

Upgrade!

KZE Series

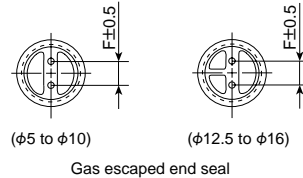
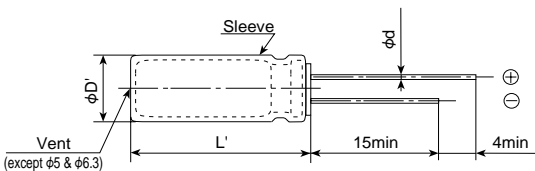
- Ultra Low impedance for Personal Computer and Storage Equipment
- Rated voltage 63 to 100V newly added **Upgrade!**
- Endurance with ripple current: 105°C 2000 to 5000 hours
- Non solvent-proof type



◆ SPECIFICATIONS

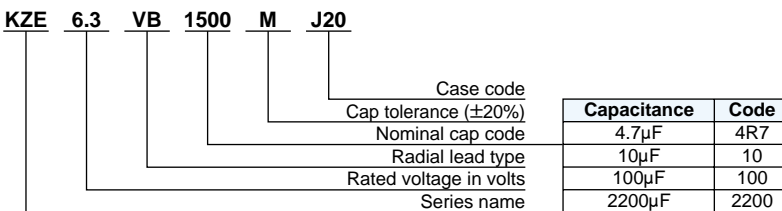
Items	Characteristics																				
Category Temperature Range	-40 to +105°C																				
Rated Voltage Range	6.3 to 100V _{dc}																				
Capacitance Tolerance	±20% (M) (at 20°C, 120Hz)																				
Leakage Current	I=0.01CV or 3μA, whichever is greater. Where, I : Max. leakage 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> <td>50V</td> <td>63V</td> <td>80V</td> <td>100V</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>0.09</td> <td>0.09</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 _{dc})	6.3V	10V	16V	25V	35V	50V	63V	80V	100V	tanδ (Max.)	0.22	0.19	0.16	0.14	0.12	0.10	0.09	0.09	0.08
Rated voltage (V _{dc})	6.3V	10V	16V	25V	35V	50V	63V	80V	100V												
tanδ (Max.)	0.22	0.19	0.16	0.14	0.12	0.10	0.09	0.09	0.08												
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 : 2000hours</td> <td>φ8 : 3000hours</td> <td>φ10 : 4000hours</td> <td>φ12.5 & φ16 : 5000hours</td> </tr> <tr> <td>Capacitance change</td> <td colspan="4">≤±25% of the initial value</td> </tr> <tr> <td>D.F. (tanδ)</td> <td colspan="4">≤200% of the initial specified value</td> </tr> <tr> <td>Leakage current</td> <td colspan="4">≤The initial specified value</td> </tr> </table>	Time	φ5 & φ6.3 : 2000hours	φ8 : 3000hours	φ10 : 4000hours	φ12.5 & φ16 : 5000hours	Capacitance change	≤±25% of the initial value				D.F. (tanδ)	≤200% of the initial specified value				Leakage current	≤The initial specified value			
Time	φ5 & φ6.3 : 2000hours	φ8 : 3000hours	φ10 : 4000hours	φ12.5 & φ16 : 5000hours																	
Capacitance change	≤±25% 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 500 hours at 105°C without voltage applied.</p> <table border="1"> <tr> <td>Capacitance change</td> <td>≤±25% 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	≤±25% of the initial value	D.F. (tanδ)	≤200% of the initial specified value	Leakage current	≤The initial specified value														
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◆ DIMENSIONS (Radial Lead Type=VB) [mm]



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



◆ RATED RIPPLE CURRENT MULTIPLIERS

- Frequency Multipliers

Capacitance(μF)	Frequency (Hz)			
	120	1k	10k	100k
6.8 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	0.85	0.95	0.98	1.00

Upgrade!

KZE Series

◆STANDARD RATINGS

Case size φD×L (mm)	V _{dc} Case code	6.3				10				16			
		Capacitance (μF)	Impedance (Ω _{max} /100kHz)		Rated ripple current (mA _{rms} /105°C 100kHz)	Capacitance (μF)	Impedance (Ω _{max} /100kHz)		Rated ripple current (mA _{rms} /105°C 100kHz)	Capacitance (μF)	Impedance (Ω _{max} /100kHz)		Rated ripple current (mA _{rms} /105°C 100kHz)
			20°C	-10°C			20°C	-10°C			20°C	-10°C	
5X11	E11	150	0.30	1.0	250	100	0.30	1.0	250	56	0.30	1.0	250
6.3X11	F11	330	0.13	0.41	405	220	0.13	0.41	405	120	0.13	0.41	405
8X11.5	H11	560	0.072	0.22	760	470	0.072	0.22	760	330	0.072	0.22	760
8X15	H15	820	0.056	0.17	995	680	0.056	0.17	995	470	0.056	0.17	995
8X20	H20	1,200	0.041	0.13	1,250	1,000	0.041	0.13	1,250	680	0.041	0.13	1,250
10X12.5	J12	1,000	0.053	0.16	1,030	680	0.053	0.16	1,030	470	0.053	0.16	1,030
10X16	J16	1,200	0.038	0.12	1,430	1,000	0.038	0.12	1,430	680	0.038	0.12	1,430
10X20	J20	1,500	0.023	0.069	1,820	1,200	0.023	0.069	1,820	1,000	0.023	0.069	1,820
10X25	J25	2,200	0.022	0.066	2,150	1,500	0.022	0.066	2,150	1,200	0.022	0.066	2,150
12.5X20	K20	3,300	0.021	0.053	2,360	2,200	0.021	0.053	2,360	1,500	0.021	0.053	2,360
12.5X25	K25	3,900	0.018	0.045	2,770	3,300	0.018	0.045	2,770	2,200	0.018	0.045	2,770
12.5X30	K30	4,700	0.016	0.041	3,290	3,900	0.016	0.041	3,290	2,700	0.016	0.041	3,290
12.5X35	K35	5,600	0.015	0.039	3,400	4,700	0.015	0.039	3,400	3,300	0.015	0.039	3,400
16X20	L20	5,600	0.018	0.045	3,140	3,900	0.018	0.045	3,140	2,700	0.018	0.045	3,140
16X25	L25	6,800	0.016	0.043	3,460	5,600	0.016	0.043	3,460	3,900	0.016	0.043	3,460

Case size φD×L (mm)	V _{dc} Case code	25				35				50			
		Capacitance (μF)	Impedance (Ω _{max} /100kHz)		Rated ripple current (mA _{rms} /105°C 100kHz)	Capacitance (μF)	Impedance (Ω _{max} /100kHz)		Rated ripple current (mA _{rms} /105°C 100kHz)	Capacitance (μF)	Impedance (Ω _{max} /100kHz)		Rated ripple current (mA _{rms} /105°C 100kHz)
			20°C	-10°C			20°C	-10°C			20°C	-10°C	
5X11	E11	47	0.30	1.0	250	33	0.30	1.0	250	22	0.34	1.18	238
6.3X11	F11	100	0.13	0.41	405	56	0.13	0.41	405	56	0.14	0.50	385
8X11.5	H11	220	0.072	0.22	760	150	0.072	0.22	760	100	0.074	0.22	724
8X15	H15	330	0.056	0.17	995	220	0.056	0.17	995	120	0.061	0.18	950
8X20	H20	470	0.041	0.13	1,250	270	0.041	0.13	1,250	180	0.046	0.14	1,190
10X12.5	J12	330	0.053	0.16	1,030	220	0.053	0.16	1,030	150	0.061	0.18	979
10X16	J16	470	0.038	0.12	1,430	330	0.038	0.12	1,430	220	0.042	0.12	1,370
10X20	J20	680	0.023	0.069	1,820	470	0.023	0.069	1,820	270	0.030	0.090	1,580
10X25	J25	820	0.022	0.066	2,150	560	0.022	0.066	2,150	330	0.028	0.085	1,870
12.5X20	K20	1,000	0.021	0.053	2,360	680	0.021	0.053	2,360	470	0.027	0.068	2,050
12.5X25	K25	1,500	0.018	0.045	2,770	1,000	0.018	0.045	2,770	560	0.023	0.059	2,410
12.5X30	K30	1,800	0.016	0.041	3,290	1,200	0.016	0.041	3,290	680	0.021	0.052	2,860
12.5X35	K35	2,200	0.015	0.039	3,400	1,500	0.015	0.039	3,400	820	0.019	0.051	2,960
16X20	L20	1,800	0.018	0.045	3,140	1,200	0.018	0.045	3,140	820	0.023	0.059	2,730
16X25	L25	2,700	0.016	0.043	3,460	1,800	0.016	0.043	3,460	1,000	0.021	0.056	3,010

Case size φD×L (mm)	V _{dc} Case code	63				80				100			
		Capacitance (μF)	Impedance (Ω _{max} /100kHz)		Rated ripple current (mA _{rms} /105°C 100kHz)	Capacitance (μF)	Impedance (Ω _{max} /100kHz)		Rated ripple current (mA _{rms} /105°C 100kHz)	Capacitance (μF)	Impedance (Ω _{max} /100kHz)		Rated ripple current (mA _{rms} /105°C 100kHz)
			20°C	-10°C			20°C	-10°C			20°C	-10°C	
5X11	E11	15	0.88	3.5	165					6.8	1.4	5.6	125
6.3X11	F11	33	0.35	1.4	265					15	0.57	2.3	205
8X11.5	H11	56	0.22	0.88	500					27	0.36	1.4	355
8X15	H15	82	0.16	0.64	665					39	0.25	1.0	450
8X20	H20	120	0.12	0.48	820					56	0.19	0.76	565
10X12.5	J12	82	0.11	0.44	690	68	0.17	0.66	480	47	0.17	0.66	480
10X16	J16	120	0.076	0.31	950	100	0.11	0.47	600	68	0.11	0.47	600
10X20	J20	180	0.056	0.23	1,150	120	0.084	0.34	800	82	0.084	0.34	800
10X25	J25	220	0.046	0.19	1,350	150	0.069	0.28	900	120	0.069	0.28	900
12.5X16	K16	180	0.072	0.29	1,150	150	0.11	0.34	750	100	0.11	0.34	750
12.5X20	K20	270	0.041	0.13	1,500	220	0.062	0.18	1,100	150	0.062	0.18	1,100
12.5X25	K25	390	0.031	0.093	1,900	330	0.047	0.14	1,250	220	0.047	0.14	1,250
12.5X30	K30	470	0.028	0.084	2,300	390	0.042	0.13	1,500	270	0.042	0.13	1,500
12.5X35	K35	560	0.024	0.072	2,500	470	0.036	0.11	1,650	330	0.036	0.11	1,650
12.5X40	K40	680	0.021	0.063	2,800	560	0.032	0.095	1,800	390	0.032	0.095	1,800
16X20	L20	470	0.032	0.096	2,000	330	0.048	0.15	1,350	220	0.048	0.15	1,350
16X25	L25	680	0.025	0.075	2,600	470	0.038	0.12	1,700	330	0.038	0.12	1,700
16X31.5	L31	820	0.021	0.063	2,850	680	0.032	0.095	1,850	470	0.032	0.095	1,850
16X35.5	L35	1,000	0.019	0.057	2,900	820	0.029	0.086	2,000	560	0.029	0.086	2,000
16X40	L40	1,200	0.018	0.054	3,400	1,000	0.027	0.081	2,200	680	0.027	0.081	2,200
18X20	M20	680	0.030	0.090	2,500	470	0.045	0.14	1,500	330	0.045	0.14	1,500
18X25	M25	820	0.024	0.072	2,800	680	0.036	0.11	1,750	470	0.036	0.11	1,750
18X31.5	M31	1,200	0.020	0.060	3,300	820	0.030	0.090	1,900	560	0.030	0.090	1,900
18X35.5	M35	1,500	0.018	0.054	3,400	1,000	0.027	0.081	2,200	680	0.027	0.081	2,200
18X40	M40	1,800	0.017	0.051	3,500	1,200	0.026	0.077	2,700	820	0.026	0.077	2,700