KOME

KSM Series

Snap-in Aluminium Electrolytic Capacitors



Features

- 2000 hours at 85°C
- Standard 85°C series

TEMPERATURE RANGE	RATED VOLTAGE	CAPACITANCE	ENDURANCE
–40 / –25°C … +85°C	10 – 500 V	68 – 82000 μF	85°C 2000 h

Specifications

Operating temperature range	10 ~ 400 V: –40 ~ +85°C 450 ~ 500 V: –25 ~ +85°C
Rated voltage range	10 ~ 400 V, 450 ~ 500 V
Capacitance range	68 ~ 82000 μF
Capacitance tolerance	±20% (at 20°C, 120 Hz)
Leakage current	After 5 minutes at 20°C application of rated voltage, leakage current is not more than 0.01CV or 1.5 mA, whichever is smaller. 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 subjected to DC voltage with the rated ripple current is applied for 2000 hours at 85°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
Shelf life	The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1,000 hours at 85°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: within ±20% of the initial value
	D.F. (tan δ): not more than 200% of the specified value
	Leakage current: not more than 200% of the specified value

Low-temperature characteristics

Rated voltage (V)	6.3~16	25	35	50~63	80~100	160~400	420~500	550~600
Z(–25°C)/Z(+20°C)	4	3	3	2	2	4	8	8
Z(–40°C)/Z(+20°C)	15	10	8	6	5	12	—	—

Impedance ratio at 120 Hz.

Ripple current frequency correction factor

Frequency	50 / 60 Hz	120 Hz	1 kHz	10 kHz	100 kHz
≤ 50 V	0.95	1.00	1.10	1.15	1.15
63 ~ 100 V	0.95	1.00	1.16	1.30	1.33
≥ 160 V	0.95	1.00	1.20	1.50	1.55

Dissipation factor (tan δ), 10 ~ 100 V

Rated voltage (V)	10 ~ 16	25	35 ~ 50	63	80 ~ 100
≤ 2700 μF	—	—	0.2	0.15	0.15
3300 ~ 4700 μF	—	0.35	0.25	0.2	0.15
5600 ~ 6800 μF	0.4	0.35	0.3	0.2	0.2
≥ 8200 μF	0.4	0.35	0.35	0.25	—

Dissipation factor (tan δ), 160 ~ 500 V

Rated voltage (V)	160 ~ 200	250 ~ 500
Φ 22 ~ 30 mm	0.1	0.15
Φ 35 mm	0.12	0.15

At 20°C, 120 Hz. 10 ~ 100 V by rated capacitance, 160 ~ 500 V by case diameter ΦD.

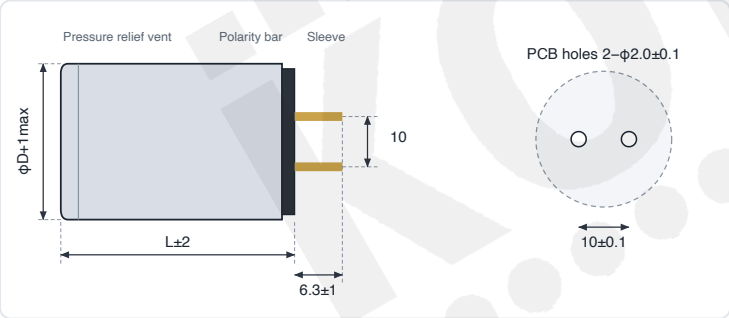
Standard ratings

μF \ V	10	16	25	35	50	63	80	100	160	200	250	315	350	400	450	500
68														22×25	22×30	
82													22×25	22×25	25×25	
100											22×25	22×25	22×25	22×30 25×25	22×35 25×30	30×25
120													22×30 25×25	22×35	22×40 25×35	30×30 35×25
150												22×30 25×25	22×35 25×30	22×40 25×30 30×25	25×40 30×30 35×25	30×35
180											22×25	22×35 25×30	22×40 30×25	22×45 25×35 30×30 35×25	25×45 30×35 35×25	30×40 35×30
220									22×25	22×25	22×30 25×25	22×40 25×35 30×25	22×45 25×35 30×30 35×25	22×50 25×40 30×35	25×50 30×40 35×30	30×45 35×35
270									22×25	22×30	22×35	22×45 25×40 30×30 35×25	25×45 30×35	25×45 25×50 30×40	30×45 35×35	30×50 35×40
330									22×25	22×30 25×25	22×40 25×30 30×25	25×45 30×35	25×50 35×30	30×45 35×30	30×50	35×45
390									22×30 25×25	22×35 25×30	22×45 25×35	25×50 30×40 35×30	30×40 35×35	30×50 35×35	35×45	35×50
470									25×30	22×40 30×25	22×50 25×40 30×30 35×25	30×45 35×35	30×45 35×40	35×45	35×50	
560									22×35 25×30 30×25	22×45 25×35 30×30 35×25	25×45 30×35	30×50 35×40	35×45	35×50		
680								22×25	22×40 25×35	25×40 30×35	30×40 35×30	35×45	35×50			
820								22×30	22×50 25×40 30×30 35×25	25×50 30×40 35×30	30×45 35×35		35×60			
1000							22×25	25×25	25×45 30×35 35×30	30×45 35×35	35×40			35×70		
1200							22×30	22×35 25×30	25×50 30×40 35×35	30×50 35×40	35×45					
1500						22×25	25×25	22×40 25×35 30×25	30×45 35×40	35×50						
1800						22×30	22×35 25×30	22×50 25×40 30×30 35×25	35×45							
2200					22×25	22×30 25×25	22×40 25×35 30×25	25×45 30×35 35×30	35×50							
2700					22×30 25×25	22×35 25×30	22×50 25×40 30×30 35×25	25×50 30×40								
3300				22×25	22×35	22×40 25×35 30×25	25×45 30×35	30×45 35×35								
3900				22×30	22×35 25×30 30×25	22×45 25×40 30×30 35×25	25×50 30×40 35×30	30×50 35×40								
4700				25×25	22×40 25×35		30×45 35×35	35×50								
5600			22×25	22×35 25×30	22×50 25×40 30×30 35×25	25×45 30×35 35×30	30×50 35×40									
6800			22×30 25×25	22×40 25×35 30×25	25×45 30×35	30×40 35×35	35×50									

μF \ V	10	16	25	35	50	63	80	100	160	200	250	315	350	400	450	500
8200		22×25	22×35	22×50 25×40 30×30 35×25	25×50 30×40 35×30	30×50 35×40										
10000	22×25	22×30 25×25	22×40 25×30 30×25	25×45 30×35	30×45 35×35	35×45										
12000	22×25	22×35	22×45 25×35 30×30	25×50 30×40 35×30	30×50 35×40	35×50										
15000	22×30 25×25	22×40 25×30 30×25	25×40 35×25	30×45 35×35	35×50											
18000	22×35 25×30	22×45 25×35	25×50 30×35 35×30	30×50 35×40												
22000	22×40 25×35 30×25	22×50 25×40 30×30 35×25	30×40 35×35	35×45												
27000		25×45 30×35		35×50												
33000	25×40 30×30 35×25	30×40 35×30	35×40													
39000	25×45 30×35	30×45 35×35	35×45													
47000	25×50 30×40 35×30	30×50 35×40														
56000	30×45 35×35	35×45														
68000	30×50 35×40															
82000	35×45															

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

Dimensions



Item	Value
Terminal pitch	10
Terminal length	6.3±1
Terminal thickness	0.8 +0.2/−0.1
Terminal width	1.5 +0.2/−0.1
P.C.B hole pitch	10±0.1
P.C.B mounting holes	2−φ2.0±0.1
Case	φD+1 max × L±2

Unit: mm

Ripple current temperature coefficient

Rated voltage \ Ambient temperature (°C)	+40	+55	+70	+85
< 160 V	2.10	1.80	1.50	1.00
≥ 160 V	1.70	1.50	1.30	1.00

How to order

KSM	4	102	M	101	B	25X25
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, 16V = 160, 25V = 250, 35V = 350, 50V = 500, 63V = 630, 80V = 800, 100V = 101, 160V = 161, 200V = 201, 250V = 251, 315V = 315, 350V = 351, 400V = 401, 450V = 451, 500V = 501	Package B: bulk pack, A: ammo pack	Size code

Example: KSM4102M101B25X25

Characteristics list

UR (V)	Rated Capacitance (μF)	Max ESR 20°C 120Hz (mΩ)	Rated Ripple Current 85°C 120Hz (mA rms)	Size ΦD×L (mm)	Surge Voltage (V)
10	10000	54	2500	22×25	13
10	12000	45	2900	22×25	13
10	15000	36	3200	22×30	13
10	15000	36	3100	25×25	13
10	18000	30	3600	22×35	13
10	18000	30	3600	25×30	13
10	22000	25	4000	22×40	13
10	22000	25	4100	25×35	13
10	22000	25	4100	30×25	13
10	33000	17	4600	25×40	13
10	33000	17	4800	30×30	13
10	33000	17	4800	35×25	13
10	39000	14	5200	25×45	13
10	39000	14	5300	30×35	13
10	47000	12	5800	25×50	13
10	47000	12	6000	30×40	13
10	47000	12	6000	35×30	13
10	56000	9.5	6700	30×45	13
10	56000	9.5	6800	35×35	13
10	68000	7.9	7500	30×50	13
10	68000	7.9	7700	35×40	13
10	82000	6.5	8700	35×45	13
16	8200	65	2200	22×25	20
16	10000	54	2600	22×30	20
16	10000	54	2600	25×25	20
16	12000	45	2900	22×35	20
16	15000	36	3300	22×40	20
16	15000	36	3300	25×30	20
16	15000	36	3400	30×25	20
16	18000	30	3800	22×45	20
16	18000	30	3700	25×35	20
16	22000	25	4200	22×50	20
16	22000	25	4200	25×40	20
16	22000	25	4200	30×30	20
16	22000	25	4400	35×25	20
16	27000	20	5000	25×45	20
16	27000	20	5000	30×35	20
16	33000	17	5600	30×40	20
16	33000	17	5600	35×30	20
16	39000	14	6200	30×45	20
16	39000	14	6300	35×35	20
16	47000	12	7000	30×50	20
16	47000	12	7200	35×40	20
16	56000	9.5	8000	35×45	20
25	5600	83	2000	22×25	32
25	6800	69	2300	22×30	32
25	6800	69	2300	25×25	32

UR (V)	Rated Capacitance (μF)	Max ESR 20°C 120Hz (mΩ)	Rated Ripple Current 85°C 120Hz (mA rms)	Size ΦD×L (mm)	Surge Voltage (V)
25	8200	57	2600	22×35	32
25	10000	47	2900	22×40	32
25	10000	47	2800	25×30	32
25	10000	47	3000	30×25	32
25	12000	39	3300	22×45	32
25	12000	39	3200	25×35	32
25	12000	39	3400	30×30	32
25	15000	31	3700	25×40	32
25	15000	31	3900	35×25	32
25	18000	26	4300	25×50	32
25	18000	26	4200	30×35	32
25	18000	26	4400	35×30	32
25	22000	22	4800	30×40	32
25	22000	22	5000	35×35	32
25	33000	15	6500	35×40	32
25	39000	12	7500	35×45	32
35	3300	100	1800	22×25	44
35	3900	86	2100	22×30	44
35	4700	71	2200	25×25	44
35	5600	72	2300	22×35	44
35	5600	72	2300	25×30	44
35	6800	59	2900	22×40	44
35	6800	59	2600	25×35	44
35	6800	59	2700	30×25	44
35	8200	57	2800	22×50	44
35	8200	57	2800	25×40	44
35	8200	57	2800	30×30	44
35	8200	57	2900	35×25	44
35	10000	47	3100	25×45	44
35	10000	47	3200	30×35	44
35	12000	39	3500	25×50	44
35	12000	39	3500	30×40	44
35	12000	39	3600	35×30	44
35	15000	31	4100	30×45	44
35	15000	31	4100	35×35	44
35	18000	26	4600	30×50	44
35	18000	26	4700	35×40	44
35	22000	22	5300	35×45	44
35	27000	18	7000	35×50	44
50	2200	120	1700	22×25	63
50	2700	100	1900	22×30	63
50	2700	100	1900	25×25	63
50	3300	100	2000	22×35	63
50	3900	86	2100	22×35	63
50	3900	86	2100	25×30	63
50	3900	86	2400	30×25	63
50	4700	71	2400	22×40	63
50	4700	71	2400	25×35	63
50	5600	72	2500	22×50	63
50	5600	72	2500	25×40	63
50	5600	72	2500	30×30	63
50	5600	72	2600	35×25	63
50	6800	59	2800	25×45	63
50	6800	59	2800	30×35	63
50	8200	57	3200	25×50	63
50	8200	57	3300	30×40	63
50	8200	57	3300	35×30	63
50	10000	47	3400	30×45	63
50	10000	47	3400	35×35	63
50	12000	39	3800	30×50	63
50	12000	39	3800	35×40	63
50	15000	31	4500	35×50	63

UR (V)	Rated Capacitance (μF)	Max ESR 20°C 120Hz (mΩ)	Rated Ripple Current 85°C 120Hz (mA rms)	Size ΦD×L (mm)	Surge Voltage (V)
63	1500	135	1600	22×25	79
63	1800	110	1800	22×30	79
63	2200	91	2000	22×30	79
63	2200	91	2000	25×25	79
63	2700	74	2200	22×35	79
63	2700	74	2300	25×30	79
63	3300	81	2300	22×40	79
63	3300	81	2300	25×35	79
63	3300	81	2300	30×25	79
63	3900	69	2500	22×45	79
63	3900	69	2600	25×40	79
63	3900	69	2600	30×30	79
63	3900	69	2700	35×25	79
63	5600	48	3100	25×45	79
63	5600	48	3200	30×35	79
63	5600	48	3300	35×30	79
63	6800	40	3600	30×40	79
63	6800	40	3700	35×35	79
63	8200	41	3700	30×50	79
63	8200	41	3800	35×40	79
63	10000	34	4300	35×45	79
63	12000	28	4800	35×50	79
80	1000	200	1300	22×25	100
80	1200	165	1500	22×30	100
80	1500	133	1700	25×25	100
80	1800	111	1900	22×35	100
80	1800	111	1900	25×30	100
80	2200	91	2100	22×40	100
80	2200	91	2200	25×35	100
80	2200	91	2200	30×25	100
80	2700	74	2500	22×50	100
80	2700	74	2500	25×40	100
80	2700	74	2500	30×30	100
80	2700	74	2500	35×25	100
80	3300	61	2800	25×45	100
80	3300	61	2800	30×35	100
80	3900	52	3100	25×50	100
80	3900	52	3200	30×40	100
80	3900	52	3200	35×30	100
80	4700	43	3600	30×45	100
80	4700	43	3600	35×35	100
80	5600	48	3500	30×50	100
80	5600	48	3500	35×40	100
80	6800	40	4100	35×50	100
100	680	293	1100	22×25	125
100	820	243	1200	22×30	125
100	1000	200	1400	25×25	125
100	1200	166	1600	22×35	125
100	1200	166	1600	25×30	125
100	1500	133	1800	22×40	125
100	1500	133	1700	25×35	125
100	1500	133	1800	30×25	125
100	1800	111	2100	22×50	125
100	1800	111	2000	25×40	125
100	1800	111	2100	30×30	125
100	1800	111	2200	35×25	125
100	2200	91	2200	25×45	125
100	2200	91	2300	30×35	125
100	2200	91	2500	35×30	125
100	2700	74	2600	25×50	125
100	2700	74	2700	30×40	125
100	3300	61	3000	30×45	125

UR (V)	Rated Capacitance (μF)	Max ESR 20°C 120Hz (mΩ)	Rated Ripple Current 85°C 120Hz (mA rms)	Size ΦD×L (mm)	Surge Voltage (V)
100	3300	61	3100	35×35	125
100	3900	52	3400	30×50	125
100	3900	52	3400	35×40	125
100	4700	43	4000	35×50	125
160	220	600	1100	22×25	200
160	270	490	1200	22×25	200
160	330	400	1300	22×25	200
160	390	341	1500	22×30	200
160	390	341	1500	25×25	200
160	470	283	1600	25×30	200
160	560	237	1900	22×35	200
160	560	237	1900	25×30	200
160	560	237	2000	30×25	200
160	680	196	2100	22×40	200
160	680	196	2200	25×35	200
160	820	162	2500	22×50	200
160	820	162	2400	25×40	200
160	820	162	2500	30×30	200
160	820	195	2400	35×25	200
160	1000	133	2700	25×45	200
160	1000	133	2800	30×35	200
160	1000	160	2700	35×30	200
160	1200	111	3100	25×50	200
160	1200	111	3200	30×40	200
160	1200	133	3000	35×35	200
160	1500	89	3700	30×45	200
160	1500	107	3500	35×40	200
160	1800	89	3900	35×45	200
160	2200	73	4500	35×50	200
200	220	600	1100	22×25	250
200	270	492	1200	22×30	250
200	330	402	1400	22×30	250
200	330	402	1400	25×25	250
200	390	341	1600	22×35	250
200	390	341	1600	25×30	250
200	470	283	1800	22×40	250
200	470	283	1900	30×25	250
200	560	237	2000	22×45	250
200	560	237	2000	25×35	250
200	560	237	2100	30×30	250
200	560	285	2000	35×25	250
200	680	196	2300	25×40	250
200	680	196	2400	30×35	250
200	820	162	2600	25×50	250
200	820	162	2700	30×40	250
200	820	195	2500	35×30	250
200	1000	133	3100	30×45	250
200	1000	160	2800	35×35	250
200	1200	111	3400	30×50	250
200	1200	133	3200	35×40	250
200	1500	107	3800	35×50	250
250	100	1990	680	22×25	300
250	180	1106	940	22×25	300
250	220	905	1100	22×30	300
250	220	905	1100	25×25	300
250	270	737	1400	22×35	300
250	330	603	1400	22×40	300
250	330	603	1400	25×30	300
250	330	603	1500	30×25	300
250	390	511	1600	22×45	300
250	390	511	1600	25×35	300
250	470	424	1800	22×50	300

UR (V)	Rated Capacitance (μF)	Max ESR 20°C 120Hz (mΩ)	Rated Ripple Current 85°C 120Hz (mA rms)	Size ΦD×L (mm)	Surge Voltage (V)
250	470	424	1800	25×40	300
250	470	424	1800	30×30	300
250	470	424	2400	35×25	300
250	560	356	2000	25×45	300
250	560	356	2000	30×35	300
250	680	293	2300	30×40	300
250	680	293	2600	35×30	300
250	820	243	2600	30×45	300
250	820	243	2600	35×35	300
250	1000	199	3200	35×40	300
250	1200	166	3400	35×45	300
315	100	1990	670	22×25	365
315	150	1327	850	22×30	365
315	150	1327	850	25×25	365
315	180	1106	960	22×35	365
315	180	1106	960	25×30	365
315	220	905	1100	22×40	365
315	220	905	1100	25×35	365
315	220	905	1100	30×25	365
315	270	737	1200	22×45	365
315	270	737	1300	25×40	365
315	270	737	1300	30×30	365
315	270	737	1300	35×25	365
315	330	603	1400	25×45	365
315	330	603	1400	30×35	365
315	390	511	1600	25×50	365
315	390	511	1600	30×40	365
315	390	511	1600	35×30	365
315	470	424	1800	30×45	365
315	470	424	1800	35×35	365
315	560	356	2000	30×50	365
315	560	356	2000	35×40	365
315	680	293	2300	35×45	365
350	82	2427	640	22×25	400
350	100	1990	800	22×25	400
350	120	1658	820	22×30	400
350	120	1658	810	25×25	400
350	150	1327	940	22×35	400
350	150	1327	940	25×30	400
350	180	1106	1100	22×40	400
350	180	1106	1100	30×25	400
350	220	905	1200	22×45	400
350	220	905	1200	25×35	400
350	220	905	1200	30×30	400
350	220	905	1300	35×25	400
350	270	737	1400	25×45	400
350	270	737	1400	30×35	400
350	330	603	1600	25×50	400
350	330	603	1600	35×30	400
350	390	511	1700	30×40	400
350	390	511	1800	35×35	400
350	470	424	2000	30×45	400
350	470	424	2000	35×40	400
350	560	356	2300	35×45	400
350	680	293	2600	35×50	400
350	820	243	2800	35×60	400
400	68	2926	550	22×25	450
400	82	2427	650	22×25	450
400	100	1990	700	22×30	450
400	100	1990	700	25×25	450
400	120	1658	790	22×35	450
400	150	1327	900	22×40	450

UR (V)	Rated Capacitance (μF)	Max ESR 20°C 120Hz (mΩ)	Rated Ripple Current 85°C 120Hz (mA rms)	Size ΦD×L (mm)	Surge Voltage (V)
400	150	1327	890	25×30	450
400	150	1327	950	30×25	450
400	180	1106	1000	22×45	450
400	180	1106	1000	25×35	450
400	180	1106	1100	30×30	450
400	180	1106	1200	35×25	450
400	220	905	1100	22×50	450
400	220	905	1200	25×40	450
400	220	905	1200	30×35	450
400	270	737	1300	25×45	450
400	270	737	1400	25×50	450
400	270	737	1500	30×40	450
400	330	603	1600	35×30	450
400	330	603	1700	30×45	450
400	390	511	1800	35×35	450
400	390	511	1800	30×50	450
400	470	424	2100	35×45	450
400	560	356	2300	35×50	450
400	1000	335	2500	35×70	450
450	68	2926	570	22×30	500
450	82	2427	680	25×25	500
450	100	1990	720	22×35	500
450	100	1990	730	25×30	500
450	120	1658	800	22×40	500
450	120	1658	830	25×35	500
450	150	1327	950	25×40	500
450	150	1327	950	30×30	500
450	150	1327	980	35×25	500
450	180	1106	1100	25×45	500
450	180	1106	1100	30×35	500
450	180	1106	1200	35×25	500
450	220	905	1200	25×50	500
450	220	905	1300	30×40	500
450	220	905	1300	35×30	500
450	270	737	1400	30×45	500
450	270	737	1500	35×35	500
450	330	603	1700	30×50	500
450	390	511	1900	35×45	500
450	470	424	2200	35×50	500
500	100	1990	900	30×25	550
500	120	1658	1000	30×30	550
500	120	1658	1000	35×25	550
500	150	1327	1200	30×35	550
500	180	1106	1400	30×40	550
500	180	1106	1300	35×30	550
500	220	905	1600	30×45	550
500	220	905	1500	35×35	550
500	270	737	1800	30×50	550
500	270	737	1700	35×40	550
500	330	603	2000	35×45	550
500	390	511	2300	35×50	550

Low-temperature characteristics: table as supplied by the manufacturer (2026-11-05); 160 ~ 400 V at –40°C = 12 and '—' = not applicable, as confirmed (2026-11-06). The original p.1 prints the columns 10 / 10 ~ 35 / 50 ~ 100 / 160 ~ 200 / 250 ~ 400 / 450 ~ 500 V with different values.
Dissipation factor: '—' as printed (no rating in the characteristics list falls on a '—' cell).
Max ESR, ripple current and sizes as printed. The original ESR column heading reads '20°C120H' (read as 20°C, 120 Hz).
As printed: 400 V 1000 μF (35×70) Max ESR 335 mΩ (original p.6), while tan δ 0.15 (table on original p.1) at 1000 μF corresponds to about 199 mΩ — the manufacturer advised against this conversion (2026-11-05); the printed 335 mΩ applies (2026-11-06). 250 V 470 μF 35×25 ripple current 2400 mA (original p.5), while the other three 470 μF sizes are 1800 mA — the manufacturer answered that ripple current depends on case size and internal element construction and such differences are normal (2026-11-05).
Voltage codes as confirmed (2026-11-03, 2026-11-04 and 2026-11-05).