mA <sub>rms</sub> / 105°C, 100kHz)	Part No.	WV (V <sub>dc</sub> )	Cap (μF)	Case size φD×L(mm)	Impedance (Ω max./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	1,050	ELXZ500E□□221MJ20S		120	10×16	0.19	0.38	600	ELXZ630E□□121MJ16S
	330	10×25	0.073	0.15	1,250	ELXZ500E□□331MJ25S		150	8×20	0.21	0.52	690	ELXZ630E□□151MH20D
	390	10×30	0.054	0.11	1,500	ELXZ500E□□391MJ30S		180	10×20	0.145	0.29	890	ELXZ630E□□181MJ20S
	390	12.5×20	0.059	0.12	1,480	ELXZ500E□□391MK20S		220	10×25	0.13	0.26	1,050	ELXZ630E□□221MJ25S
	560	12.5×25	0.044	0.088	1,840	ELXZ500E□□561MK25S		330	10×30	0.090	0.18	1,300	ELXZ630E□□331MJ30S
	680	12.5×30	0.039	0.078	2,220	ELXZ500E□□681MK30S		330	12.5×20	0.085	0.17	1,290	ELXZ630E□□331MK20S
	680	16×20	0.048	0.096	1,840	ELXZ500E□□681ML20S		390	12.5×25	0.070	0.14	1,720	ELXZ630E□□391MK25S
	820	12.5×35	0.033	0.066	2,290	ELXZ500E□□821MK35S		470	12.5×30	0.055	0.11	2,090	ELXZ630E□□471MK30S
	820	18×20	0.042	0.084	1,980	ELXZ500E□□821MM20S		470	16×20	0.059	0.12	1,770	ELXZ630E□□471ML20S
	1,000	12.5×40	0.029	0.058	2,500	ELXZ500E□□102MK40S		680	12.5×35	0.047	0.094	2,270	ELXZ630E□□681MK35S
	1,000	16×25	0.034	0.068	2,240	ELXZ500E□□102ML25S		680	16×25	0.050	0.10	2,160	ELXZ630E□□681ML25S
	1,200	16×30	0.028	0.056	2,700	ELXZ500E□□122ML30S		680	18×20	0.055	0.11	2,290	ELXZ630E□□681MM20S
	1,200	18×25	0.029	0.058	2,610	ELXZ500E□□122MM25S		820	12.5×40	0.042	0.084	2,560	ELXZ630E□□821MK40S
	1,500	16×35	0.025	0.050	2,800	ELXZ500E□□152ML35S		820	16×30	0.043	0.086	2,670	ELXZ630E□□821ML30S
	1,800	16×40	0.021	0.042	3,200	ELXZ500E□□182ML40S		820	18×25	0.043	0.086	2,590	ELXZ630E□□821MM25S
	1,800	18×30	0.025	0.050	3,000	ELXZ500E□□182MM30S		1,000	16×35	0.036	0.072	2,770	ELXZ630E□□102ML35S
2,200	18×35	0.023	0.046	3,100	ELXZ500E□□222MM35S	1,200	16×40	0.030	0.060	2,850	ELXZ630E□□122ML40S		
2,700	18×40	0.020	0.040	3,400	ELXZ500E□□272MM40S	1,200	18×30	0.032	0.064	2,950	ELXZ630E□□122MM30S		
63	12	5×11.5	1.9	4.0	145	ELXZ630E□□120MEB5D	1,500	18×35	0.030	0.060	3,100	ELXZ630E□□152MM35S	
	22	6.3×11.5	1.0	2.0	240	ELXZ630E□□220MFB5D	1,800	18×40	0.025	0.050	3,210	ELXZ630E□□182MM40S	

□□ : Enter the appropriate lead forming or 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

The endurance of capacitors is reduced with internal heating produced by ripple current at the rate of halving the lifetime with every 5°C rise. When long life performance is required in actual use, the rms ripple current has to be reduced.