



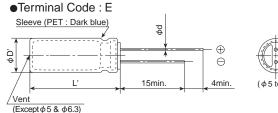
- Adoption of innovative electrolyte and new technologies
- Very low impedance at high frequency
- Endurance with ripple current: 2,000 to 8,000 hours at 105°C
- Solvent resistant type (see PRECAUTIONS AND GUIDELINES)
- RoHS2 Compliant
- AEC-Q200 compliant : Please contact Chemi-Con for more details, test data, information.

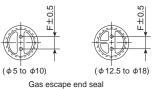


#### **SPECIFICATIONS**

Items		Charact	eristics					
Category Temperature Range	-55 to +105℃							
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, whiche Where, I: Max. leakage of	ver is greater. current (μΑ), C : Nominal capacitance (μF	), V : Rated voltage (V)	(at 20℃ after 2 minutes)				
Dissipation Factor (tan δ)	Rated voltage (V <sub>dc</sub> ) tan δ (Max.) When nominal capacitane	6.3V 10V 16V 25V 35V 50V 0.22 0.19 0.16 0.14 0.12 0.10 ce exceeds 1,000µF, add 0.02 to the value.	0.08 e above for each 1.000µF increase.	(at 20°C, 120Hz)				
Endurance	The following specifications shall be satisfied when the capacitors are restored to 20°C after subjected to DC v ripple current is applied (the peak voltage shall not exceed the rated voltage) for the specified period of time at '							
	$\phi$ 10 : 5,000hours $\phi$ 12.5 : 7,000hours $\phi$	16 & 18 : 8,000hours						
	Capacitance change	≤±20% of the initial value						
	D.F. (tan δ )	≤200% of the initial specified value						
	Leakage current	≦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 $\delta$ )	≤200% of the initial specified value						
	Leakage current	≦The initial specified value						

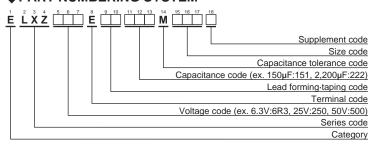
## **◆DIMENSIONS** [mm]





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+	-1.5ma	ax.						

## **◆PART NUMBERING SYSTEM**



Please refer to "Product code guide (radial lead type)"





# **STANDARD RATINGS**

wv	Сар	Case size	Imped (Ω max.		Rated ripple current	Part No.	wv	Сар	Case size	Imped (Ω max.		Rated ripple current	Part No.
(V <sub>dc</sub> )	,	φD×L(mm)	20℃	-10℃	(mArms/ 105℃, 100kHz)		(V <sub>dc</sub> )	(μF)	φD×L(mm)	20℃	-10℃	(mArms/ 105°C, 100kHz)	
	150	5×11.5	0.50	1.0	175	ELXZ6R3E 151MEB5D		2,700	16×20	0.029	0.058	2,210	ELXZ160E 272ML20S
	330 470	6.3×11.5 6.3×15	0.25	0.50	290 400	ELXZ6R3E 331MFB5D ELXZ6R3E 471MF15D		3,300	12.5×35 12.5×40	0.022	0.044	2,510 2,870	ELXZ160E□□332MK35S ELXZ160E□□392MK40S
	680	8×12	0.12	0.24	555	ELXZ6R3E 681MH12D		3,900	16×25	0.017	0.034	2,560	ELXZ160E 392ML25S
	820	10×12.5	0.090	0.18	760	ELXZ6R3E□□821MJC5S		3,900	18×20	0.028	0.056	2,490	ELXZ160E 392MM20S
	1,000	8×15	0.090	0.18	730	ELXZ6R3E□□102MH15D	16	4,700	16×30	0.019	0.038	3,010	ELXZ160E□□472ML30S
	1,200	8×20	0.080	0.16	810	ELXZ6R3E 122MH20D	'`	4,700	18×25	0.020	0.040	2,740	ELXZ160E 472MM25S
	1,200 1,500	10×16 10×20	0.068	0.136	1,050 1,220	ELXZ6R3E□□122MJ16S ELXZ6R3E□□152MJ20S		5,600 5,600	16×35	0.017	0.034	3,150 3,330	ELXZ160E □ □ 562ML35S ELXZ160E □ □ 562MM30S
	2,200	10×20 10×25	0.032	0.104	1,440	ELXZ6R3E 222MJ25S		6,800	18×30 16×40	0.015	0.030	3,710	ELXZ160E 682ML40S
	2,700	10×30	0.037	0.074	1,690	ELXZ6R3E 272MJ30S		8,200	18×35	0.016	0.032	3,680	ELXZ160E B22MM35S
	3,300	12.5×20	0.038	0.076	1,660	ELXZ6R3E□□332MK20S		10,000	18×40	0.015	0.030	3,800	ELXZ160E□□103MM40S
6.3	3,900	12.5×25	0.030	0.060	1,950	ELXZ6R3E□□392MK25S		47	5×11.5	0.50	1.0	175	ELXZ250E 470MEB5D
	4,700	12.5×30	0.025	0.050	2,310	ELXZ6R3E 472MK30S		100	6.3×11.5	0.25	0.50	290	ELXZ250E 101MFB5D
	5,600 5,600	12.5×35 16×20	0.022	0.044	2,510 2,210	ELXZ6R3E□□562MK35S ELXZ6R3E□□562ML20S		150 220	6.3×15 8×12	0.18	0.36	400 555	ELXZ250E □ □ 151MF15D ELXZ250E □ □ 221MH12D
	6,800	12.5×40	0.023	0.034	2,870	ELXZ6R3E 682MK40S		330	8×15	0.090	0.18	730	ELXZ250E 331MH15D
	6,800	16×25	0.022	0.044	2,560	ELXZ6R3E□□682ML25S		330	10×12.5	0.090	0.18	760	ELXZ250E 331MJC5S
	6,800	18×20	0.028	0.056	2,490	ELXZ6R3E□□682MM20S		390	8×20	0.080	0.16	810	ELXZ250E□□391MH20D
	8,200	16×30	0.019	0.038	3,010	ELXZ6R3E□□822ML30S		470	10×16	0.068	0.136	1,050	ELXZ250E□□471MJ16S
	10,000	16×35	0.017	0.034	3,150	ELXZ6R3E 103ML35S		680	10×20	0.052	0.104	1,220	ELXZ250E G81MJ20S
	10,000	18×25 16×40	0.020	0.040	2,740 3,710	ELXZ6R3E \Boxed 103MM25S ELXZ6R3E \Boxed 123ML40S		1,000	10×25 10×30	0.045	0.090	1,440 1,690	ELXZ250E□□821MJ25S ELXZ250E□□102MJ30S
	12,000	18×30	0.013	0.036	3,330	ELXZ6R3E 123MM30S		1,000	12.5×20	0.037	0.074	1,660	ELXZ250E 102MK20S
	15,000	18×35	0.016	0.032	3,680	ELXZ6R3E□□153MM35S		1,500	12.5×25	0.030	0.060	1,950	ELXZ250E \Bigcup 152MK25S
	18,000	18×40	0.015	0.030	3,800	ELXZ6R3E□□183MM40S	ĺ	1,800	12.5×30	0.025	0.050	2,310	ELXZ250E□□182MK30S
	100	5×11.5	0.50	1.0	175	ELXZ100E 101MEB5D	25	1,800	16×20	0.029	0.058	2,210	ELXZ250E \Box 182ML20S
	220	6.3×11.5	0.25	0.50	290	ELXZ100E 221MFB5D		2,200	12.5×30	0.025	0.050	2,310	ELXZ250E 222MK30S
	330 470	6.3×15 8×12	0.18	0.36	400 555	ELXZ100E□□331MF15D ELXZ100E□□471MH12D		2,200 2,200	12.5×35 18×20	0.022	0.044	2,510 2,490	ELXZ250E□□222MK35S ELXZ250E□□222MM20S
	680	8×15	0.090	0.18	730	ELXZ100E 681MH15D		2,700	12.5×40	0.020	0.034	2,870	ELXZ250E 272MK40S
	680	10×12.5	0.090	0.18	760	ELXZ100E□□681MJC5S		2,700	16×25	0.022	0.044	2,560	ELXZ250E□□272ML25S
	1,000	8×20	0.080	0.16	810	ELXZ100E 102MH20D		3,300	16×25	0.022	0.044	2,560	ELXZ250E□□332ML25S
	1,000	10×16	0.068	0.136	1,050 1,220	ELXZ100E 102MJ16S		3,300	16×30	0.019	0.038	3,010	ELXZ250E 332ML30S
	1,200 1,500	10×20 10×25	0.052	0.104	1,440	ELXZ100E□□122MJ20S ELXZ100E□□152MJ25S		3,300	18×20 18×25	0.028	0.056	2,490 2,740	ELXZ250E□□332MM20S ELXZ250E□□332MM25S
	1,800	10×30	0.037	0.074	1,690	ELXZ100E 182MJ30S		3,900	16×35	0.020	0.034	3,150	ELXZ250E 392ML35S
	2,200	10×30	0.037	0.074	1,690	ELXZ100E□□222MJ30S	İ	3,900	18×30	0.018	0.036	3,330	ELXZ250E□□392MM30S
	2,200	12.5×20	0.038	0.076	1,660	ELXZ100E 222MK20S		4,700	16×40	0.015	0.030	3,710	ELXZ250E□□472ML40S
10	3,300	12.5×25	0.030	0.060	1,950	ELXZ100E 332MK25S		4,700	18×35	0.016	0.032	3,680	ELXZ250E 472MM35S
	3,900	12.5×30 16×20	0.025	0.050	2,310 2,210	ELXZ100E □ □ 392MK30S ELXZ100E □ □ 392ML20S		5,600	18×40 5×11.5	0.015	0.030	3,800 175	ELXZ250E □ □ 562MM40S ELXZ350E □ □ 330MEB5D
	4,700	12.5×35	0.023	0.044	2,510	ELXZ100E 472MK35S		56	6.3×11.5	0.25	0.50	290	ELXZ350E 560MFB5D
	5,600	12.5×40	0.017	0.034	2,870	ELXZ100E□□562MK40S	i	100	6.3×15	0.18	0.36	400	ELXZ350E \Box 101MF15D
	5,600	16×25	0.022			ELXZ100E□□562ML25S		150	8×12	0.12			ELXZ350E□□151MH12D
	5,600	18×20		0.056	2,490	ELXZ100E 562MM20S		220	8×15	0.090		730	ELXZ350E 221MH15D
	6,800 6,800	16×30 18×25	0.019	0.038	3,010 2,740	ELXZ100E□□682ML30S ELXZ100E□□682MM25S		220 270	10×12.5 8×20	0.090	0.18	760 810	ELXZ350E□□221MJC5S ELXZ350E□□271MH20D
	8,200	16×25	0.020	0.040	3,150	ELXZ100E B22ML35S		330	10×16	0.068	0.136	1,050	ELXZ350E 331MJ16S
	8,200	18×30	0.018		3,330	ELXZ100E B22MM30S		470	10×20	0.052	0.104	1,220	ELXZ350E□□471MJ20S
	10,000	16×40	0.015	0.030	3,710	ELXZ100E□□103ML40S	İ	560	10×20	0.052	0.104	1,220	ELXZ350E□□561MJ20S
	10,000	18×35	0.016		3,680	ELXZ100E□□103MM35S		560	10×25	0.045	0.090	1,440	ELXZ350E□□561MJ25S
	12,000	18×40	0.015	0.030	3,800	ELXZ100E 123MM40S		680	10×30	0.037	0.074	1,690	ELXZ350E 681MJ30S
	47 100	5×11.5 6.3×11.5	0.50	1.0 0.50	175 290	ELXZ160E \Begin{array}{c c c c c c c c c c c c c c c c c c c	35		12.5×20 12.5×20	0.038	0.076	1,660 1,660	ELXZ350E□□681MK20S ELXZ350E□□102MK20S
	220	6.3×11.3	0.23	0.36	400	ELXZ160E 221MF15D			12.5×25	0.030	0.060	1,950	ELXZ350E 102MK20S 102MK25S
	330	8×12	0.12	0.24	555	ELXZ160E 331MH12D			12.5×30	0.025	0.050	2,310	ELXZ350E 102MK30S
	470	8×15	0.090	0.18	730	ELXZ160E□□471MH15D	İ	1,200	16×20	0.029	0.058	2,210	ELXZ350E□□122ML20S
	470	10×12.5	0.090	0.18	760	ELXZ160E□□471MJC5S		1,500		0.022	0.044	2,510	ELXZ350E□□152MK35S
16	560	8×20	0.080	0.16	810	ELXZ160E 561MH20D		1,800		0.017	0.034	2,870	ELXZ350E 182MK40S
	1,000	10×16 10×20	0.068	0.136	1,050 1,220	ELXZ160E□□681MJ16S ELXZ160E□□102MJ20S		1,800 1,800	16×25 18×20	0.022	0.044	2,560 2,490	ELXZ350E□□182ML25S ELXZ350E□□182MM20S
	1,200	10×20 10×25	0.052	0.104	1,440	ELXZ160E 102MJ20S 122MJ25S		2,200	16×25	0.028	0.056	2,490	ELXZ350E 222ML25S
	1,500	10×23	0.043	0.030	1,690	ELXZ160E		2,200	16×30	0.022	0.038	3,010	ELXZ350E 222ML30S
	1,500		0.038		1,660	ELXZ160E□□152MK20S		2,200	18×20	0.028	0.056	2,490	ELXZ350E□□222MM20S
	2,200		0.030		1,950	ELXZ160E 222MK25S		2,200	18×25	0.020	0.040	2,740	ELXZ350E 222MM25S
	2,700	12.5×30	0.025	0.050	2,310	ELXZ160E□□272MK30S		2,700	16×35	0.017	0.034	3,150	ELXZ350E□□272ML35S

 $\Box\Box$  : Enter the appropriate lead forming or taping code.

Production of the products shown in is scheduled to be discontinued.





### **STANDARD RATINGS**

wv	Сар	Case size	Impedance (Ω max./100kHz			Part No.	wv	Cap (μF)	Case size φD×L(mm)	Impedance (Ω max./100kHz)		Rated ripple current	Part No.
(V <sub>dc</sub> )	(µF)	F) φD×L(mm)	20℃	-10℃	(mArms/ 105℃, 100kHz)		(V <sub>dc</sub> )			20℃	-10℃	(mArms/ 105℃, 100kHz)	Tartivo.
	2,700	18×30	0.018	0.036	3,330	ELXZ350E□□272MM30S	50	2,700	18×40	0.020	0.040	3,400	ELXZ500E□□272MM40S
	3,300	16×40	0.015	0.030	3,710	ELXZ350E□□332ML40S		12	5×11.5	1.9	4.0	145	ELXZ630E□□120MEB5D
35	3,300	18×35	0.016	0.032	3,680	ELXZ350E□□332MM35S		22	6.3×11.5	1.0	2.0	240	ELXZ630E□□220MFB5D
	3,900	18×40	0.015	0.030	3,800	ELXZ350E□□392MM40S		39	6.3×15	0.61	1.4	330	ELXZ630E□□390MF15D
	4,700	18×40	0.015	0.030	3,800	ELXZ350E□□472MM40S		68	8×12	0.34	0.75	405	ELXZ630E□□680MH12D
	22	5×11.5	0.90	1.8	155	ELXZ500E□□220MEB5D		100	8×15	0.27	0.65	535	ELXZ630E□□101MH15D
	47	6.3×11.5	0.45	0.90	260	ELXZ500E□□470MFB5D		100	10×12.5	0.255	0.51	540	ELXZ630E□□101MJC5S
	68	6.3×15	0.31	0.62	360	ELXZ500E□□680MF15D	63	120	10×16	0.19	0.38	600	ELXZ630E□□121MJ16S
	100	8×12	0.22	0.44	485	ELXZ500E□□101MH12D		150	8×20	0.21	0.52	690	ELXZ630E□□151MH20D
	120	8×15	0.16	0.32	635	ELXZ500E 121MH15D		180	10×20	0.145	0.29	890	ELXZ630E□□181MJ20S
	120	10×12.5	0.16	0.32	620	ELXZ500E□□121MJC5S		220	10×25	0.13	0.26	1,050	ELXZ630E□□221MJ25S
	180	8×20	0.12	0.24	730	ELXZ500E□□181MH20D		330	10×30	0.090	0.18	1,300	ELXZ630E□□331MJ30S
	180	10×16	0.13	0.26	850	ELXZ500E□□181MJ16S		330	12.5×20	0.085	0.17	1,290	ELXZ630E□□331MK20S
	220	10×20	0.088	0.18	1,050	ELXZ500E□□221MJ20S		390	12.5×25	0.070	0.14	1,720	ELXZ630E□□391MK25S
	330	10×25	0.073	0.15	1,250	ELXZ500E□□331MJ25S		470	12.5×30	0.055	0.11	2,090	ELXZ630E□□471MK30S
	390	10×30	0.054	0.11	1,500	ELXZ500E□□391MJ30S		470	16×20	0.059	0.12	1,770	ELXZ630E□□471ML20S
	390	12.5×20	0.059	0.12	1,480	ELXZ500E□□391MK20S		680	12.5×35	0.047	0.094	2,270	ELXZ630E□□681MK35S
50	470	12.5×20	0.059	0.12	1,480	ELXZ500E□□471MK20S		680	16×25	0.050	0.10	2,160	ELXZ630E□□681ML25S
30	560	12.5×25	0.044	0.088	1,840	ELXZ500E□□561MK25S		680	18×20	0.055	0.11	2,290	ELXZ630E□□681MM20S
	680	12.5×30	0.039	0.078	2,220	ELXZ500E□□681MK30S		820	12.5×40	0.042	0.084	2,560	ELXZ630E□□821MK40S
	680	16×20	0.048	0.096	1,840	ELXZ500E□□681ML20S	1 1	820	16×30	0.043	0.086	2,670	ELXZ630E□□821ML30S
	820	12.5×35	0.033	0.066	2,290	ELXZ500E□□821MK35S		820	18×25	0.043	0.086	2,590	ELXZ630E□□821MM25S
	820	18×20	0.042	0.084	1,980	ELXZ500E□□821MM20S		1,000	16×30	0.043	0.086	2,670	ELXZ630E□□102ML30S
	1,000	12.5×40	0.029	0.058	2,500	ELXZ500E□□102MK40S	1 1	1,000	16×35	0.036	0.072	2,770	ELXZ630E□□102ML35S
	1,000	16×25	0.034	0.068	2,240	ELXZ500E□□102ML25S		1,200	16×40	0.030	0.060	2,850	ELXZ630E□□122ML40S
	1,200	16×30	0.028	0.056	2,700	ELXZ500E□□122ML30S	1 1	1,200	18×30	0.032	0.064	2,950	ELXZ630E□□122MM30S
	1,200	18×25	0.029	0.058	2,610	ELXZ500E□□122MM25S		1,500	18×35	0.030	0.060	3,100	ELXZ630E□□152MM35S
	1,500	16×35	0.025	0.050	2,800	ELXZ500E□□152ML35S		1,800	18×40	0.025	0.050	3,210	ELXZ630E□□182MM40S
	1,800	16×40	0.021	0.042	3,200	ELXZ500E□□182ML40S		2,200	18×40	0.025	0.050	3,210	ELXZ630E□□222MM40S
	1,800	18×30	0.025	0.050	3,000	ELXZ500E□□182MM30S		3,300	18×40	0.021	0.042	3,900	ELXZ630E□□332MM40S
	2,200	18×35	0.023	0.046	3,100	ELXZ500E□□222MM35S							

 $\square\,\square$  : Enter the appropriate lead forming or taping code.

is scheduled to be discontinued. Production of the products shown in

## **◆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 deterioration of aluminum electrolytic capacitors accelerates their life due to the internal heating produced by ripple current. For details, refer to Section "5-3 Ripple Current Effect on Lifetime" in the catalog, Technical Note.