

# LZA Series

- Adoption of innovative electrolyte and new technologies
- Very low impedance at high frequency
- Endurance with ripple current: 4,000 to 7,000 hours at 105°C
- Solvent resistant type
- RoHS Compliant

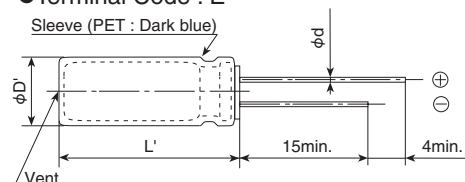


## ◆ SPECIFICATIONS

Items	Characteristics					
Category Temperature Range	-55 to +105°C					
Rated Voltage Range	6.3 to 35V <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)	Rated voltage (V <sub>dc</sub> )	6.3V	10V	16V	25V	35V
	tanδ (Max.)	0.22	0.19	0.16	0.14	0.12
	When nominal capacitance exceeds 1,000µF, add 0.02 to the value above for each 1,000µF increase. (at 20°C, 120Hz)					
Low Temperature Characteristics (Max. Impedance Ratio)	Rated voltage (V <sub>dc</sub> )	6.3V	10V	16V	25V	35V
	Z(-55°C)/Z(+20°C)	4	3	3	3	3
	(at 120Hz)					
Endurance	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	φ10 : 4,000hours		φ12.5 : 5,000hours	φ16 to 18 : 7,000hours	
	Rated voltage	6.3 to 10V <sub>dc</sub> (φ10)		6.3 to 10V <sub>dc</sub> (φ12.5 to 18)	16 to 35V <sub>dc</sub>	
	Capacitance change	≤±30% of the initial value		≤±20% of the initial value	≤±20% of the initial value	
	D.F.(tanδ)	≤300% of the initial specified value		≤200% of the initial specified value	≤200% of the initial specified value	
Leakage current	≤The initial specified value		≤The initial specified value	≤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.					
	Rated voltage	6.3 to 10V <sub>dc</sub> (φ10)		6.3 to 10V <sub>dc</sub> (φ12.5 to 18)	16 to 35V <sub>dc</sub>	
	Capacitance change	≤±30% of the initial value		≤±20% of the initial value	≤±20% of the initial value	
	D.F.(tanδ)	≤300% of the initial specified value		≤200% of the initial specified value	≤200% of the initial specified value	
	Leakage current	≤The initial specified value		≤The initial specified value	≤The initial specified value	

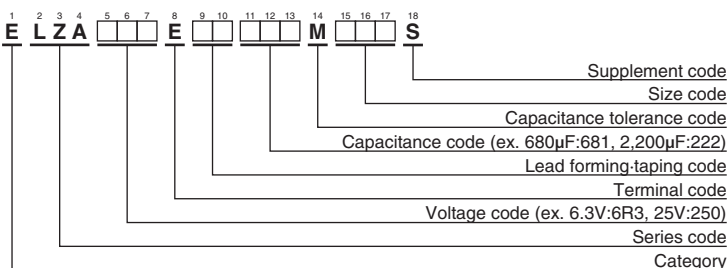
## ◆ DIMENSIONS [mm]

- Terminal Code : E



φD	10	12.5	16	18
φd	0.6	0.6	0.8	0.8
F	5.0	5.0	7.5	7.5
φD'	φD+0.5max.			
L'	L+1.5max.			

## ◆ PART NUMBERING SYSTEM



Specifications in this bulletin are subject to change without notice.

**LZA** Series

◆ **STANDARD RATINGS**

WV (Vdc)	Cap (μF)	Case size φD×L(mm)	Impedance (Ω max/ 20°C, 100kHz)	Rated ripple current (mA rms/ 105°C, 100kHz)	Part No.	WV (Vdc)	Cap (μF)	Case size φD×L(mm)	Impedance (Ω max/ 20°C, 100kHz)	Rated ripple current (mA rms/ 105°C, 100kHz)	Part No.	
6.3	1,500	10×12.5	0.063	960	ELZA6R3E□□ 152MJC5S	16	3,300	12.5×25	0.022	2,350	ELZA160E□□ 332MK25S	
	1,800	10×16	0.049	1,240	ELZA6R3E□□ 182MJ16S		3,900	16×20	0.026	2,330	ELZA160E□□ 392ML20S	
	2,700	10×20	0.035	1,550	ELZA6R3E□□ 272MJ20S		5,600	16×25	0.019	2,760	ELZA160E□□ 562ML25S	
	3,300	10×25	0.033	1,740	ELZA6R3E□□ 332MJ25S		5,600	18×20	0.025	2,640	ELZA160E□□ 562MM20S	
	4,700	12.5×20	0.029	1,890	ELZA6R3E□□ 472MK20S		8,200	18×25	0.018	2,850	ELZA160E□□ 822MM25S	
	6,800	12.5×25	0.022	2,350	ELZA6R3E□□ 682MK25S		25	470	10×12.5	0.063	960	ELZA250E□□ 471MJC5S
	6,800	16×20	0.026	2,330	ELZA6R3E□□ 682ML20S			680	10×16	0.049	1,240	ELZA250E□□ 681MJ16S
	8,200	18×20	0.025	2,640	ELZA6R3E□□ 822MM20S			1,000	10×20	0.035	1,550	ELZA250E□□ 102MJ20S
	10,000	16×25	0.019	2,760	ELZA6R3E□□ 103ML25S			1,200	10×25	0.033	1,740	ELZA250E□□ 122MJ25S
	12,000	18×25	0.018	2,850	ELZA6R3E□□ 123MM25S			1,500	12.5×20	0.029	1,890	ELZA250E□□ 152MK20S
10	1,000	10×12.5	0.063	960	ELZA100E□□ 102MJC5S	2,200		12.5×25	0.022	2,350	ELZA250E□□ 222MK25S	
	1,500	10×16	0.049	1,240	ELZA100E□□ 152MJ16S	2,700		16×20	0.026	2,330	ELZA250E□□ 272ML20S	
	2,200	10×20	0.035	1,550	ELZA100E□□ 222MJ20S	3,300		18×20	0.025	2,640	ELZA250E□□ 332MM20S	
	2,700	10×25	0.033	1,740	ELZA100E□□ 272MJ25S	3,900		16×25	0.019	2,760	ELZA250E□□ 392ML25S	
	3,300	12.5×20	0.029	1,890	ELZA100E□□ 332MK20S	4,700		18×25	0.018	2,850	ELZA250E□□ 472MM25S	
	4,700	12.5×25	0.022	2,350	ELZA100E□□ 472MK25S	35	330	10×12.5	0.063	960	ELZA350E□□ 331MJC5S	
	4,700	16×20	0.026	2,330	ELZA100E□□ 472ML20S		470	10×16	0.049	1,240	ELZA350E□□ 471MJ16S	
	6,800	16×25	0.019	2,760	ELZA100E□□ 682ML25S		680	10×20	0.035	1,550	ELZA350E□□ 681MJ20S	
	6,800	18×20	0.025	2,640	ELZA100E□□ 682MM20S		820	10×25	0.033	1,740	ELZA350E□□ 821MJ25S	
	8,200	18×25	0.018	2,850	ELZA100E□□ 822MM25S		1,000	12.5×20	0.029	1,890	ELZA350E□□ 102MK20S	
16	820	10×12.5	0.063	960	ELZA160E□□ 821MJC5S		1,500	12.5×25	0.022	2,350	ELZA350E□□ 152MK25S	
	1,000	10×16	0.049	1,240	ELZA160E□□ 102MJ16S		1,800	16×20	0.026	2,330	ELZA350E□□ 182ML20S	
	1,500	10×20	0.035	1,550	ELZA160E□□ 152MJ20S		2,200	18×20	0.025	2,640	ELZA350E□□ 222MM20S	
	1,800	10×25	0.033	1,740	ELZA160E□□ 182MJ25S		2,700	16×25	0.019	2,760	ELZA350E□□ 272ML25S	
	2,200	12.5×20	0.029	1,890	ELZA160E□□ 222MK20S		3,300	18×25	0.018	2,850	ELZA350E□□ 332MM25S	

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

◆ **RATED RIPPLE CURRENT MULTIPLIERS**

● Frequency Multipliers

Capacitance (μF)	Frequency (Hz)			
	120	1k	10k	100k
330 to 470	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 12,000	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.