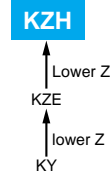


KZH Series

- Ultra Low impedance for Personal Computer and Storage Equipment
- Endurance with ripple current: 105°C 5000 to 6000 hours
- Non solvent-proof type
- Pb-free design

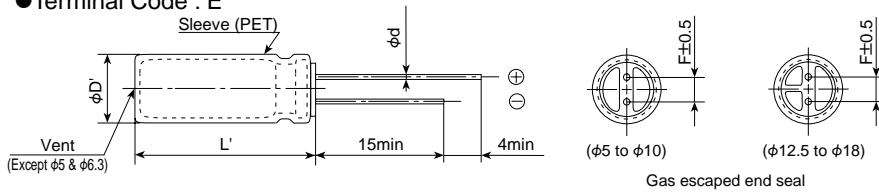


◆SPECIFICATIONS

Items	Characteristics												
Category Temperature Range	-40 to +105°C												
Rated Voltage Range	6.3 to 35V _{dc}												
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_{dc})</td> <td>6.3V</td> <td>10V</td> <td>16V</td> <td>25V</td> <td>35V</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> </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 _{dc})	6.3V	10V	16V	25V	35V	tanδ (Max.)	0.22	0.19	0.16	0.14	0.12
Rated voltage (V _{dc})	6.3V	10V	16V	25V	35V								
tanδ (Max.)	0.22	0.19	0.16	0.14	0.12								
Low Temperature Characteristics (Max. Impedance Ratio)	<table border="1"> <tr> <td>Z (-25°C) / Z (+20°C)</td> <td>2max.</td> </tr> <tr> <td>Z (-40°C) / Z (+20°C)</td> <td>3max.</td> </tr> </table> <p>(at 120Hz)</p>	Z (-25°C) / Z (+20°C)	2max.	Z (-40°C) / Z (+20°C)	3max.								
Z (-25°C) / Z (+20°C)	2max.												
Z (-40°C) / Z (+20°C)	3max.												
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 & φ6.3 : 5000hours</td> <td>φ8 to φ16 : 6000hours</td> </tr> <tr> <td>Capacitance change</td> <td colspan="2">≤±25% of the initial value (6.3, 10V : ≤±30%)</td> </tr> <tr> <td>D.F. (tanδ)</td> <td colspan="2">≤200% of the initial specified value</td> </tr> <tr> <td>Leakage current</td> <td colspan="2">≤The initial specified value</td> </tr> </table>	Time	φ5 & φ6.3 : 5000hours	φ8 to φ16 : 6000hours	Capacitance change	≤±25% of the initial value (6.3, 10V : ≤±30%)		D.F. (tanδ)	≤200% of the initial specified value		Leakage current	≤The initial specified value	
Time	φ5 & φ6.3 : 5000hours	φ8 to φ16 : 6000hours											
Capacitance change	≤±25% of the initial value (6.3, 10V : ≤±30%)												
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 500 hours at 105°C without voltage applied.</p> <table border="1"> <tr> <td>Capacitance change</td> <td>≤±25% of the initial value (6.3, 10V : ≤±30%)</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	≤±25% of the initial value (6.3, 10V : ≤±30%)	D.F. (tanδ)	≤200% of the initial specified value	Leakage current	≤The initial specified value						
Capacitance change	≤±25% of the initial value (6.3, 10V : ≤±30%)												
D.F. (tanδ)	≤200% of the initial specified value												
Leakage current	≤The initial specified value												

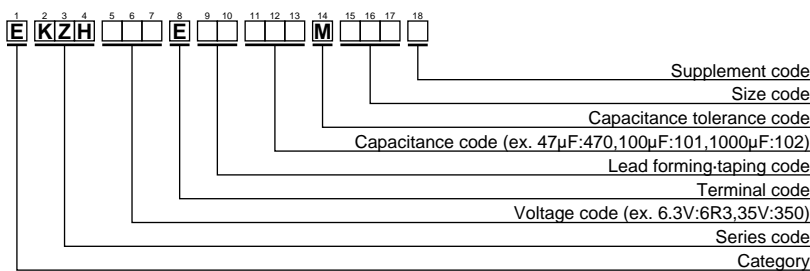
◆DIMENSIONS [mm]

- Terminal Code : E



φD	5	6.3	8	10	12.5	16
φd	0.5	0.5	0.6	0.6	0.6	0.8
F	2.0	2.5	3.5	5.0	5.0	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 (mA _{rms} /105°C, 100kHz)	Part No.	WV (Vdc)	Cap (μF)	Case size φD×L(mm)	Impedance (Ωmax/100kHz)		Rated ripple current (mA _{rms} /105°C, 100kHz)	Part No.
			20°C	-10°C						20°C	-10°C		
6.3	220	5 × 11	0.24	0.80	330	EKZH6R3E□□221ME11D	16	1800	10 × 25	0.018	0.054	2250	EKZH160E□□182MJ25S
	470	6.3 × 11	0.11	0.35	500	EKZH6R3E□□471MF11D		2200	12.5 × 20	0.017	0.043	2480	EKZH160E□□222MK20S
	820	8 × 11.5	0.062	0.19	900	EKZH6R3E□□821MHB5D		2700	12.5 × 25	0.015	0.038	2900	EKZH160E□□272MK25S
	1200	8 × 15	0.048	0.15	1210	EKZH6R3E□□122MH15D		3300	12.5 × 30	0.013	0.033	3450	EKZH160E□□332MK30S
	1200	10 × 12.5	0.045	0.14	1240	EKZH6R3E□□122MJC5S		3300	16 × 20	0.015	0.038	3250	EKZH160E□□332ML20S
	1500	8 × 20	0.033	0.11	1410	EKZH6R3E□□152MH20D		3900	12.5 × 35	0.012	0.031	3570	EKZH160E□□392MK35S
	1800	10 × 16	0.032	0.10	1650	EKZH6R3E□□182MJ16S		4700	16 × 25	0.013	0.035	3630	EKZH160E□□472ML25S
	2200	10 × 20	0.020	0.060	1960	EKZH6R3E□□222MJ20S		25	68	5 × 11	0.24	0.80	330
	2700	10 × 25	0.018	0.054	2250	EKZH6R3E□□272MJ25S	150		6.3 × 11	0.11	0.35	500	EKZH250E□□151MF11D
	3900	12.5 × 20	0.017	0.043	2480	EKZH6R3E□□392MK20S	330		8 × 11.5	0.062	0.19	900	EKZH250E□□331MHB5D
	4700	12.5 × 25	0.015	0.038	2900	EKZH6R3E□□472MK25S	390		8 × 15	0.048	0.15	1210	EKZH250E□□391MH15D
	5600	12.5 × 30	0.013	0.033	3450	EKZH6R3E□□562MK30S	470		10 × 12.5	0.045	0.14	1240	EKZH250E□□471MJC5S
	6800	12.5 × 35	0.012	0.031	3570	EKZH6R3E□□682MK35S	560		8 × 20	0.033	0.11	1410	EKZH250E□□561MH20D
	6800	16 × 20	0.015	0.038	3250	EKZH6R3E□□682ML20S	680		10 × 16	0.032	0.10	1650	EKZH250E□□681MJ16S
	8200	16 × 25	0.013	0.035	3630	EKZH6R3E□□822ML25S	820		10 × 20	0.020	0.060	1960	EKZH250E□□821MJ20S
	10	150	5 × 11	0.24	0.80	330	EKZH100E□□151ME11D	1000	10 × 25	0.018	0.054	2250	EKZH250E□□102MJ25S
330		6.3 × 11	0.11	0.35	500	EKZH100E□□331MF11D	1500	12.5 × 20	0.017	0.043	2480	EKZH250E□□152MK20S	
680		8 × 11.5	0.062	0.19	900	EKZH100E□□681MHB5D	1800	12.5 × 25	0.015	0.038	2900	EKZH250E□□182MK25S	
1000		8 × 15	0.048	0.15	1210	EKZH100E□□102MH15D	2200	12.5 × 30	0.013	0.033	3450	EKZH250E□□222MK30S	
1000		10 × 12.5	0.045	0.14	1240	EKZH100E□□102MJC5S	2200	16 × 20	0.015	0.038	3250	EKZH250E□□222ML20S	
1500		8 × 20	0.033	0.11	1410	EKZH100E□□152MH20D	2700	12.5 × 35	0.012	0.031	3570	EKZH250E□□272MK35S	
1500		10 × 16	0.032	0.10	1650	EKZH100E□□152MJ16S	3300	16 × 25	0.013	0.035	3630	EKZH250E□□332ML25S	
1800		10 × 20	0.020	0.060	1960	EKZH100E□□182MJ20S	35	47	5 × 11	0.24	0.80	330	EKZH350E□□470ME11D
2200		10 × 25	0.018	0.054	2250	EKZH100E□□222MJ25S		100	6.3 × 11	0.11	0.35	500	EKZH350E□□101MF11D
3300		12.5 × 20	0.017	0.043	2480	EKZH100E□□332MK20S		220	8 × 11.5	0.062	0.19	900	EKZH350E□□221MHB5D
3900		12.5 × 25	0.015	0.038	2900	EKZH100E□□392MK25S		270	8 × 15	0.048	0.15	1210	EKZH350E□□271MH15D
4700		12.5 × 30	0.013	0.033	3450	EKZH100E□□472MK30S		330	10 × 12.5	0.045	0.14	1240	EKZH350E□□331MJC5S
4700		16 × 20	0.015	0.038	3250	EKZH100E□□472ML20S		390	8 × 20	0.033	0.11	1410	EKZH350E□□391MH20D
5600		12.5 × 35	0.012	0.031	3570	EKZH100E□□562MK35S		470	10 × 16	0.032	0.10	1650	EKZH350E□□471MJ16S
6800		16 × 25	0.013	0.035	3630	EKZH100E□□682ML25S		560	10 × 20	0.020	0.060	1960	EKZH350E□□561MJ20S
16		100	5 × 11	0.24	0.80	330	EKZH160E□□101ME11D	680	10 × 25	0.018	0.054	2250	EKZH350E□□681MJ25S
	220	6.3 × 11	0.11	0.35	500	EKZH160E□□221MF11D	1000	12.5 × 20	0.017	0.043	2480	EKZH350E□□102MK20S	
	470	8 × 11.5	0.062	0.19	900	EKZH160E□□471MHB5D	1200	12.5 × 25	0.015	0.038	2900	EKZH350E□□122MK25S	
	680	8 × 15	0.048	0.15	1210	EKZH160E□□681MH15D	1500	12.5 × 30	0.013	0.033	3450	EKZH350E□□152MK30S	
	680	10 × 12.5	0.045	0.14	1240	EKZH160E□□681MJC5S	1500	16 × 20	0.015	0.038	3250	EKZH350E□□152ML20S	
	1000	8 × 20	0.033	0.11	1410	EKZH160E□□102MH20D	1800	12.5 × 35	0.012	0.031	3570	EKZH350E□□182MK35S	
	1000	10 × 16	0.032	0.10	1650	EKZH160E□□102MJ16S	2200	16 × 25	0.013	0.035	3630	EKZH350E□□222ML25S	
	1500	10 × 20	0.020	0.060	1960	EKZH160E□□152MJ20S							

□ □ : Lead forming / Taping code

◆RATED RIPPLE CURRENT MULTIPLIERS

●Frequency Multipliers

Capacitance(μF)	Frequency (Hz)			
	120	1k	10k	100k
0.47 to 150	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 8,200	0.85	0.95	0.98	1.00