

KL5 Large Capacitance Aluminum Electrolytic Capacitors

Series KL5 PC Board Plug-in Ultraminiaturized Capacitor

- Increased in allowed ripple current by 5 to 40%
- 20mm-tall products for every diameter of $\varnothing 22$ to $\varnothing 35$ are now offered in series
- As many as 4 case sizes available for the same rating.

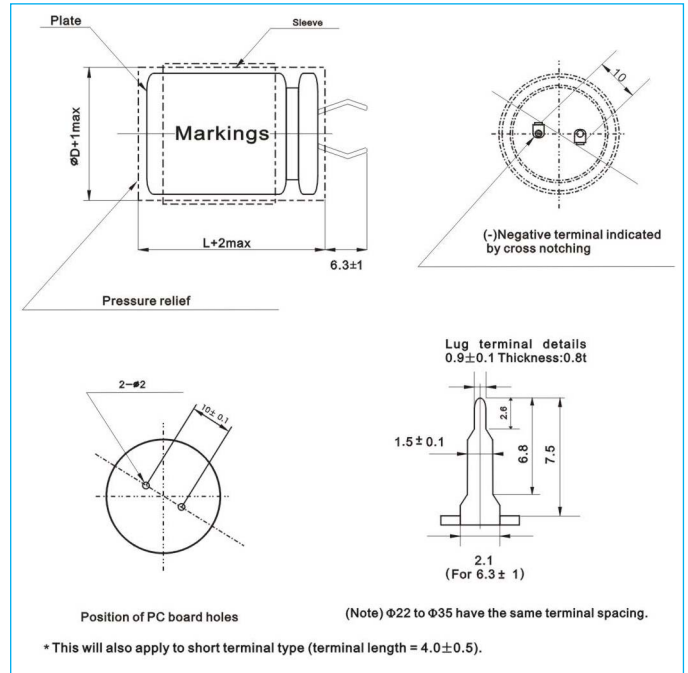
Photo



Marking color: White print on a black sleeve

Outline Drawing

Unit:mm



Specifications

No.	Item	Performance																								
1	Temperature range (°C)	-40 to +85 (450 V is at -25 to +85)																								
2	Leakage Current (μA)	Less than 0.01CV or 1.5 mA whichever is smaller (after five minutes). C: Capacitance (μF), V: Voltage (V) 20°C																								
3	Capacitance tolerance (%)	±20 (20°C, 120 Hz)																								
4	Tangent of loss angle (tan δ)	<table border="1"> <tr> <td>Rated voltage (v)</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> <td>63 to 100</td> </tr> <tr> <td>tan δ (max)</td> <td>0.80</td> <td>0.60</td> <td>0.50</td> <td>0.40</td> <td>0.30</td> <td>0.20</td> </tr> </table> <table border="1"> <tr> <td rowspan="3">∅D</td> <td>Rated voltage (V)</td> <td>160 to 250</td> <td>315 to 450</td> </tr> <tr> <td>22 to 30</td> <td>0.10</td> <td>0.15</td> </tr> <tr> <td>35</td> <td>0.15</td> <td>0.15</td> </tr> </table> (20°C, 120Hz)	Rated voltage (v)	10	16	25	35	50	63 to 100	tan δ (max)	0.80	0.60	0.50	0.40	0.30	0.20	∅D	Rated voltage (V)	160 to 250	315 to 450	22 to 30	0.10	0.15	35	0.15	0.15
Rated voltage (v)	10	16	25	35	50	63 to 100																				
tan δ (max)	0.80	0.60	0.50	0.40	0.30	0.20																				
∅D	Rated voltage (V)	160 to 250	315 to 450																							
	22 to 30	0.10	0.15																							
	35	0.15	0.15																							
5	Stability at low Temperature	<table border="1"> <tr> <td>Rated Voltage (V)</td> <td>10</td> <td>16 to 35</td> <td>50 to 100</td> <td>160 to 200</td> <td>250 to 400</td> <td>450</td> </tr> <tr> <td>Impedance</td> <td>Z-25°C/Z+20°C</td> <td>5</td> <td>4</td> <td>3</td> <td>3</td> <td>4</td> </tr> <tr> <td>ratio (max)</td> <td>Z-40°C/Z+20°C</td> <td>18</td> <td>15</td> <td>10</td> <td>6</td> <td>8</td> </tr> </table> (120Hz)	Rated Voltage (V)	10	16 to 35	50 to 100	160 to 200	250 to 400	450	Impedance	Z-25°C/Z+20°C	5	4	3	3	4	ratio (max)	Z-40°C/Z+20°C	18	15	10	6	8			
Rated Voltage (V)	10	16 to 35	50 to 100	160 to 200	250 to 400	450																				
Impedance	Z-25°C/Z+20°C	5	4	3	3	4																				
ratio (max)	Z-40°C/Z+20°C	18	15	10	6	8																				
6	Endurance (85°C) (Applied ripple current)	<table border="1"> <tr> <td>Test time</td> <td>2000hrs</td> </tr> <tr> <td>Leakage current</td> <td>Initial specified value or less</td> </tr> <tr> <td>Change in capacitance</td> <td>Within ±20% of initial value</td> </tr> <tr> <td>tan δ</td> <td>200% or less of initial specified value</td> </tr> </table>	Test time	2000hrs	Leakage current	Initial specified value or less	Change in capacitance	Within ±20% of initial value	tan δ	200% or less of initial specified value																
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7	Max. Storage temp. (85°C)	<table border="1"> <tr> <td>Test time</td> <td>1000hrs</td> </tr> <tr> <td>Leakage current</td> <td>Initial specified value or less</td> </tr> <tr> <td>Change in capacitance</td> <td>Within ±15% of initial value</td> </tr> <tr> <td>tan δ</td> <td>150% or less of initial specified value</td> </tr> </table> Pretreatment performed (JIS C 5102).	Test time	1000hrs	Leakage current	Initial specified value or less	Change in capacitance	Within ±15% of initial value	tan δ	150% or less of initial specified value																
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Change in capacitance	Within ±15% of initial value																									
tan δ	150% or less of initial specified value																									
8	Applicable Standards	JIS C 5102 and JIS C 5141																								

KL5 Large Capacitance Miniature Aluminum Electrolytic Capacitors

Standard Ratings

KOSHIN PART NO./VV(V)	CAP (μ F)	SIZE (ϕ XL) (mm)	Tan δ	Ripple Current (Arms)
10V				
KL5-10V822MS21	8200	22X20	0.80	2.0
KL5-10V123MS22	12000	22X25	0.80	2.5
KL5-10V153MS23	15000	22X30	0.80	3.0
KL5-10V223MS24	22000	22X35	0.80	3.7
KL5-10V273MS26	27000	22X45	0.80	4.3
KL5-10V333MS27	33000	22X50	0.80	4.9
KL5-10V123MS31	12000	25X20	0.80	2.5
KL5-10V183MS32	18000	25X25	0.80	3.2
KL5-10V223MS33	22000	25X30	0.80	3.7
KL5-10V273MS34	27000	25X35	0.80	4.2
KL5-10V333MS35	33000	25X40	0.80	4.8
KL5-10V393MS36	39000	25X45	0.80	5.4
KL5-10V473MS37	47000	25X50	0.80	6.0
KL5-10V183MS41	18000	30X20	0.80	3.3
KL5-10V273MS42	27000	30X25	0.80	4.2
KL5-10V333MS43	33000	30X30	0.80	4.9
KL5-10V393MS44	39000	30X35	0.80	5.5
KL5-10V473MS45	47000	30X40	0.80	6.1
KL5-10V563MS46	56000	30X45	0.80	6.9
KL5-10V683MS47	68000	30X50	0.80	7.7
KL5-10V223MS51	22000	35X20	0.80	3.9
KL5-10V333MS52	33000	35X25	0.80	5.0
KL5-10V473MS53	47000	35X30	0.80	6.2
KL5-10V563MS54	56000	35X35	0.80	7.0
KL5-10V683MS55	68000	35X40	0.80	7.9
KL5-10V823MS56	82000	35X45	0.80	8.9
16V				
KL5-16V562MS21	5600	22X20	0.60	1.9
KL5-16V822MS22	8200	22X25	0.60	2.4
KL5-16V123MS23	12000	22X30	0.60	3.0
KL5-16V153MS24	15000	22X35	0.60	3.4
KL5-16V183MS25	18000	22X40	0.60	3.9
KL5-16V223MS27	22000	22X50	0.60	4.5
KL5-16V822MS31	8200	25X20	0.60	2.3
KL5-16V123MS32	12000	25X25	0.60	2.9
KL5-16V153MS33	15000	25X30	0.60	3.4

KOSHIN PART NO./VV(V)	CAP (μ F)	SIZE (ϕ XL) (mm)	Tan δ	Ripple Current (Arms)
KL5-16V183MS34	18000	25X35	0.60	3.9
KL5-16V223MS35	22000	25X40	0.60	4.4
KL5-16V273MS36	27000	25X45	0.60	5.0
KL5-16V123MS41	12000	30X20	0.60	3.0
KL5-16V183MS42	18000	30X25	0.60	3.9
KL5-16V223MS43	22000	30X30	0.60	4.4
KL5-16V273MS44	27000	30X35	0.60	5.1
KL5-16V333MS45	33000	30X40	0.60	5.8
KL5-16V393MS46	39000	30X45	0.60	6.4
KL5-16V473MS47	47000	30X50	0.60	7.2
KL5-16V153MS51	15000	35X20	0.60	3.7
KL5-16V223MS52	22000	35X25	0.60	4.6
KL5-16V333MS53	33000	35X30	0.60	5.8
KL5-16V393MS54	39000	35X35	0.60	6.5
KL5-16V473MS55	47000	35X40	0.60	7.4
KL5-16V563MS56	56000	35X45	0.60	8.2
25V				
KL5-25V392MS21	3900	22X20	0.50	1.8
KL5-25V562MS22	5600	22X25	0.50	2.3
KL5-25V822MS23	8200	22X30	0.50	2.8
KL5-25V103MS24	10000	22X35	0.50	3.2
KL5-25V123MS25	12000	22X40	0.50	3.7
KL5-25V153MS27	15000	22X50	0.50	4.3
KL5-25V562MS31	5600	25X20	0.50	2.2
KL5-25V822MS32	8200	25X25	0.50	2.8
KL5-25V103MS33	10000	25X30	0.50	3.2
KL5-25V123MS34	12000	25X35	0.50	3.7
KL5-25V153MS35	15000	25X40	0.50	4.2
KL5-25V183MS36	18000	25X45	0.50	4.7
KL5-25V223MS37	22000	25X50	0.50	5.4
KL5-25V822MS41	8200	30X20	0.50	2.9
KL5-25V123MS42	12000	30X25	0.50	3.7
KL5-25V153MS43	15000	30X30	0.50	4.3
KL5-25V183MS44	18000	30X35	0.50	4.8
KL5-25V223MS45	22000	30X40	0.50	5.5
KL5-25V273MS46	27000	30X45	0.50	6.2
KL5-25V333MS47	33000	30X50	0.50	7.0

Note : Allowable Ripple Current 120Hz at 85°C

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Standard Ratings

KOSHIN PART NO./WV(V)	CAP (μ F)	SIZE (ϕ XL) (mm)	Tan δ	Ripple Current (Arms)
KL5-25V103MS51	10000	35X20	0.50	3.5
KL5-25V153MS52	15000	35X25	0.50	4.4
KL5-25V223MS53	22000	35X30	0.50	5.5
KL5-25V273MS54	27000	35X35	0.50	6.3
KL5-25V333MS55	33000	35X40	0.50	7.2
KL5-25V393MS56	39000	35X45	0.50	8.0
35V				
KL5-35V272MS21	2700	22X20	0.40	1.6
KL5-35V392MS22	3900	22X25	0.40	2.1
KL5-35V472MS23	4700	22X30	0.40	2.4
KL5-35V682MS24	6800	22X35	0.40	2.9
KL5-35V822MS25	8200	22X40	0.40	3.3
KL5-35V103MS27	10000	22X50	0.40	3.9
KL5-35V392MS31	3900	25X20	0.40	2.0
KL5-35V562MS32	5600	25X25	0.40	2.6
KL5-35V682MS33	6800	25X30	0.40	2.9
KL5-35V822MS34	8200	25X35	0.40	3.3
KL5-35V103MS35	10000	25X40	0.40	3.8
KL5-35V123MS36	12000	25X45	0.40	4.3
KL5-35V153MS37	15000	25X50	0.40	4.9
KL5-35V562MS41	5600	30X20	0.40	2.6
KL5-35V822MS42	8200	30X25	0.40	3.3
KL5-35V103MS43	10000	30X30	0.40	3.8
KL5-35V123MS44	12000	30X35	0.40	4.3
KL5-35V153MS45	15000	30X40	0.40	5.0
KL5-35V183MS46	18000	30X45	0.40	5.6
KL5-35V223MS47	22000	30X50	0.40	6.3
KL5-35V682MS51	6800	35X20	0.40	3.1
KL5-35V103MS52	10000	35X25	0.40	4.0
KL5-35V153MS53	15000	35X30	0.40	5.0
KL5-35V183MS54	18000	35X35	0.40	5.7
KL5-35V223MS55	22000	35X40	0.40	6.4
KL5-35V273MS57	27000	35X50	0.40	7.4
50V				
KL5-50V182MS21	1800	22X20	0.30	1.6
KL5-50V272MS22	2700	22X25	0.30	2.1
KL5-50V392MS23	3900	22X30	0.30	2.6

KOSHIN PART NO./WV(V)	CAP (μ F)	SIZE (ϕ XL) (mm)	Tan δ	Ripple Current (Arms)
KL5-50V472MS24	4700	22X35	0.30	3.1
KL5-50V562MS25	5600	22X40	0.30	3.4
KL5-50V682MS27	6800	22X50	0.30	3.9
KL5-50V272MS31	2700	25X20	0.30	2.1
KL5-50V392MS32	3900	25X25	0.30	2.6
KL5-50V472MS33	4700	25X30	0.30	3.0
KL5-50V562MS34	5600	25X35	0.30	3.4
KL5-50V682MS35	6800	25X40	0.30	3.8
KL5-50V822MS36	8200	25X45	0.30	4.3
KL5-50V103MS37	10000	25X50	0.30	4.9
KL5-50V392MS41	3900	30X20	0.30	2.7
KL5-50V562MS42	5600	30X25	0.30	3.4
KL5-50V682MS43	6800	30X30	0.30	3.9
KL5-50V822MS44	8200	30X35	0.30	4.4
KL5-50V103MS45	10000	30X40	0.30	5.0
KL5-50V123MS46	12000	30X45	0.30	5.6
KL5-50V153MS47	15000	30X50	0.30	6.4
KL5-50V472MS51	4700	35X20	0.30	3.2
KL5-50V682MS52	6800	35X25	0.30	4.0
KL5-50V103MS53	10000	35X30	0.30	5.0
KL5-50V123MS54	12000	35X35	0.30	5.7
KL5-50V153MS55	15000	35X40	0.30	6.5
KL5-50V183MS56	18000	35X45	0.30	7.3
63V				
KL5-63V152MS21	1500	22X20	0.20	1.7
KL5-63V222MS22	2200	22X25	0.20	2.2
KL5-63V272MS23	2700	22X30	0.20	2.5
KL5-63V332MS24	3300	22X35	0.20	2.9
KL5-63V392MS25	3900	22X40	0.20	3.3
KL5-63V472MS26	4700	22X45	0.20	3.7
KL5-63V562MS27	5600	22X50	0.20	4.1
KL5-63V182MS31	1800	25X20	0.20	2.0
KL5-63V272MS32	2700	25X25	0.20	2.0
KL5-63V392MS33	3900	25X30	0.20	3.2
KL5-63V472MS34	4700	25X35	0.20	3.6
KL5-63V562MS35	5600	25X40	0.20	4.0
KL5-63V682MS36	6800	25X45	0.20	4.6

Note : Allowable Ripple Current 120Hz at 85°C

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Standard Ratings

KOSHIN PART NO./WV(V)	CAP (μ F)	SIZE (ϕ XL) (mm)	Tan δ	Ripple Current (Arms)
KL5-63V272MS41	2700	30X20	0.20	2.6
KL5-63V392MS42	3900	30X25	0.20	3.3
KL5-63V562MS43	5600	30X30	0.20	4.1
KL5-63V682MS44	6800	30X35	0.20	4.6
KL5-63V822MS45	8200	30X40	0.20	5.2
KL5-63V103MS46	10000	30X45	0.20	5.9
KL5-63V392MS51	3900	35X20	0.20	3.4
KL5-63V562MS52	5600	35X25	0.20	4.2
KL5-63V682MS53	6800	35X30	0.20	4.8
KL5-63V822MS54	8200	35X35	0.20	5.5
KL5-63V103MS55	10000	35X40	0.20	6.2
KL5-63V123MS56	12000	35X45	0.20	6.9
KL5-63V153MS57	15000	35X50	0.20	7.9
80V				
KL5-80V102MS21	1000	22X20	0.20	1.5
KL5-80V152MS22	1500	22X25	0.20	1.9
KL5-80V182MS23	1800	22X30	0.20	2.2
KL5-80V222MS24	2200	22X35	0.20	2.5
KL5-80V272MS25	2700	22X40	0.20	2.8
KL5-80V332MS26	3300	22X45	0.20	3.2
KL5-80V392MS27	3900	22X50	0.20	3.6
KL5-80V122MS31	1200	25X20	0.20	1.7
KL5-80V182MS32	1800	25X25	0.20	2.2
KL5-80V222MS33	2200	25X30	0.20	2.5
KL5-80V332MS34	3300	25X35	0.20	3.1
KL5-80V392MS35	3900	25X40	0.20	3.5
KL5-80V472MS37	4700	25X50	0.20	4.0
KL5-80V182MS41	1800	30X20	0.20	2.2
KL5-80V272MS42	2700	30X25	0.20	2.9
KL5-80V392MS43	3900	30X30	0.20	3.6
KL5-80V472MS44	4700	30X35	0.20	4.0
KL5-80V562MS45	5600	30X40	0.20	4.5
KL5-80V682MS46	6800	30X45	0.20	5.1
KL5-80V272MS51	2700	35X20	0.20	3.0
KL5-80V392MS52	3900	35X25	0.20	3.7
KL5-80V472MS53	4700	35X30	0.20	4.2
KL5-80V562MS54	5600	35X35	0.20	4.7

KOSHIN PART NO./WV(V)	CAP (μ F)	SIZE (ϕ XL) (mm)	Tan δ	Ripple Current (Arms)
KL5-80V682MS55	6800	35X40	0.20	5.3
KL5-80V822MS56	8200	35X45	0.20	6.0
KL5-80V103MS57	10000	35X50	0.20	6.8
100V				
KL5-100V561MS21	560	22X20	0.20	1.3
KL5-100V821MS22	820	22X25	0.20	1.7
KL5-100V122MS23	1200	22X30	0.20	2.1
KL5-100V152MS24	1500	22X35	0.20	2.5
KL5-100V182MS25	1800	22X40	0.20	2.8
KL5-100V222MS26	2200	22X45	0.20	3.2
KL5-100V821MS31	820	25X20	0.20	1.7
KL5-100V122MS32	1200	25X25	0.20	2.1
KL5-100V152MS33	1500	25X30	0.20	2.5
KL5-100V182MS34	1800	25X35	0.20	2.8
KL5-100V222MS35	2200	25X40	0.20	3.2
KL5-100V272MS36	2700	25X45	0.20	3.6
KL5-100V332MS37	3300	25X50	0.20	4.1
KL5-100V122MS41	1200	30X20	0.20	2.2
KL5-100V182MS42	1800	30X25	0.20	2.8
KL5-100V222MS43	2200	30X30	0.20	3.2
KL5-100V272MS44	2700	30X35	0.20	3.7
KL5-100V332MS45	3300	30X40	0.20	4.2
KL5-100V392MS46	3900	30X45	0.20	4.7
KL5-100V472MS47	4700	30X50	0.20	5.2
KL5-100V152MS51	1500	35X20	0.20	2.7
KL5-100V222MS52	2200	35X25	0.20	3.4
KL5-100V332MS53	3300	35X30	0.20	4.3
KL5-100V392MS54	3900	35X35	0.20	4.8
KL5-100V472MS55	4700	35X40	0.20	5.4
KL5-100V562MS56	5600	35X45	0.20	6.0
160V				
KL5-160V271MS21	270	22X20	0.10	1.2
KL5-160V391MS22	390	22X25	0.10	1.5
KL5-160V561MS23	560	22X30	0.10	1.9
KL5-160V681MS24	680	22X35	0.10	2.2
KL5-160V821MS25	820	22X40	0.10	2.5
KL5-160V102MS27	1000	22X50	0.10	2.9

Note : Allowable Ripple Current 120Hz at 85°C

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Standard Ratings

KOSHIN PART NO./WV(V)	CAP (μ F)	SIZE (ϕ XL) (mm)	Tan δ	Ripple Current (Arms)
KL5-160V391MS31	390	25X20	0.10	1.5
KL5-160V561MS32	560	25X25	0.10	1.9
KL5-160V681MS33	680	25X30	0.10	2.2
KL5-160V821MS34	820	25X35	0.10	2.5
KL5-160V102MS35	1000	25X40	0.10	2.8
KL5-160V122MS36	1200	25X45	0.10	3.2
KL5-160V152MS37	1500	25X50	0.10	3.6
KL5-160V561MS41	560	30X20	0.10	2.0
KL5-160V821MS42	820	30X25	0.10	2.5
KL5-160V102MS43	1000	30X30	0.10	2.9
KL5-160V122MS44	1200	30X35	0.10	3.3
KL5-160V152MS45	1500	30X40	0.10	3.7
KL5-160V182MS46	1800	30X45	0.10	4.2
KL5-160V222MS47	2200	30X50	0.10	4.7
KL5-160V681MS51	680	35X20	0.15	2.3
KL5-160V102MS52	1000	35X25	0.15	2.9
KL5-160V152MS53	1500	35X30	0.15	3.6
KL5-160V182MS54	1800	35X35	0.15	4.1
KL5-160V222MS55	2200	35X40	0.15	4.7
KL5-160V272MS57	2700	35X50	0.15	5.4
180V				
KL5-180V221MS21	220	22X20	0.10	1.1
KL5-180V331MS22	330	22X25	0.10	1.4
KL5-180V471MS23	470	22X30	0.10	1.8
KL5-180V561MS24	560	22X35	0.10	2.0
KL5-180V681MS25	680	22X40	0.10	2.3
KL5-180V821MS26	820	22X45	0.10	2.6
KL5-180V331MS31	330	25X20	0.10	1.4
KL5-180V471MS32	470	25X25	0.10	1.8
KL5-180V561MS33	560	25X30	0.10	2.0
KL5-180V681MS34	680	25X35	0.10	2.3
KL5-180V821MS35	820	25X40	0.10	2.6
KL5-180V102MS36	1000	25X45	0.10	2.9
KL5-180V122MS37	1200	25X50	0.10	3.3
KL5-180V471MS41	470	30X20	0.10	1.8
KL5-180V681MS42	680	30X25	0.10	2.3
KL5-180V821MS43	820	30X30	0.10	2.6

KOSHIN PART NO./WV(V)	CAP (μ F)	SIZE (ϕ XL) (mm)	Tan δ	Ripple Current (Arms)
KL5-180V122MS44	1200	30X35	0.10	3.3
KL5-180V152MS46	1500	30X45	0.10	3.9
KL5-180V182MS47	1800	30X50	0.10	4.3
KL5-180V561MS51	560	35X20	0.15	2.1
KL5-180V821MS52	820	35X25	0.15	2.6
KL5-180V122MS53	1200	35X30	0.15	3.3
KL5-180V152MS54	1500	35X35	0.15	3.8
KL5-180V182MS55	1800	35X40	0.15	4.3
KL5-180V222MS56	2200	35X45	0.15	4.8
200V				
KL5-200V181MS21	180	22X20	0.10	1.0
KL5-200V271MS22	270	22X25	0.10	1.3
KL5-200V391MS23	390	22X30	0.10	1.6
KL5-200V471MS24	470	22X35	0.10	1.9
KL5-200V561MS25	560	22X40	0.10	2.1
KL5-200V681MS26	680	22X45	0.10	2.4
KL5-200V821MS27	820	22X50	0.10	2.6
KL5-200V271MS31	270	25X20	0.10	1.3
KL5-200V391MS32	390	25X25	0.10	1.6
KL5-200V561MS33	560	25X30	0.10	2.0
KL5-200V681MS34	680	25X35	0.10	2.3
KL5-200V821MS35	820	25X40	0.10	2.6
KL5-200V102MS37	1000	25X50	0.10	3.0
KL5-200V391MS41	390	30X20	0.10	1.7
KL5-200V561MS42	560	30X25	0.10	2.1
KL5-200V821MS43	820	30X30	0.10	2.7
KL5-200V102MS44	1000	30X35	0.10	3.0
KL5-200V122MS45	1200	30X40	0.10	3.4
KL5-200V152MS47	1500	30X50	0.10	4.0
KL5-200V561MS51	560	35X20	0.15	2.1
KL5-200V821MS52	820	35X25	0.15	2.7
KL5-200V102MS53	1000	35X30	0.15	3.0
KL5-200V122MS54	1200	35X35	0.15	3.4
KL5-200V152MS55	1500	35X40	0.15	3.9
KL5-200V182MS56	1800	35X45	0.15	4.4
KL5-200V222MS57	2200	35X50	0.15	5.0

Note : Allowable Ripple Current 120Hz at 85°C

KL5 Large Capacitance Miniature Aluminum Electrolytic Capacitors

Standard Ratings

KOSHIN PART NO./VV(V)	CAP (μ F)	SIZE (ϕ XL) (mm)	Tan δ	Ripple Current (Arms)
250V				
KL5-250V151MS21	150	22X20	0.10	0.94
KL5-250V221MS22	220	22X25	0.10	1.2
KL5-250V271MS23	270	22X30	0.10	1.4
KL5-250V331MS24	330	22X35	0.10	1.6
KL5-250V391MS25	390	22X40	0.10	1.8
KL5-250V471MS26	470	22X45	0.10	2.0
KL5-250V561MS27	560	22X50	0.10	2.2
KL5-250V181MS31	180	25X20	0.10	1.1
KL5-250V271MS32	270	25X25	0.10	1.4
KL5-250V391MS33	390	25X30	0.10	1.7
KL5-250V471MS34	470	25X35	0.10	2.0
KL5-250V561MS35	560	25X40	0.10	2.2
KL5-250V681MS36	680	25X45	0.10	2.5
KL5-250V271MS41	270	30X20	0.10	1.4
KL5-250V391MS42	390	30X25	0.10	1.8
KL5-250V561MS43	560	30X30	0.10	2.3
KL5-250V681MS44	680	30X35	0.10	2.6
KL5-250V821MS45	820	30X40	0.10	2.9
KL5-250V102MS46	1000	30X45	0.10	3.3
KL5-250V122MS47	1200	30X50	0.10	3.7
KL5-250V391MS51	390	35X20	0.15	1.8
KL5-250V561MS52	560	35X25	0.15	2.3
KL5-250V681MS53	680	35X30	0.15	2.6
KL5-250V821MS54	820	35X35	0.15	2.9
KL5-250V102MS55	1000	35X40	0.15	3.3
KL5-250V122MS56	1200	35X45	0.15	3.7
KL5-250V152MS57	1500	35X50	0.15	4.2
315V				
KL5-315V101MS21	100	22X20	0.15	0.78
KL5-315V151MS22	150	22X25	0.15	1.0
KL5-315V181MS23	180	22X30	0.15	1.1
KL5-315V221MS24	220	22X35	0.15	1.3
KL5-315V271MS25	270	22X40	0.15	1.5
KL5-315V331MS26	330	22X45	0.15	1.7
KL5-315V121MS31	120	25X20	0.15	0.88
KL5-315V181MS32	180	25X25	0.15	1.1

KOSHIN PART NO./VV(V)	CAP (μ F)	SIZE (ϕ XL) (mm)	Tan δ	Ripple Current (Arms)
KL5-315V271MS33	270	25X30	0.15	1.4
KL5-315V331MS34	330	25X35	0.15	1.7
KL5-315V391MS35	390	25X40	0.15	1.8
KL5-315V471MS37	470	25X50	0.15	2.1
KL5-315V181MS41	180	30X20	0.15	1.2
KL5-315V271MS42	270	30X25	0.15	1.5
KL5-315V391MS43	390	30X30	0.15	1.9
KL5-315V471MS44	470	30X35	0.15	2.1
KL5-315V561MS45	560	30X40	0.15	2.4
KL5-315V681MS46	680	30X45	0.15	2.7
KL5-315V271MS51	270	35X20	0.15	1.5
KL5-315V391MS52	390	35X25	0.15	1.9
KL5-315V471MS53	470	35X30	0.15	2.2
KL5-315V561MS54	560	35X35	0.15	2.5
KL5-315V681MS55	680	35X40	0.15	2.8
KL5-315V821MS56	820	35X45	0.15	3.1
KL5-315V102MS57	1000	35X50	0.15	3.5
350V				
KL5-350V680MS21	68	22X20	0.15	0.61
KL5-350V101MS22	100	22X25	0.15	0.78
KL5-350V151MS23	150	22X30	0.15	1.0
KL5-350V181MS24	180	22X35	0.15	1.1
KL5-350V221MS25	220	22X40	0.15	1.3
KL5-350V271MS27	270	22X50	0.15	1.5
KL5-350V101MS31	100	25X20	0.15	0.77
KL5-350V151MS32	150	25X25	0.15	0.99
KL5-350V181MS33	180	25X30	0.15	1.1
KL5-350V221MS34	220	25X35	0.15	1.3
KL5-350V271MS35	270	25X40	0.15	1.5
KL5-350V331MS36	330	25X45	0.15	1.7
KL5-350V391MS37	390	25X50	0.15	1.9
KL5-350V151MS41	150	30X20	0.15	1.0
KL5-350V221MS42	220	30X25	0.15	1.3
KL5-350V271MS43	270	30X30	0.15	1.5
KL5-350V331MS44	330	30X35	0.15	1.7
KL5-350V391MS45	390	30X40	0.15	1.9
KL5-350V471MS46	470	30X45	0.15	2.1

Note : Allowable Ripple Current 120Hz at 85°C

KL5 Large Capacitance Miniature Aluminum Electrolytic Capacitors

Standard Ratings

KOSHIN PART NO./VV(V)	CAP (μ F)	SIZE (ϕ XL) (mm)	Tan δ	Ripple Current (Arms)
KL5-350V561MS47	560	30X50	0.15	2.4
KL5-350V181MS51	180	35X20	0.15	1.2
KL5-350V271MS52	270	35X25	0.15	1.6
KL5-350V391MS53	390	35X30	0.15	1.9
KL5-350V471MS54	470	35X35	0.15	2.2
KL5-350V561MS55	560	35X40	0.15	2.5
KL5-350V681MS56	680	35X45	0.15	2.8
400V				
KL5-400V560MS21	56	22X20	0.15	0.54
KL5-400V820MS22	82	22X25	0.15	0.69
KL5-400V121MS23	120	22X30	0.15	0.86
KL5-400V151MS24	150	22X35	0.15	1.0
KL5-400V181MS25	180	22X40	0.15	1.1
KL5-400V221MS26	220	22X45	0.15	1.3
KL5-400V820MS31	82	25X20	0.15	0.69
KL5-400V121MS32	120	25X25	0.15	0.87
KL5-400V151MS33	150	25X30	0.15	1.0
KL5-400V181MS34	180	25X35	0.15	1.1
KL5-400V221MS35	220	25X40	0.15	1.3
KL5-400V271MS36	270	25X45	0.15	1.5
KL5-400V331MS37	330	25X50	0.15	1.7
KL5-400V121MS41	120	30X20	0.15	0.93
KL5-400V181MS42	180	30X25	0.15	1.2
KL5-400V221MS43	220	30X30	0.15	1.4
KL5-400V271MS44	270	30X35	0.15	1.6
KL5-400V331MS45	330	30X40	0.15	1.8
KL5-400V391MS46	390	30X45	0.15	2.0
KL5-400V471MS47	470	30X50	0.15	2.2
KL5-400V151MS51	150	35X20	0.15	1.2
KL5-400V221MS52	220	35X25	0.15	1.5
KL5-400V331MS53	330	35X30	0.15	1.8

KOSHIN PART NO./VV(V)	CAP (μ F)	SIZE (ϕ XL) (mm)	Tan δ	Ripple Current (Arms)
KL5-400V391MS54	390	35X35	0.15	2.1
KL5-400V471MS55	470	35X40	0.15	2.3
KL5-400V561MS56	560	35X45	0.15	2.6
KL5-400V681MS57	680	35X50	0.15	2.9
450V				
KL5-450V470MS21	47	22X20	0.15	0.49
KL5-450V680MS22	68	22X25	0.15	0.62
KL5-450V820MS23	82	22X30	0.15	0.71
KL5-450V101MS24	100	22X35	0.15	0.82
KL5-450V121MS25	120	22X40	0.15	0.92
KL5-450V151MS26	150	22X45	0.15	1.1
KL5-450V181MS27	180	22X50	0.15	1.2
KL5-450V560MS31	56	25X20	0.15	0.57
KL5-450V820MS32	82	25X25	0.15	0.72
KL5-450V121MS33	120	25X30	0.15	0.91
KL5-450V151MS34	150	25X35	0.15	1.0
KL5-450V181MS35	180	25X40	0.15	1.2
KL5-450V221MS37	220	25X50	0.15	1.4
KL5-450V820MS41	82	30X20	0.15	0.77
KL5-450V121MS42	120	30X25	0.15	0.97
KL5-450V181MS43	180	30X30	0.15	1.2
KL5-450V221MS44	220	30X35	0.15	1.4
KL5-450V271MS45	270	30X40	0.15	1.6
KL5-450V331MS47	330	30X50	0.15	1.8
KL5-450V121MS51	120	35X20	0.15	1.0
KL5-450V181MS52	180	35X25	0.15	1.3
KL5-450V221MS53	220	35X30	0.15	1.5
KL5-450V271MS54	270	35X35	0.15	1.7
KL5-450V331MS55	330	35X40	0.15	1.9
KL5-450V391MS56	390	35X45	0.15	2.2
KL5-450V471MS57	470	35X50	0.15	2.4

Note : Allowable Ripple Current 120Hz at 85°C

Coefficients of Frequency for Ripple Current

Frequency (Hz) Rated Voltage (V)	50	120	1k	10k	20k
100 or less	0.95	1	1.10	1.15	1.15
160 to 250	0.87	1	1.11	1.18	1.20
315 or more	0.80	1	1.14	1.19	1.20

Coefficients of Temperature for Ripple Current

Temperature (°C)	+45 or less	+55	+70	+85
100 or less	2.1	1.8	1.5	1
160 or more	1.7	1.5	1.3	1