

LBA

+ 85°C Snap-Mount Aluminum Electrolytic Capacitors



For all general purpose high CV applications

FEATURES

- High Ripple Currents Ratings
- Rugged Design
- Large Case Size Selection
- Capacitance Range: 47μF to 47000μF
- Voltage Range: 10 WVDC to 450 WVDC
- Solvent Tolerant End Seal Standard (250 WVDC)
- Rugged Design

SPECIFICATIONS

Capacitance Tolerance		±20% at 120Hz, 20°C																	
Operating Temperature Range		-40°C to +85°C														-25°C to +85°C			
Dissipation Factor 120Hz, 20°C	WVDC					10	16	25	35	50	63	80	100	160	200	250	350	400	450
	tan δ	C 2200µF								.2	.15	.15	.15	.1	.1	.1	.2	.2	.2
		3300µF C 6800µF						.30	.25	.25	.2	.2	.2						
		C=8200µF					.3	.35	3	.3									
		C 10000µF				.7	.7	.4	.35	.3	.3								
Impedance Ratio 120Hz	WVDC	10	16	25	35	50	63	80	100	160	200	250	350	400	450				
	-25°C/20°C	4	4	3	3	3	3	3	3	3	3	3	8	8	8				
	-40°C/20°C	12	12	6	6	6	6	6	6	8	8	8	-	-	-				
Leakage Current	WVDC	450 WVDC																	
	Time	5 minutes																	
		.02CV or 2000µA																	
		whichever is smaller																	
Load Life		2,000 hours at 85°C with rated voltage and ripple current																	
		Capacitance change Dissipation factor Leakage current									20% of initial measured value 200% of initial specified value < Initial specified value								
Shelf life		500 hours at +85°C with no voltage applied. Units will meet load life specifications																	

SPECIAL ORDER OPTIONS

(See Page 7)

- Special tolerances: ±10% (K), -10% + 30% (Q)
- Epoxy end seal



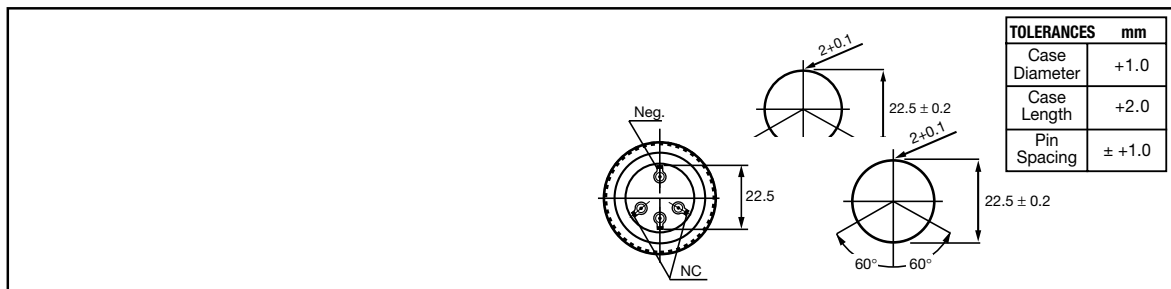
ILLINOIS CAPACITOR, INC. 3757 W. Touhy Ave., Lincolnwood, IL 60712 • (847) 675-1760 • Fax (847) 673-2850 • www.illcap.com

PHYSICAL DIMENSIONS

WVDC (SV) μF	10 (13)	16 (20)	25 (32)	35 (44)	50 (63)	63 (79)	80 (100)	100 (125)	160 (200)	200 (250)	250 (300)	350 (400)	400 (450)	450 (500)
47														22x25
68														25x25
100												25x25 22x30	22x30	22x35
150											25x20	25x30	22x40 25x30	25x40
220									22x20 25x20	22x25 25x20	22x30 25x25 30x20	30x30	22x50 25x40	30x40
330									22x25	22x30 25x25	22x40 25x30 30x25	30x40	30x45	35x40
470									25x25	22x40 25x30 25x35 30x25	22x50 25x40 30x30	35x40	35x45 40x35	35x50
560										25x35	30x35			
680								22x25	30x25	25x40 35x25	30x35 30x40 35x30			
820										30x40	30x45 35x35			
1,000							22x25	22x35 25x25	30x30 30x35 35x25	30x45 35x30 35x35	30x45 30x50 35x40			
1,200									30x35 35x30	30x45 30x50 35x35 35x40	35x45			
1,500						22x25	25x25	25x35	35x35	35x40 35x45	35x50			
1,800									30x50 35x40	35x45 35x50				
2,200					22x25	25x25	22x40 25x35 35x30	25x45 30x35	35x50 40x40	35x50				
3,300				22x25	22x30 25x25	25x35	25x45 35x30	35x35 40x30						
4,700			22x25	22x30 25x25	22x40 25x35 30x25	25x45 30x30 35x25	35x35	35x45 40x35						
5,600			22x30	25x30										
6,800			22x35 25x25	25x30 22x40 30x25	25x45 35x30	35x35	35x45							
8,200		22x25	22x35	25x35	30x40									
10,000		22x30 25x25	22x45 25x35 30x25	25x40 30x30 35x25	35x35	35x45								
15,000	25x25	22x40 30x25	25x45 35x30	30x40 35x35	35x45									
22,000	30x25	22x50 30x30 35x25	35x35 40x30	35x45										
33,000		30x40 35x30	35x50											
47,000		30x50 35x40												

Convert to inches, divide by 25.4.

DxL(mm)



STANDARD PART LISTING

Capacitance (μF)	WVDC	ic [®] PART NUMBER	Maximum ESR m 120Hz, +20°C	Maximum RMS Ripple Current (A) 120Hz, +85°C	Dimensions DxL (mm)
47	450	476LBA450M2BC	7055	0.46	22x25
68	450	686LBA450M2CC	4876	0.60	25x25
100	350	107LBA350M2BD	3316	0.65	22x30
100	350	107LBA350M2CC	3316	0.63	25x25
100	400	107LBA400M2BD	3316	0.68	22x30
100	450	107LBA450M2BE	3316	0.77	22x35
150	250	157LBA250M2CA	1105	0.85	25x20
150	350	157LBA350M2CD	2210	0.97	25x30
150	400	157LBA400M2BF	2210	0.94	22x40
150	400	157LBA400M2CD	2210	0.89	25x30
150	450	157LBA450M2CF	2210	1.08	25x40
220	160	227LBA160M2BA	753.6	1.00	22x20
220	200	227LBA200M2BC	753.6	1.14	22x25
220	200	227LBA200M2CA	753.6	1.10	25x20
220	250	227LBA250M2BD	753.6	1.20	22x30
220	250	227LBA250M2CC	753.6	1.15	25x25
220	250	227LBA250M2DA	753.6	1.10	30x20
220	350	227LBA350M2DD	1507	1.29	30x30
220	400	227LBA400M2BH	1507	1.26	22x50
220	400	227LBA400M2CF	1507	1.22	25x40
220	450	227LBA450M2DF	1507	1.44	30x40
330	160	337LBA160M2BC	502.4	1.20	22x25
330	200	337LBA200M2BD	502.4	1.48	22x30
330	200	337LBA200M2CC	502.4	1.48	25x25
330	250	337LBA250M2BF	502.4	1.72	22x40
330	250	337LBA250M2CD	502.4	1.67	25x30
330	250	337LBA250M2DC	502.4	1.61	30x25
330	350	337LBA350M2DF	1005	1.72	30x40
330	400	337LBA400M2DG	1005	1.74	30x45
330	450	337LBA450M2EF	1005	1.92	35x40
470	160	477LBA160M2CC	352.7	1.52	25x25
470	200	477LBA200M2BF	352.7	2.02	22x40
470	200	477LBA200M2CD	352.7	1.91	25x30
470	200	477LBA200M2CE	352.7	1.80	25x35
470	200	477LBA200M2DC	352.7	1.97	30x25
470	250	477LBA250M2BH	352.7	2.08	22x50
470	250	477LBA250M2CF	352.7	2.03	25x40
470	250	477LBA250M2DD	352.7	1.97	30x30

Capacitance (μF)	WVDC	ic [®] PART NUMBER	Maximum ESR m 120Hz, +20°C	Maximum RMS Ripple Current (A) 120Hz, +85°C	Dimensions DxL (mm)
470	350	477LBA350M2EF	705.5	2.30	35x40
470	400	477LBA400M2EG	705.5	2.23	35x45
470	400	477LBA400M2FE	705.5	2.16	40x35
470	450	477LBA450M2EH	705.5	2.50	35x50
560	200	567LBA200M2CE	296.0	2.22	25x35
560	250	567LBA250M2DE	296.0	2.30	30x35
680	100	687LBA100M2BC	365.7	1.85	22x25
680	160	687LBA160M2DC	243.8	2.10	30x25
680	200	687LBA200M2CF	243.8	2.43	25x40
680	200	687LBA200M2EC	243.8	2.30	35x25
680	250	687LBA250M2DE	243.8	2.40	30x35
680	250	687LBA250M2DF	243.8	2.55	30x40
680	250	687LBA250M2ED	243.8	2.48	35x30
820	200	827LBA200M2DF	202.2	2.85	30x40
820	250	827LBA250M2DG	202.2	2.90	30x45
820	250	827LBA250M2EE	202.2	2.83	35x35
1,000	80	108LBA080M2BC	248.7	1.65	22x25
1,000	100	108LBA100M2BE	248.7	2.08	22x35
1,000	100	108LBA100M2CC	248.7	2.03	25x25
1,000	160	108LBA160M2DD	165.8	2.77	30x30
1,000	160	108LBA160M2DE	165.8	2.80	30x35
1,000	160	108LBA160M2EC	165.8	2.80	35x25
1,000	200	108LBA200M2DG	165.8	3.42	30x45
1,000	200	108LBA200M2ED	165.8	3.42	35x30
1,000	200	108LBA200M2EE	165.8	3.35	35x35
1,000	250	108LBA250M2DG	165.8	3.00	30x45
1,000	250	108LBA250M2DH	165.8	3.65	30x50
1,000	250	108LBA250M2EF	165.8	3.58	35x40
1,200	160	128LBA160M2DE	138.16	3.20	30x35
1,200	160	128LBA160M2ED	138.16	3.20	35x30
1,200	200	128LBA200M2DG	138.16	3.40	30x45
1,200	200	128LBA200M2EE	138.2	3.54	35x35
1,200	200	128LBA200M2DH	138.16	3.40	30x50
1,200	200	128LBA200M2EF	138.2	3.47	35x40
1,200	250	128LBA250M2EG	138.16	3.50	35x45
1,500	63	158LBA063M2BC	165.8	2.00	22x25
1,500	80	158LBA080M2CC	165.8	2.15	25x25
1,500	100	158LBA100M2CE	165.8	2.76	25x35



STANDARD PART LISTING

Capacitance (μF)	WVDC	IC [®] PART NUMBER	Maximum ESR m 120Hz, +20°C	Maximum RMS Ripple Current (A) 120Hz, +85°C	Dimensions DxL (mm)
1,500	160	158LBA160M2EE	110.5	3.48	35x35
1,500	200	158LBA200M2EG	110.52	3.80	35x45
1,500	200	158LBA200M2EF	110.5	4.10	35x40
1,500	250	158LBA250M2EH	110.52	4.00	35x50
1,800	160	188LBA160M2DH	92.1	4.10	30x50
1,800	160	188LBA160M2EF	92.1	4.10	35x40
1,800	200	188LBA200M2EG	92.1	4.20	35x45
1,800	200	188LBA200M2EH	92.1	4.38	35x50
2,200	50	228LBA050M2BC	150.7	2.00	22x25
2,200	63	228LBA063M2CC	113.0	2.30	25x25
2,200	80	228LBA080M2BF	113.0	2.71	22x40
2,200	80	228LBA080M2CE	113.0	2.66	25x35
2,200	100	228LBA100M2CG	113.0	3.41	25x45
2,200	100	228LBA100M2DE	113.0	3.35	30x35
2,200	100	228LBA100M2ED	113	3.28	35x30
2,200	160	228LBA160M2EH	75.36	4.97	35x50
2,200	160	228LBA160M4FF	75.36	4.57	40x40
2,200	200	228LBA200M2EH	75.36	4.70	35x50
3,300	35	338LBA035M2BC	125.6	2.20	22x25
3,300	50	338LBA050M2BD	125.6	2.40	22x30
3,300	50	338LBA050M2CC	125.6	2.35	25x25
3,300	63	338LBA063M2CE	100.5	2.81	25x35
3,300	80	338LBA080M2CG	100.5	3.41	25x45
3,300	80	338LBA080M2ED	100.5	3.28	35x30
3,300	100	338LBA100M2EE	100.5	3.58	35x35
3,300	100	338LBA100M2FD	100.5	3.50	40x30
4,700	25	478LBA025M2BC	105.8	2.20	22x25
4,700	35	478LBA035M2BD	88.18	2.40	22x30
4,700	35	478LBA035M2CC	88.18	2.35	25x25
4,700	50	478LBA050M2BF	88.18	2.91	22x40
4,700	50	478LBA050M2CE	88.18	2.86	25x35
4,700	50	478LBA050M2DC	88.18	2.80	30x25
4,700	63	478LBA063M2CG	70.55	3.25	25x45
4,700	63	478LBA063M2DD	70.55	3.20	30x30
4,700	63	478LBA063M2EC	70.55	3.13	35x25
4,700	80	478LBA080M2EE	70.55	3.73	35x35
4,700	100	478LBA100M2EG	70.55	4.30	35x45

Capacitance (μF)	WVDC	IC [®] PART NUMBER	Maximum ESR m 120Hz, +20°C	Maximum RMS Ripple Current (A) 120Hz, +85°C	Dimensions DxL (mm)
4,700	100	478LBA100M2FE	70.55	4.22	40x35
5,600	25	568LBA025M2BD	88.81	2.4	22x30
6,800	25	688LBA025M2BE	73.14	2.6	22x35
6,800	25	688LBA025M2CC	73.14	2.55	25x25
6,800	35	688LBA035M2BF	60.95	3.06	22x40
6,800	35	688LBA035M2CD	60.95	3.01	25x30
6,800	35	688LBA035M2DC	60.95	2.95	30x25
6,800	50	688LBA050M2CG	60.95	3.86	25x45
6,800	50	688LBA050M2ED	60.95	3.73	35x30
6,800	63	688LBA063M2EE	48.76	4.15	35x35
6,800	80	688LBA080M2EG	48.76	4.80	35x45
8,200	16	828LBA016M2BC	70.76	2.37	22x25
8,200	25	828LBA025M2BE	70.76	3.31	22x35
8,200	35	828LBA035M2CE	60.65	3.45	25x35
8,200	50	828LBA050M2DF	60.65	4.35	30x40
10,000	16	109LBA016M2BD	116.1	2.84	22x30
10,000	16	109LBA016M2CC	116.1	2.76	25x25
10,000	25	109LBA025M2BG	116.1	3.40	22x45
10,000	25	109LBA025M2CE	116.1	3.32	25x35
10,000	25	109LBA025M2DC	116.1	3.31	30x25
10,000	35	109LBA035M2CF	82.89	4.06	25x40
10,000	35	109LBA035M2DD	82.89	4.00	30x30
10,000	35	109LBA035M2EC	82.89	3.93	35x25
10,000	50	109LBA050M2EE	82.89	4.70	35x35
10,000	63	109LBA063M2EG	49.74	5.20	35x45
15,000	10	159LBA010M2CC	77.37	2.76	25x25
15,000	16	159LBA016M2BF	77.37	3.94	22x40
15,000	16	159LBA016M2DC	77.37	3.51	30x25
15,000	25	159LBA025M2CG	77.37	4.50	25x45
15,000	25	159LBA025M2ED	55.26	4.39	35x30
15,000	35	159LBA035M2DF	55.26	5.07	30x40
15,000	35	159LBA035M2EE	55.26	5.00	35x35
15,000	50	159LBA050M2EG	55.26	5.90	35x45
22,000	10	229LBA010M2DC	52.75	3.49	30x25
22,000	16	229LBA016M2EC	52.75	4.13	35x25
22,000	16	229LBA016M2BH	52.75	5.23	22x50
22,000	16	229LBA016M2DD	52.76	4.45	30x30



STANDARD PART LISTING

Capacitance (μ F)	WVDC	IC [®] PART NUMBER	Maximum ESR m 120Hz, +20°C	Maximum RMS Ripple Current (A) 120Hz, +85°C	Dimensions DxL (mm)
22,000	16	229LBA016M2DD	52.75	4.45	30x30
22,000	25	229LBA025M2EE	52.75	5.73	35x35
22,000	25	229LBA025M2FD	30.14	5.65	40x30
22,000	35	229LBA035M2EG	37.68	6.25	35x45
33,000	16	339LBA016M2DF	35.17	5.80	30x40

Capacitance (μ F)	WVDC	IC [®] PART NUMBER	Maximum ESR m 120Hz, +20°C	Maximum RMS Ripple Current (A) 120Hz, +85°C	Dimensions DxL (mm)
33,000	16	339LBA016M2ED	35.77	5.15	35x30
33,000	25	339LBA025M2EH	35.17	7.20	35x50
47,000	16	479LBA016M2DH	31.75	6.78	30x50
47,000	16	479LBA016M2EF	31.75	6.71	35x40

NOTE 1: WVDC: MAXIMUM RATED DC WORKING VOLTAGE AT +85°C.

NOTE 2: SVDC: MAXIMUM RATED DC SURGE VOLTAGE AT +85°C.

NOTE 3: DISSIPATION FACTOR (TAN δ) MAXIMUM: 120 Hz, +25°C.

NOTE 4: ESR: MAXIMUM EQUIVALENT SERIES RESISTANCE;
120 Hz, +25°C MINIMUM CAPACITANCE, MAXIMUM DISSIPATION FACTOR.

NOTE 5: MAXIMUM LEAKAGE CURRENT; RATED WVDC, 5 MINUTES, +25°C.

NOTE 6: RMS RIPPLE CURRENT; 120 Hz, +85°C.

NOTE 7: CAPACITANCE TOLERANCE IS MEASURED AT 120 Hz, +25°C.

NOTE 8: ALL MEASUREMENTS ARE PERFORMED USING THE BRIDGE METHOD.

RIPPLE CURRENT MULTIPLIER

When operated at temperatures below rated temperature (+85°C) or at frequencies other than 120Hz, RMS, Ripple Current may be increased by the multiplier as shown.

Ripple Current Multiplier					
Temperature					
+85°C	+60°C		+45°C		
1.00	1.23		1.50		
Frequency (Hz)					
Rated Voltage	60	120	1K	10K	100K
16-100	.9	1.0	1.10	1.15	1.25
160-250	.8	1.0	1.25	1.40	1.50
350-450	.8	1.0	1.20	1.25	1.40

CAUTION: The surface temperature of the capacitor shall not rise more than 10°C above the ambient temperature and shall never exceed the maximum rated temperature and shall never exceed the maximum rated temperature (+85°C).

CASE DIMENSIONS CODE LAST TWO LETTERS OF PART NUMBERS (DxL)mm	Letter Group							
	A	B	C	D	E	F	G	H
	20	22	25	30	35	40	45	50

