KOME

KLZ Series

Radial Aluminium Electrolytic Capacitors



Features

- 2000 ~ 5000 hours at 105°C
- Lowest impedance
- High ripple current
- For switching power supplies

TEMPERATURE RANGE	RATED VOLTAGE	CAPACITANCE	ENDURANCE
–40°C … +105°C	**6.3 – 100 V**	**6.8 – 6800 μF**	**105°C 2000 – 5000 h**

Endurance: 2000 h for ΦD ≤ 6.3; 3000 h for ΦD = 8; 4000 h for ΦD = 10; 5000 h for ΦD > 10.

Specifications

Operating temperature range	–40 ~ +105°C
Rated voltage range	6.3 ~ 100 V
Capacitance range	6.8 ~ 6800 μF
Capacitance tolerance	±20% (20°C, 120 Hz)
Leakage current	After 2 minutes' application of rated voltage at 20°C, not more than 0.01CV or 3 μA, whichever is greater C: nominal capacitance (μF), V: rated voltage (V)
Load life	The following specifications shall be satisfied when the capacitors are restored to 20°C after DC voltage with the rated ripple current has been applied for 2000 ~ 5000 hours at 105°C.

Capacitance change	Within ±20% of the initial value
D.F. (tan δ)	Not more than 200% of the specified value
Leakage current	Not more than the specified value
Life by case diameter	ΦD ≤ 6.3: 2000 hours ΦD = 8: 3000 hours ΦD = 10: 4000 hours ΦD > 10: 5000 hours

Shelf life	The following specifications shall be satisfied when the capacitors are restored to 20°C after exposure for 1,000 hours at 105°C without voltage applied. Before the measurement, the capacitors shall be preconditioned by applying voltage according to Item 4.1 of JIS C 5101-4.

Capacitance change	Within ±20% of the initial value
D.F. (tan δ)	Not more than 200% of the specified value
Leakage current	Not more than the specified value

Low-temperature characteristics

Rated voltage (V)	6.3 ~ 100
Z(–25°C)/Z(+20°C)	2
Z(–40°C)/Z(+20°C)	3

Impedance ratio at 120 Hz.

Ripple current frequency correction factor

Frequency	120 Hz	1 kHz	10 kHz	100 kHz
6.8 ~ 33 μF	0.42	0.70	0.90	1.00
39 ~ 270 μF	0.50	0.73	0.92	1.00
330 ~ 680 μF	0.55	0.88	0.98	1.00
820 ~ 1800 μF	0.66	0.90	0.99	1.00
2200 ~ 6800 μF	0.70	0.92	1.00	1.00

Dissipation factor (tan δ) at 20°C, 120 Hz

Rated voltage (V)	6.3	10	16	25	35	50	63	100
tan δ (max.)	0.22	0.19	0.16	0.14	0.12	0.10	0.09	0.08

For capacitances above 1000 μF, add 0.02 for every additional 1000 μF.

Ripple current temperature coefficient

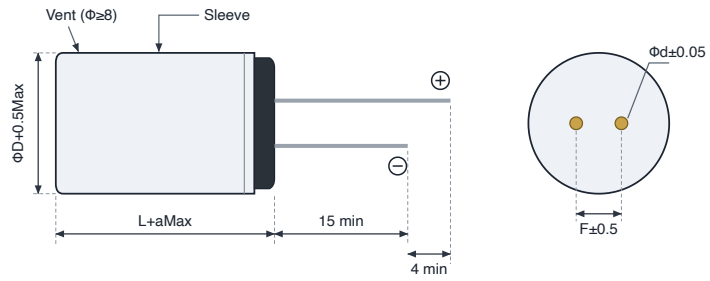
Ambient temperature (°C)	≤65	+85	+105
Coefficient	2.0	1.7	1.0

Standard ratings

μF \ V	6.3	10	16	25	35	50	63	100
6.8								5×11
15							5×11	6.3×12
22						5×11		
27								8×12
33					5×11		6.3×12	
39								8×16
47				5×11				10×12.5
56			5×11		6.3×12	6.3×12	8×12	8×20
68								10×16
82							8×16 10×12.5	10×20 13×16
100		5×11		6.3×12		8×12		10×25
120			6.3×12			8×16	8×20 10×16	13×20
150	5×11				8×12	10×12.5		
180						8×20	10×20 13×16	13×25
220		6.3×12		8×12	8×16 10×12.5	10×16	10×25	13×30 16×20
270					8×20	10×20	13×20	13×35 16×25 18×20
330	6.3×12		8×12	8×16 10×12.5	10×16	10×25	13×25	13×40
390								16×31.5 18×25
470		8×12	8×16 10×12.5	8×20 10×16	10×20	13×20	13×30 16×20	16×35.5 18×31.5
560	8×12				10×25	13×25	13×35 16×25	16×40 18×35.5
680		8×16 10×12.5	8×20 10×16	10×20	13×20	13×30	13×40 18×20	18×40
820	8×16			10×25		13×30 16×20	16×31.5 18×25	
1000	10×12.5	8×20 10×16	10×20	13×20	13×25	16×25	16×35.5 18×31.5	
1200	8×20 10×16	10×20	10×25		13×30 16×20		16×40 18×35.5	
1500	10×20	10×25	13×20	13×25	13×35		18×40	
1800				13×30 16×20	16×25			
2200	10×25	13×20	13×25	13×35				
2700			13×30 16×20	16×25				
3300	13×20	13×25	13×35					
3900	13×25	13×30 16×20	16×25					
4700	13×30	13×35						
5600	13×35 16×20	16×25						
6800	16×25							

Case size ΦD × L (mm). Full ratings in the characteristics list.

Dimensions



ΦD	5	6.3	8	10	13	16	18
F	2.0	2.5	3.5	5.0	5.0	7.5	7.5
Φd	0.5	0.5	0.5	0.6	0.6	0.8	0.8
a	1.5	1.5	1.5	1.5	1.5	2.0	2.0

Unit: mm

How to order

KLZ	4	102	M	100	B	10X16
Series code	Number of characters for capacitance 47μF = 2, 470μF = 3, 4700μF = 4	Capacitance 47μF = 470, 3300μF = 332, 33000μF = 333	Capacitance tolerance M = ±20%, K = ±10%	Voltage code 6.3V = 060, 10V = 100, 63V = 630, 100V = 101	Package B: bulk pack, A: ammo pack	Size code

Example: KLZ4102M100B10X16

Characteristics list

UR (V)	Rated Capacitance (μF)	Max ESR 20°C 100kHz (Ω)	Rated Ripple Current 105°C 100kHz (mA rms)	Size ΦD×L (mm)	Surge Voltage (V)
6.3	150	0.30	250	5×11	8
6.3	330	0.13	405	6.3×12	8
6.3	560	0.072	760	8×12	8
6.3	820	0.056	995	8×16	8
6.3	1000	0.053	1030	10×12.5	8
6.3	1200	0.041	1250	8×20	8
6.3	1200	0.038	1430	10×16	8
6.3	1500	0.023	1820	10×20	8
6.3	2200	0.022	2150	10×25	8
6.3	3300	0.021	2360	13×20	8
6.3	3900	0.018	2770	13×25	8
6.3	4700	0.016	3290	13×30	8
6.3	5600	0.015	3400	13×35	8
6.3	5600	0.018	3140	16×20	8
6.3	6800	0.016	3460	16×25	8
10	100	0.30	250	5×11	13
10	220	0.13	405	6.3×12	13
10	470	0.072	760	8×12	13
10	680	0.056	995	8×16	13
10	680	0.053	1030	10×12.5	13
10	1000	0.041	1250	8×20	13
10	1000	0.038	1430	10×16	13
10	1200	0.023	1820	10×20	13
10	1500	0.022	2150	10×25	13
10	2200	0.021	2360	13×20	13
10	3300	0.018	2770	13×25	13
10	3900	0.016	3290	13×30	13
10	3900	0.018	3140	16×20	13
10	4700	0.015	3400	13×35	13
10	5600	0.016	3460	16×25	13
16	56	0.30	250	5×11	20
16	120	0.13	405	6.3×12	20
16	330	0.072	760	8×12	20
16	470	0.056	995	8×16	20
16	470	0.053	1030	10×12.5	20
16	680	0.041	1250	8×20	20
16	680	0.038	1430	10×16	20
16	1000	0.023	1820	10×20	20
16	1200	0.022	2150	10×25	20
16	1500	0.021	2360	13×20	20
16	2200	0.018	2770	13×25	20
16	2700	0.016	3290	13×30	20
16	2700	0.018	3140	16×20	20
16	3300	0.015	3400	13×35	20

UR (V)	Rated Capacitance (μF)	Max ESR 20°C 100kHz (Ω)	Rated Ripple Current 105°C 100kHz (mA rms)	Size ΦD×L (mm)	Surge Voltage (V)
16	3900	0.016	3460	16×25	20
25	47	0.30	250	5×11	32
25	100	0.13	405	6.3×12	32
25	220	0.072	760	8×12	32
25	330	0.056	995	8×16	32
25	330	0.053	1030	10×12.5	32
25	470	0.041	1250	8×20	32
25	470	0.038	1430	10×16	32
25	680	0.023	1820	10×20	32
25	820	0.022	2150	10×25	32
25	1000	0.021	2360	13×20	32
25	1500	0.018	2770	13×25	32
25	1800	0.016	3290	13×30	32
25	1800	0.018	3140	16×20	32
25	2200	0.015	3400	13×35	32
25	2700	0.016	3460	16×25	32
35	33	0.30	250	5×11	44
35	56	0.13	405	6.3×12	44
35	150	0.072	760	8×12	44
35	220	0.056	995	8×16	44
35	220	0.053	1030	10×12.5	44
35	270	0.041	1250	8×20	44
35	330	0.038	1430	10×16	44
35	470	0.023	1820	10×20	44
35	560	0.022	2150	10×25	44
35	680	0.021	2360	13×20	44
35	1000	0.018	2770	13×25	44
35	1200	0.016	3290	13×30	44
35	1200	0.018	3140	16×20	44
35	1500	0.015	3400	13×35	44
35	1800	0.016	3460	16×25	44
50	22	0.34	238	5×11	63
50	56	0.14	385	6.3×12	63
50	100	0.074	724	8×12	63
50	120	0.061	950	8×16	63
50	150	0.061	979	10×12.5	63
50	180	0.046	1190	8×20	63
50	220	0.042	1370	10×16	63
50	270	0.030	1580	10×20	63
50	330	0.028	1870	10×25	63
50	470	0.027	2050	13×20	63
50	560	0.023	2410	13×25	63
50	680	0.021	2860	13×30	63
50	820	0.019	2960	13×30	63
50	820	0.023	2730	16×20	63
50	1000	0.021	3010	16×25	63
63	15	0.88	165	5×11	79
63	33	0.35	265	6.3×12	79
63	56	0.22	500	8×12	79
63	82	0.16	665	8×16	79
63	82	0.15	685	10×12.5	79
63	120	0.12	820	8×20	79
63	120	0.11	945	10×16	79
63	180	0.080	1100	10×20	79
63	180	0.082	1135	13×16	79
63	220	0.073	1300	10×25	79
63	270	0.060	1495	13×20	79
63	330	0.043	1850	13×25	79
63	470	0.039	2250	13×30	79
63	470	0.045	1990	16×20	79
63	560	0.033	2450	13×35	79
63	560	0.032	2550	16×25	79
63	680	0.029	2780	13×40	79
63	680	0.038	2450	18×20	79
63	820	0.026	2810	16×31.5	79
63	820	0.031	2780	18×25	79
63	1000	0.021	2835	16×35.5	79
63	1000	0.025	3270	18×31.5	79
63	1200	0.019	3340	16×40	79

UR (V)	Rated Capacitance (μF)	Max ESR 20°C 100kHz (Ω)	Rated Ripple Current 105°C 100kHz (mA rms)	Size ΦD×L (mm)	Surge Voltage (V)
63	1200	0.020	3310	18×35.5	79
63	1500	0.018	3420	18×40	79
100	6.8	1.40	125	5×11	125
100	15	0.57	205	6.3×12	125
100	27	0.36	355	8×12	125
100	39	0.25	450	8×16	125
100	47	0.24	450	10×12.5	125
100	56	0.19	565	8×20	125
100	68	0.18	580	10×16	125
100	82	0.13	750	10×20	125
100	82	0.13	735	13×16	125
100	100	0.12	880	10×25	125
100	120	0.094	1045	13×20	125
100	180	0.071	1195	13×25	125
100	220	0.063	1410	13×30	125
100	220	0.071	1295	16×20	125
100	270	0.052	1560	13×35	125
100	270	0.053	1600	16×25	125
100	270	0.069	1470	18×20	125
100	330	0.046	1700	13×40	125
100	390	0.041	1750	16×31.5	125
100	390	0.049	1620	18×25	125
100	470	0.033	1890	16×35.5	125
100	470	0.039	1775	18×31.5	125
100	560	0.030	2080	16×40	125
100	560	0.031	2060	18×35.5	125
100	680	0.028	2570	18×40	125

Custom products are available on request.