

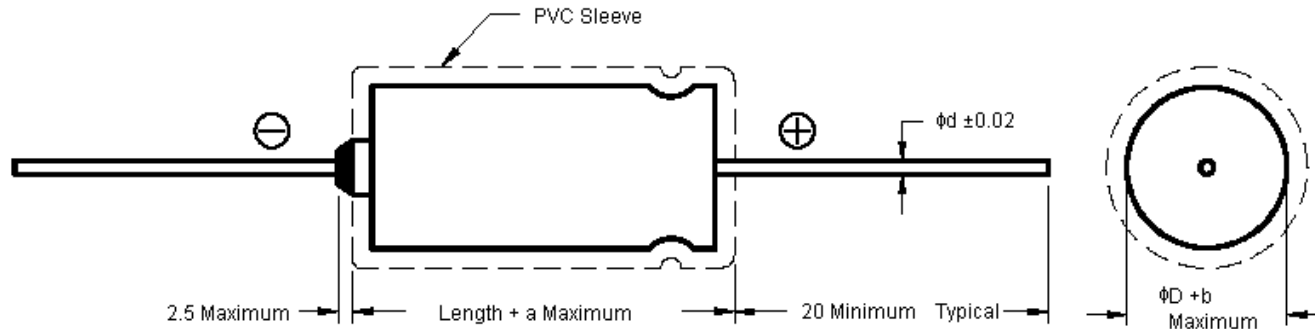


PART NO.

LV Series

REVISIONS

ECN #	REV	DESCRIPTION	DRAWN	DATE	CHECKD	DATE	APPRVD	DATE
-	A	RELEASED	S. R	8/5/06	K. S	8/5/06	N. K	22/5/06



a = 1.5mm if ØD <10
a = 2.0mm if ØD >10

Dimensions : Millimetres
b = 0.5mm if ØD <10
b = 1.0mm if ØD >10

Features:

- Low Impedance characteristics.
- Case sizes are smaller than conventional general-purpose capacitors, with very high performance.
- Can size larger than 8mm diameter has safety vent on rubber bun.
- General purpose 85°C.
- Axial leaded electrolytic.

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DRAWN BY:	DATE:
S. Ram	08/05/06
CHECKED BY:	DATE:
K. Suresh	08/05/06
APPROVED BY:	DATE:
N. Kiwomya	22/05/06

DRAWING TITLE:

LV Series - Axial Electrolytic Capacitors

SIZE A	DWG NO. M10000226	ELECTRONIC FILE 208517_2_DWG	REV A
SCALE: NTS		U.O.M.: mm	SHEET: 1 OF 6



PART NO.

LV Series

REVISIONS

ECN #	REV	DESCRIPTION	DRAWN	DATE	CHECKD	DATE	APPRVD	DATE
-	A	RELEASED	S. R	8/5/06	K. S	8/5/06	N. K	22/5/06

Characteristics

Item	Characteristic																																																	
Operating temperature range	-40°C to +85°C.																																																	
Capacitance tolerance	±20% (at 20°C, 120Hz).																																																	
Leakage current	I = 0.02CV or 3µA whichever is greater (after 3 minutes applying the rated DC working voltage at 20°C) where C = rated capacitance in µF, V = rated DC working voltage in V.																																																	
Dissipation factor (tan δ) (At 20°C, 120Hz)	<table border="1"> <thead> <tr> <th>Rated Voltage (V)</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63</th> <th>100</th> </tr> </thead> <tbody> <tr> <th>Tan δ</th> <td>0.23</td> <td>0.20</td> <td>0.17</td> <td>0.15</td> <td>0.12</td> <td>0.10</td> <td>0.09</td> <td>0.08</td> </tr> </tbody> </table>	Rated Voltage (V)	6.3	10	16	25	35	50	63	100	Tan δ	0.23	0.20	0.17	0.15	0.12	0.10	0.09	0.08																															
	Rated Voltage (V)	6.3	10	16	25	35	50	63	100																																									
Tan δ	0.23	0.20	0.17	0.15	0.12	0.10	0.09	0.08																																										
For capacitors whose capacitance exceeds 1000µF, the specification of tan δ is increased by 0.02 for every addition of 1000µF.																																																		
Surge voltage	<table border="1"> <thead> <tr> <th>Rated Voltage (V)</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63</th> <th>100</th> </tr> </thead> <tbody> <tr> <th>Surge Voltage (V)</th> <td>7.3</td> <td>13</td> <td>20</td> <td>32</td> <td>44</td> <td>63</td> <td>79</td> <td>125</td> </tr> </tbody> </table>	Rated Voltage (V)	6.3	10	16	25	35	50	63	100	Surge Voltage (V)	7.3	13	20	32	44	63	79	125																															
	Rated Voltage (V)	6.3	10	16	25	35	50	63	100																																									
Surge Voltage (V)	7.3	13	20	32	44	63	79	125																																										
Low temperature characteristics	1. Capacitance at -40°C shall not be less than 80% of the value at 20°C. 2. Impedance ratio at 120Hz.																																																	
	<table border="1"> <thead> <tr> <th>Rated Voltage (V)</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63</th> <th>100</th> </tr> </thead> <tbody> <tr> <th>Z (-25°C)</th> <th>(ØD < 16)</th> <td>6</td> <td>4</td> <td>3</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> </tr> <tr> <th>Z (+20°C)</th> <th>(ØD ≥ 16)</th> <td>8</td> <td>6</td> <td>4</td> <td>4</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> </tr> <tr> <th>Z (-40°C)</th> <th>(ØD < 16)</th> <td>10</td> <td>8</td> <td>6</td> <td>6</td> <td>4</td> <td>3</td> <td>3</td> <td>3</td> </tr> <tr> <th>Z (20°C)</th> <th>(ØD ≥ 16)</th> <td>18</td> <td>16</td> <td>12</td> <td>10</td> <td>8</td> <td>8</td> <td>6</td> <td>6</td> </tr> </tbody> </table>	Rated Voltage (V)	6.3	10	16	25	35	50	63	100	Z (-25°C)	(ØD < 16)	6	4	3	3	2	2	2	2	Z (+20°C)	(ØD ≥ 16)	8	6	4	4	3	3	3	3	Z (-40°C)	(ØD < 16)	10	8	6	6	4	3	3	3	Z (20°C)	(ØD ≥ 16)	18	16	12	10	8	8	6	6
	Rated Voltage (V)	6.3	10	16	25	35	50	63	100																																									
	Z (-25°C)	(ØD < 16)	6	4	3	3	2	2	2	2																																								
	Z (+20°C)	(ØD ≥ 16)	8	6	4	4	3	3	3	3																																								
Z (-40°C)	(ØD < 16)	10	8	6	6	4	3	3	3																																									
Z (20°C)	(ØD ≥ 16)	18	16	12	10	8	8	6	6																																									
Load life (After 1000 hours application of rated voltage at 85°C, capacitors meet the characteristics requirements listed at right)	<table border="1"> <tbody> <tr> <td>Leakage Current</td> <td>Initial specified value or less</td> </tr> <tr> <td>Capacitance Change</td> <td>within ±20% of initial value</td> </tr> <tr> <td>Capacitance Factor</td> <td>200% of less of initial specified value</td> </tr> </tbody> </table>	Leakage Current	Initial specified value or less	Capacitance Change	within ±20% of initial value	Capacitance Factor	200% of less of initial specified value																																											
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	Capacitance Change	within ±20% of initial value																																																
Capacitance Factor	200% of less of initial specified value																																																	
Shelf life	After leaving capacitors under no load at 85°C for 1000 hours and applying voltage they meet the specified value for load life characteristics listed above.																																																	

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S. Ram	08/05/06
CHECKED BY:	DATE:
K. Suresh	08/05/06
APPROVED BY:	DATE:
N. Kiwomya	22/05/06

DRAWING TITLE:			
LV Series - Axial Electrolytic Capacitors			
SIZE	DWG NO.	ELECTRONIC FILE	REV
A	M10000226	208517_2_DWG	A
SCALE: NTS		U.O.M.: mm	SHEET: 2 OF 6



PART NO.

LV Series

REVISIONS

ECN #	REV	DESCRIPTION	DRAWN	DATE	CHECKD	DATE	APPRVD	DATE
-	A	RELEASED	S. R	8/5/06	K. S	8/5/06	N. K	22/5/06

Allowable ripple current Vs ambient temperature

Ambient Temperature (°C)	Under 50	70°C	85
Multiplier	1.78	1.40	1.00

Frequency coefficient of allowable ripple current

Capacitance (µF)	Frequency (Hz)				
	60	120	500	1K	10K up
Under 100	0.70	1.00	1.30	1.40	1.50
100 - 1000	0.75		1.20	1.30	1.35
1000 up above	0.80		1.12	1.12	1.15

Specifications

Voltage (V)	Capacitance (µF)	Case Size Length (L) x Diameter (φD)	Allowable Ripple Current (mA)*	Lead Diameter	Part Number
10	470	16 x 8	350	0.6	LV471M1AB-0816(E)
	1000	17 x 10	640		LV102M1AB-1017(E)
	2200	22 x 13	1051		LV222M1AB-1322(E)
	4700	28 x 16	1552	0.8	LV472M1AB-1628(E)
16	22	13 x 5	60	0.6	LV220M1CB-0513(E)
	100	14 x 6.3	160		LV101M1CB-6.314(E)
	220	13 x 8	260		LV221M1CB-0813(E)
	470	16 x 8	430		LV471M1CB-0816(E)
	1000	21 x 10	770		LV102M1CB-1021(E)
	2200	24 x 13	1125		LV222M1CB-1324(E)
	4700	33 x 16	1650	0.8	LV472M1CB-1633(E)
25	10	13 x 5	40	0.6	LV100M1EB-0513(E)
	22		65		LV220M1EB-0513(E)
	47	13 x 6	100		LV470M1EB-0613(E)
	100	13 x 8	170		LV101M1EB-0813(E)

* Ripple Current at 85°C, 120Hz

Dimensions : Millimetres

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LV Series - Axial Electrolytic Capacitors			
SIZE	DWG NO.	ELECTRONIC FILE	REV
A	M10000226	208517_2_DWG	A
SCALE: NTS		U.O.M.: mm	SHEET: 3 OF 6



PART NO.

LV Series

REVISIONS

ECN #	REV	DESCRIPTION	DRAWN	DATE	CHECKD	DATE	APPRVD	DATE
-	A	RELEASED	S. R	8/5/06	K. S	8/5/06	N. K	22/5/06

Specifications

Voltage (V)	Capacitance (µF)	Case Size Length (L) x Diameter (φD)	Allowable Ripple Current (mA)*	Lead Diameter	Part Number
25	220	16 x 8	280	0.6	LV221M1EB-0816(E)
	470	21 x 10	510		LV471M1EB-1021(E)
	1000	22 x 13	873		LV102M1EB-1322(E)
	2200	28 x 16	1344	0.8	LV222M1EB-1628(E)
	4700	36 x 18	1881		LV472M1EB-1836(E)
35	22	13 x 6	70	0.6	LV220M1VB-0613(E)
	100	16 x 8	210		LV101M1VB-0816(E)
	220	17 x 10	340		LV221M1VB-1017(E)
	470	22 x 13	610		LV471M1VB-1322(E)
	1000	27 x 13	955		LV102M1VB-1327(E)
	2200	36 x 16	1421	0.8	LV222M1VB-1636(E)
	4700	43 x 22	2280		LV472M1VB-2243(E)
63	22	14 x 6.3	90	0.6	LV220M1JB-6.314(E)
	47	16 x 8	160		LV470M1JB-0816(E)
	100	17 x 10	260		LV101M1JB-1017(E)

*Ripple Current at 85°C, 120Hz.

Dimensions : Millimetres

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DRAWING TITLE:

LV Series - Axial Electrolytic Capacitors

SIZE A	DWG NO. M10000226	ELECTRONIC FILE 208517_2_DWG	REV A
SCALE: NTS		U.O.M.: mm	SHEET: 4 OF 6



PART NO.

LV Series

REVISIONS

ECN #	REV	DESCRIPTION	DRAWN	DATE	CHECKD	DATE	APPRVD	DATE
-	A	RELEASED	S. R	8/5/06	K. S	8/5/06	N. K	22/5/06

Specifications

Voltage (V)	Capacitance (µF)	Case Size Length (L) x Diameter (φD)	Allowable Ripple Current (mA)*	Lead Diameter	Part Number
63	220	22 x 13	480	0.6	LV221M1JB-1322(E)
	470	27 x 13	780		LV471M1JB-1327(E)
	1000	33 x 16	1249	0.8	LV102M1JB-1633(E)
	2200	42 x 20	1744		LV222M1JB-2042(E)
	4700	52 x 25	2710		LV472M1JB-2552(E)
100	2.2	13 x 5	28	0.6	LV2R2M2AB-0513(E)
	4.7	13 x 6	40		LV4R7M2AB-0613(E)
	22	16 x 8	120		LV220M2AB-0816(E)
	47	21 x 10	190		LV470M2AB-1021(E)
	100	22 x 13	340		LV101M2AB-1322(E)

*Ripple Current at 85°C, 120Hz.

Dimensions : Millimetres

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LV Series - Axial Electrolytic Capacitors

SIZE A	DWG NO. M10000226	ELECTRONIC FILE 208517_2_DWG	REV A
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PART NO.

LV Series

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-	A	RELEASED	S. R	8/5/06	K. S	8/5/06	N. K	22/5/06

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Fax No: ++ 61 2 9644 7898
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N. Kiwomya	22/05/06

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SIZE	DWG NO.	ELECTRONIC FILE	REV
A	M10000226	208517_2_DWG	A
SCALE: NTS		U.O.M.: mm	SHEET: 6 OF 6