

LC Type

For printed circuit board , high – performance aluminum electrolytic power supply input filter capacitors.

Specifically designed for complete application ease of PC board mounting ,LC type capacitors are ideally suited for use in switching power supplies and other industrial and commercial applications. LC type capacitors are designed for operation over the temperature range of -25°C to 105°C for rated voltage 160V to 450 V

Low Profile PC Board Terminals

LCrge capacitance LC type capacitors which is the snap-lock terminals providing secure locking into the PC board for low cost solder assembly.

Standard units are avaiLCble in a variety of case sizes with case diameters of 22 to 35 mm and heights form 25 mm to 50 mm.

All our aluminum capacitors are lead free.

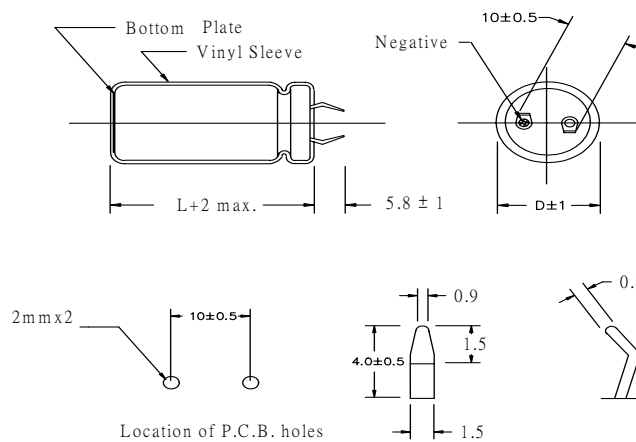
Diagram of Dimensions and P.C.B Mounting Holes (Unit=mm)

Construction of terminal: Fe/Cu/Sn

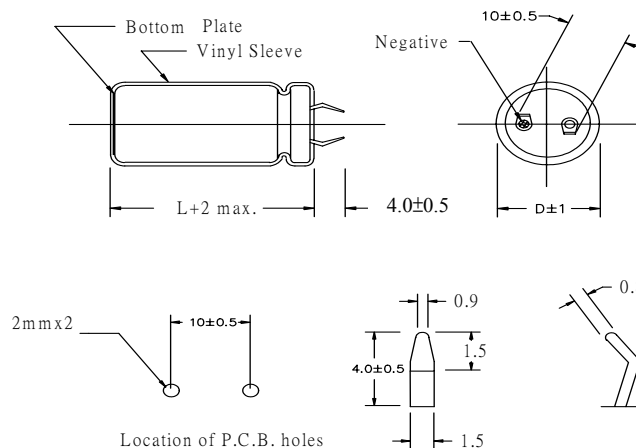
Standard Terminal type



RoHS
COMPLIANT



Short Terminal type



Distributed by:



PERFORMANCE CHARACTERISTICS (continued)

Feature

Working voltage range : 10 to 100V 160 to 450V
 Operating temp. range : -40 to +105°C -25 to +105°C
 Rate capacitance range : 47 to 56000 uF
 Capacitance tolerance : -20 to +20% (@ 20°C)
 DC leakage current (uA) : 0.02CV or 3000 , whichever is smaller . (@ 20°C)
 (measurements shall be made after a 5 minute charge at rated working voltage)

Dissipation factor : at 120 Hz, 20°C

WV (V) 10 16 25 35 50 63 80 100 160 250 315-450

DF (%) 55 50 45 40 35 30 25 20 15 15 25

For capacitance value which is LCrger than 33000uf, add following calculCted value:

[(rated capacitance) – 33000uf / 10000uf] x 0.1

Load Life (5000 hrs, with rated voltage and full rated ripple current at rated temperature, at 105°C)

Capacitance change ... : within ±20% of initial value

Dissipation factor ... : 200% or less of initial specified value

Leakage current : not exceed the initial specified value

Shelf Life (1000 hrs, no voltage applied, at 105°C)

Capacitance change : within ±20% of initial value

Dissipation factor : 150% or less of initial specified value

Leakage current : not exceed the initial specified value

Catalog Numbering System

LC 400 M 0150 B P F - 2535
 : : : : : : : : ...Case size
 : : : : : : : : ...Lead cut
 : : : : : : : : ...Rubber
 : : : : : : : : ...Pitch
 : : : : : : : : ...Package Code
 : : : : : : : : ...Capacitance. This expressed in microfarads
 : : : : : : : : ...Capacitance tolerance
 : : : : : : : : ...DC voltage rating. This is expressed in volt.
 : : : : : : : : ...YAGEO type number. This identifies the basic capacitor design

PERFORMANCE CHARACTERISTICS

1. General Characteristics

1.1 Marking

Capacitors shall be marked with YAGEO mark ; rated capacitance ; rated DC working voltage voltage. and the date code of manufacture. The cathode terminal or lead will be identified with minus signs (—) on the side of the case .

1.2 Operating Temperature Range

These capacitors are designed to operate over a temperature rang of -25°C to $+105^{\circ}\text{C}$ for . rated voltage 160V to 450V

1.2.1 At -25°C , capacitance shall retain at least 70% of their initial value measured @ 20°C , At 85°C capacitance shall increases to no more than 120% of their initial value measured @ 20°C

1.2.2 At -25°C , impedance shall increase to no more than the following table.

Rated Voltage (V)	160-400	450
$Z(-25^{\circ}\text{C}) / z(20^{\circ}\text{C})$	4	8

1.3 Vent Test

During and after applicable test (sec. 1.3.1 or 1.3.2) there shall be no explosion , fLCsh , fLCme or expulsion of particles of the core or container. In addition, the case shall not be expelled from the core . If the capacitor under test is a multisection unit, this test shall apply to input section only. Both of the following test shall be performed, but on separate test units.

1.3.1 Forward Bias Test

The capacitor under test shall be connected to a DC power supply that has sufficient voltage to supply a constant direct current of 500 milliamperes with the positive terminal of the capacitor connected to the positive supply terminal and the negative capacitor terminal connected to the negative supply terminal. The constant current shall be maintained until (1) the capacitor vents ,(2) 300 seconds have eLCpsed , or (3) the capacitor under test open circuits.

1.3.2 Reverse Bias Test

The capacitor under test shall be connected to a power supply with sufficient voltage to provide a constant direct current of 500 milliamperes when the positive capacitor terminal is connected to the negative supply terminal and the negative capacitor terminal to the positive supply terminal. The constant current shall be maintained until (1) the capacitor vents, (2) 300 seconds have eLCpsed , or (3) the capacitor under open circuits.

PERFORMANCE CHARACTERISTICS (continued)

2. Mechanical Characteristics

2.1 Lead Pull test

Capacitor leads shall withstand a steady pull of 2.5kg applied axially to the leads for 5 seconds.

3. Electrical Characteristics

3.1 Standard Test Conditions

Unless otherwise specified all tests shall be performed at, or referred to, an ambient temperature of 20°C and a reLctive humidity not greater than 50%.

3.2 Capacitance and dissipation Factor

Measurements shall be made on a capacitance bridge capable of ±2% accuracy on capacitance and dissipation factor measurements. Measurements shall be at 120 Hz. The RMS value of the AC measuring voltage shall not exceed 1.0 volt.

3.3 Leakage Current

3.3.1 Pre-conditioning. Rated working voltage shall be applied to capacitors for a minimum period of 15 minutes duration at least 24 hours and not more than 48 hours before test.

3.3.2 Test. Measurements shall be made after a 2 minute charge at rated working voltage at 20°C with an application of a steady source of power. Such as a reguLcR power supply, with a 1000 ohm resistance to limit the charging current, connected in series with each capacitor under test.

3.4 Surge Voltage

The surge DC rating is the maximum voltage to which the capacitor should be subjected under any conditions. This includes transients and peak ripple at the highest line voltage.

3.4.1 Capacitors, connected in series with 1000 ohm resistors, shall withstand the surge test voltage applied at the rated of 1/2 minute on, 5 1/2 minutes off, for 1000 successive test cycles at 20°C. (see the following table)

Rated Voltage (v)	160	200	250	350	400	450
Surge Voltage (v)	200	250	300	400	450	500

PERFORMANCE CHARACTERISTICS (continued)

3.4.2 After the test , the capacitors shall meet the requirement specified in the following table.

Test	Value after test
Leakage Current	Not more than the initial value specified
Capacitance Change	More than 85% of the value before test
Dissipation Factor	Not more than 175% of the initial value specified

3.5 Humidity Test

Capacitors shall be subjected to a temperature of $40\pm 2^{\circ}\text{C}$ at a relative humidity of 90 to 95% for a period of 500 hours, then air dried for 1 hour. Following this conditioning , capacitors shall meet the specified requirements for dissipation factor and DC leakage current, and the capacitance value shall not change more than 10% .

4 Life And Reliability Test

4.1 Life Test

4.1.1 Rated voltage with full rated ripple current shall be applied to the capacitors for a period of 5000 hours while units are maintained at an ambient temperature of $+105^{\circ}\text{C}$.

4.1.2 Capacitance shall then be removed from the test chamber and returned to room temperature

4.1.3 The capacitance shall then be measured in accordance with section 3.2 It shall not decrease to less than 80% of the capacitance at 20°C , measured prior to the test, nor shall it increase to more than 120% of the original 20°C value.

4.1.4 The dissipation factor shall be measured in accordance with section 3.2, The dissipation factor shall not exceed 200% of the initial requirement.

4.1.5 At the conclusion of the test, the leakage current shall not exceed the initial DC leakage current requirement. Measurements shall be made in accordance with section 3.3 .

4.2 Shelf Test

After storage for 1000 hours at 105°C with no voltage applied, the capacitance and dissipation factor shall meet the initial requirements of section 4.1.3 and 4.1.4 ; the DC leakage current measured in accordance with section 3.3 shall not exceed 150% of the initial requirement .

GUIDE TO APPLICATION

1. Maximum Ripple Current

1.1 Maximum rms. ripple current at 105°C 120 Hz is given in the table.

1.2 When capacitors are operated at temperatures other than 105°C, the permissible 120 Hz rms. ripple current limit can be calculated using the multiplication factors shown below :

Ambient Temp. (°C)	60	70	85	105
Factors	2.27	2.17	1.67	1.0

1.3 When capacitors are operated at frequency other than 120 Hz, the permissible rms. ripple current limit can be calculated using the multiplication factor shown below :

Frequency (Hz)	60	120	1k	10-100k
160-250(V)	0.80	1.0	1.15	1.18
315-450(V)	0.80	1.0	1.10	1.15

2. Ripple Voltage

2.1 Ripple voltage must not exceed the sum of the DC voltage plus the AC ripple voltage must not exceed the rated DC voltage. The DC voltage plus the peak AC voltage must not cause a voltage reversal more than 1.5 volts.

3. Insulating

General types of aluminum electrolytic capacitors are covered with a vinyl sleeve or the like. and this sleeve is used for marking. When the internal element or the container is needed to be insulated, capacitors specially designed for insulation requirement are recommended to be used

4. Soldering

4.1 When soldering a printed circuit board with various components, too high soldering temperature or too long dipping times may cause secondary shrinking of the sleeve which unnecessarily exposes the container. Soldering is allowed to performed at less than 260°C for less than 10 seconds.

4.2 Soldering may melt or break the sleeve , if the sleeve is contacted with circuit patterns . To avoid this trouble ,the capacitors are recommended to be slightly apart from the circuit boards.

GUIDE TO APPLICATION (continued)

5. Solderability

The solderability requirements shall be under soldering temperature at $235\pm 2^{\circ}\text{C}$, and soldering time 2 ± 0.1 seconds.

6. Vent

The capacitors are provided with a pressure resistive controlled safety vent form on the bottom of the container. The vent is designed to rupture in the event that higher internal pressure is developed by circuit malfunction or capacitor miss-use.

7. High Altitude

These capacitors are capable of withstanding in transit conditions where storage temperature may range from -25°C to $+105^{\circ}\text{C}$ and the altitude may reach 200,000 feet.

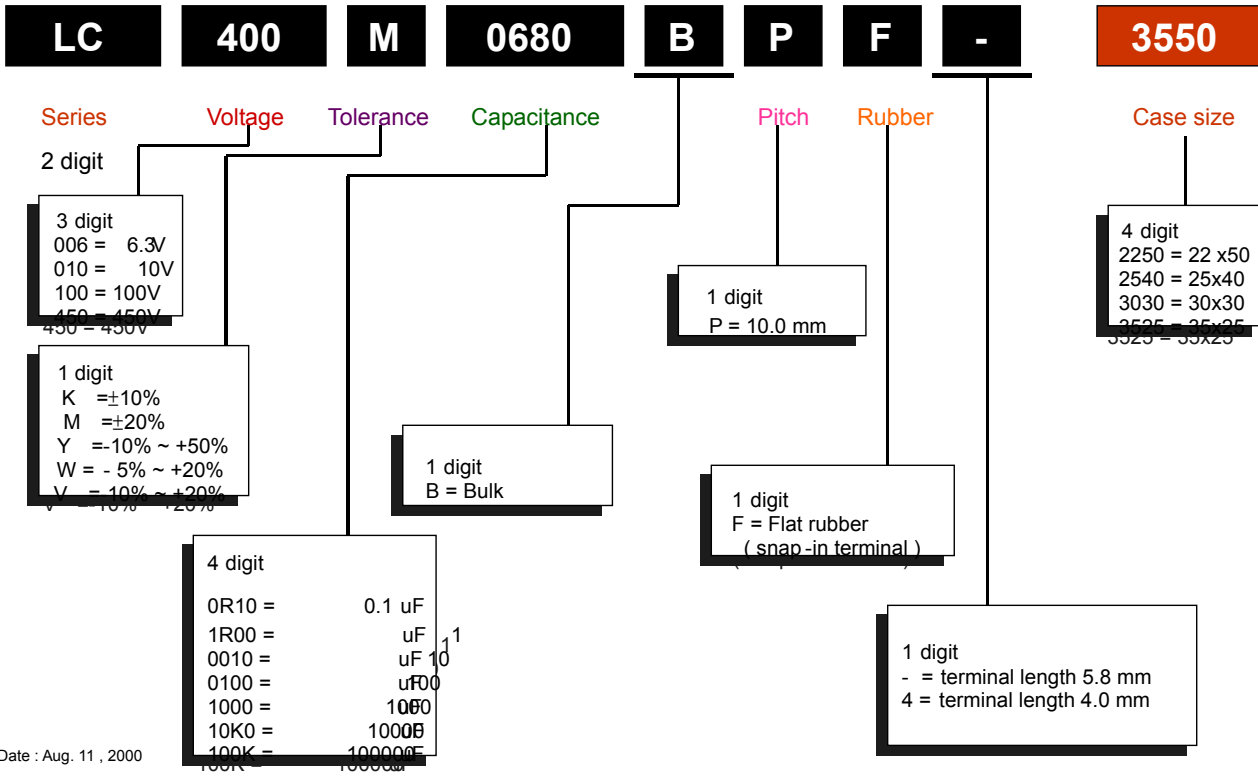
8. Cleaning Agents

Halogenated hydrocarbon cleaning soLCents are not recommended for use in cleaning capacitors

supplied with exposed end seals . Where cleaning with a halogenated soLCent is desired, capacitors should be ordered with a epoxy-coated end seal.

YAGEO Snap -in Type E/C Ordering Code

1. For worldwide customers use only
2. For standard specification use only



Date : Aug. 11 , 2000

Table 1-1 LC Type , Standard Ratings and Catalog Number (LIFE:105°C,5000Hr.)

Catalog Number	Capacitance (μ F)	Rated Voltage (V.DC)	Size (mm) D X L	Dissipation Factor (Tan δ)	Ripple 120HZ (A/rms)	ESR
LC160M0270BPF-2225	270	160	22X25	0.15	0.85	0.737
LC160M0330BPF-2230	330	160	22X30	0.15	1.00	0.603
LC160M0390BPF-2230	390	160	22X30	0.15	1.15	0.51
LC160M0390BPF-2525	390	160	25X25	0.15	1.15	0.51
LC160M0470BPF-2235	470	160	22X35	0.15	1.30	0.423
LC160M0470BPF-2530	470	160	25X30	0.15	1.30	0.423
LC160M0560BPF-2240	560	160	22X40	0.15	1.57	0.355
LC160M0560BPF-2530	560	160	25X30	0.15	1.50	0.355
LC160M0560BPF-3025	560	160	30X25	0.15	1.54	0.355
LC160M0680BPF-2245	680	160	22X45	0.15	1.75	0.293
LC160M0680BPF-2535	680	160	25X35	0.15	1.70	0.293
LC160M0680BPF-3030	680	160	30X30	0.15	1.77	0.293
LC160M0820BPF-2250	820	160	22X50	0.15	2.03	0.243
LC160M0820BPF-2540	820	160	25X40	0.15	1.97	0.243
LC160M0820BPF-3030	820	160	30X30	0.15	1.95	0.243
LC160M0820BPF-3525	820	160	35X25	0.15	1.99	0.243
LC160M1000BPF-2545	1000	160	25X45	0.15	2.15	0.199
LC160M1000BPF-3035	1000	160	30X35	0.15	2.15	0.199
LC160M1000BPF-3530	1000	160	35X30	0.15	2.21	0.199
LC160M1200BPF-3040	1200	160	30X40	0.15	2.45	0.166
LC160M1200BPF-3535	1200	160	35X35	0.15	2.52	0.166
LC160M1500BPF-3050	1500	160	30X50	0.15	2.75	0.133
LC160M1500BPF-3540	1500	160	35X40	0.15	2.75	0.133
LC160M1800BPF-3545	1800	160	35X45	0.15	3.00	0.111
LC160M2200BPF-3550	2200	160	35X50	0.15	3.50	0.09
LC180M0270BPF-2225	270	180	22X25	0.15	0.85	0.737
LC180M0330BPF-2230	330	180	22X30	0.15	1.10	0.603
LC180M0390BPF-2235	390	180	22X35	0.15	1.32	0.51
LC180M0390BPF-2525	390	180	25X25	0.15	1.25	0.51
LC180M0470BPF-2240	470	180	22X40	0.15	1.47	0.423
LC180M0470BPF-2530	470	180	25X30	0.15	1.40	0.423
LC180M0560BPF-2245	560	180	22X45	0.15	1.70	0.355
LC180M0560BPF-2535	560	180	25X35	0.15	1.63	0.355
LC180M0560BPF-3025	560	180	30X25	0.15	1.60	0.355
LC180M0680BPF-2250	680	180	22X50	0.15	1.87	0.293
LC180M0680BPF-2540	680	180	25X40	0.15	1.82	0.293
LC180M0680BPF-3030	680	180	30X30	0.15	1.80	0.293
LC180M0680BPF-3525	680	180	35X25	0.15	1.84	0.293
LC180M0820BPF-2545	820	180	25X45	0.15	2.05	0.243
LC180M0820BPF-3035	820	180	30X35	0.15	2.05	0.243
LC180M0820BPF-3530	820	180	35X30	0.15	2.11	0.243

Table 1-2LC Type , Standard Ratings and Catalog Number (LIFE:105°C,5000Hr.)

Catalog Number	Capacitance (μ F)	Rated Voltage (V.DC)	Size (mm) D X L	Dissipation Factor (Tan δ)	Ripple 120HZ (A/rms)	ESR
LC180M1000BPF-2550	1000	180	25X50	0.15	2.27	0.199
LC180M1000BPF-3040	1000	180	30X40	0.15	2.29	0.199
LC180M1000BPF-3530	1000	180	35X30	0.15	2.25	0.199
LC180M1200BPF-3045	1200	180	30X45	0.15	2.57	0.166
LC180M1200BPF-3535	1200	180	35X35	0.15	2.55	0.166
LC180M1500BPF-3540	1500	180	35X40	0.15	2.85	0.133
LC180M1800BPF-3550	1800	180	35X50	0.15	3.10	0.111
LC200M0220BPF-2225	220	200	22X25	0.15	0.85	0.905
LC200M0270BPF-2230	270	200	22X30	0.15	1.00	0.737
LC200M0330BPF-2230	330	200	22X30	0.15	1.15	0.603
LC200M0330BPF-2525	330	200	25X25	0.15	1.15	0.603
LC200M0390BPF-2235	390	200	22X35	0.15	1.30	0.510
LC200M0390BPF-2530	390	200	25X30	0.15	1.30	0.510
LC200M0470BPF-2240	470	200	22X40	0.15	1.52	0.423
LC200M0470BPF-2535	470	200	25X35	0.15	1.54	0.423
LC200M0470BPF-3025	470	200	30X25	0.15	1.49	0.423
LC200M0560BPF-2245	560	200	22X45	0.15	1.7	0.355
LC200M0560BPF-2535	560	200	25X35	0.15	1.65	0.355
LC200M0560BPF-3030	560	200	30X30	0.15	1.72	0.355
LC200M0680BPF-2545	680	200	25X45	0.15	1.97	0.293
LC200M0680BPF-3035	680	200	30X35	0.15	1.97	0.293
LC200M0680BPF-3530	680	200	35X30	0.15	2.02	0.293
LC200M0820BPF-2545	820	200	25X45	0.15	2.20	0.243
LC200M0820BPF-3035	820	200	30X35	0.15	2.10	0.243
LC200M0820BPF-3530	820	200	35X30	0.15	2.16	0.243
LC200M1000BPF-3045	1000	200	30X45	0.15	2.32	0.199
LC200M1000BPF-3535	1000	200	35X35	0.15	2.30	0.199
LC200M1200BPF-3050	1200	200	30X50	0.15	2.75	0.166
LC200M1200BPF-3540	1200	200	35X40	0.15	2.75	0.166
LC200M1500BPF-3545	1500	200	35X45	0.15	2.90	0.133
LC250M0150BPF-2225	150	250	22X25	0.15	0.75	1.330
LC250M0180BPF-2230	180	250	22X30	0.15	0.85	1.110
LC250M0220BPF-2230	220	250	22X30	0.15	1.00	0.905
LC250M0220BPF-2525	220	250	25X25	0.15	1.00	0.905
LC250M0270BPF-2235	270	250	22X35	0.15	1.22	0.737
LC250M0270BPF-2525	270	250	25X25	0.15	1.15	0.737
LC250M0330BPF-2240	330	250	22X40	0.15	1.36	0.603
LC250M0330BPF-2530	330	250	25X30	0.15	1.30	0.603
LC250M0390BPF-2245	390	250	22X45	0.15	1.54	0.510
LC250M0390BPF-2535	390	250	25X35	0.15	1.48	0.510

Table 1-3C Type , Standard Ratings and Catalog Number (LIFE:105°C,5000Hr.)

Catalog Number	Capacitance (μ F)	Rated Voltage (V.DC)	Size (mm) D X L	Dissipation Factor (Tan δ)	Ripple 120HZ (A/rms)	ESR
LC250M0390BPF-3025	390	250	30X25	0.15	1.45	0.510
LC250M0390BPF-3525	390	250	35X25	0.15	1.59	0.510
LC250M0470BPF-2250	470	250	22X50	0.15	1.78	0.423
LC250M0470BPF-2540	470	250	25X40	0.15	1.75	0.423
LC250M0470BPF-3030	470	250	30X30	0.15	1.72	0.423
LC250M0470BPF-3530	470	250	35X30	0.15	1.88	0.423
LC250M0560BPF-2540	560	250	25X40	0.15	1.80	0.355
LC250M0560BPF-3035	560	250	30X35	0.15	1.89	0.355
LC250M0560BPF-3530	560	250	35X30	0.15	1.94	0.355
LC250M0680BPF-2550	680	250	25X50	0.15	2.10	0.293
LC250M0680BPF-3040	680	250	30X40	0.15	2.10	0.293
LC250M0680BPF-3535	680	250	35X35	0.15	2.18	0.293
LC250M0820BPF-3045	820	250	30X45	0.15	2.30	0.243
LC250M0820BPF-3540	820	250	35X40	0.15	2.39	0.243
LC250M1000BPF-3050	1000	250	30X50	0.15	2.55	0.199
LC250M1000BPF-3545	1000	250	35X45	0.15	2.65	0.199
LC250M1200BPF-3550	1200	250	35X50	0.15	2.90	0.166
LC315M0082BPF-2225	82	315	22X25	0.15	0.55	2.426
LC315M0100BPF-2230	100	315	22X30	0.15	0.65	1.989
LC315M0120BPF-2230	120	315	22X30	0.15	0.75	1.658
LC315M0120BPF-2525	120	315	25X25	0.15	0.75	1.658
LC315M0150BPF-2235	150	315	22X35	0.15	0.80	1.326
LC315M0150BPF-2530	150	315	25X30	0.15	0.80	1.326
LC315M0180BPF-2240	180	315	22X40	0.15	1.01	1.105
LC315M0180BPF-2535	180	315	25X35	0.15	1.02	1.105
LC315M0180BPF-3025	180	315	30X25	0.15	1.00	1.105
LC315M0220BPF-2245	220	315	22X45	0.15	1.10	0.905
LC315M0220BPF-2540	220	315	25X40	0.15	1.10	0.905
LC315M0220BPF-3030	220	315	30X30	0.15	1.10	0.905
LC315M0270BPF-2545	270	315	25X45	0.15	1.25	0.737
LC315M0270BPF-3035	270	315	30X35	0.15	1.25	0.737
LC315M0330BPF-2550	330	315	25X50	0.15	1.53	0.603
LC315M0330BPF-3040	330	315	30X40	0.15	1.53	0.603
LC315M0330BPF-3530	330	315	35X30	0.15	1.50	0.603
LC315M0390BPF-3045	390	315	30X45	0.15	1.71	0.510
LC315M0390BPF-3530	390	315	35X30	0.15	1.60	0.510
LC315M0470BPF-3050	470	315	30X50	0.15	1.85	0.423
LC315M0470BPF-3535	470	315	35X35	0.15	1.75	0.423
LC315M0560BPF-3540	560	315	35X40	0.15	2.00	0.355
LC315M0680BPF-3545	680	315	35X45	0.15	2.20	0.293

Table 1-4 Type , Standard Ratings and Catalog Number (LIFE:105°C,5000Hr.)

Catalog Number	Capacitance (μ F)	Rated Voltage (V.DC)	Size (mm) D X L	Dissipation Factor (Tan δ)	Ripple 120HZ (A/rms)	ESR
LC350M0082BPF-2225	82	350	22X25	0.15	0.60	2.426
LC350M0100BPF-2230	100	350	22X30	0.15	0.70	1.989
LC350M0100BPF-2525	100	350	25X25	0.15	0.70	1.989
LC350M0120BPF-2235	120	350	22X35	0.15	0.80	1.658
LC350M0120BPF-2530	120	350	25X30	0.15	0.80	1.658
LC350M0150BPF-2240	150	350	22X40	0.15	0.86	1.326
LC350M0150BPF-2535	150	350	25X35	0.15	0.87	1.326
LC350M0150BPF-3025	150	350	30X25	0.15	0.85	1.326
LC350M0180BPF-2245	180	350	22X45	0.15	1.05	1.105
LC350M0180BPF-2540	180	350	25X40	0.15	1.07	1.105
LC350M0180BPF-3030	180	350	30X30	0.15	1.05	1.105
LC350M0220BPF-2250	220	350	22X50	0.15	1.16	0.905
LC350M0220BPF-2545	220	350	25X45	0.15	1.20	0.905
LC350M0220BPF-3035	220	350	30X35	0.15	1.18	0.905
LC350M0220BPF-3525	220	350	35X25	0.15	1.18	0.905
LC350M0270BPF-2550	270	350	25X50	0.15	1.31	0.737
LC350M0270BPF-3040	270	350	30X40	0.15	1.33	0.737
LC350M0270BPF-3530	270	350	35X30	0.15	1.30	0.737
LC350M0330BPF-3045	330	350	30X45	0.15	1.46	0.603
LC350M0330BPF-3535	330	350	35X35	0.15	1.45	0.603
LC350M0390BPF-3050	390	350	30X50	0.15	1.65	0.510
LC350M0390BPF-3540	390	350	35X40	0.15	1.65	0.510
LC350M0470BPF-3545	470	350	35X45	0.15	1.85	0.423
LC350M0560BPF-3550	560	350	35X50	0.15	2.10	0.355
LC400M0068BPF-2225	68	400	22X25	0.15	0.55	2.926
LC400M0082BPF-2230	82	400	22X30	0.15	0.65	2.426
LC400M0082BPF-2525	82	400	25X25	0.15	0.65	2.426
LC400M0100BPF-2235	100	400	22X35	0.15	0.79	1.989
LC400M0100BPF-2525	100	400	25X25	0.15	0.75	1.989
LC400M0120BPF-2240	120	400	22X40	0.15	0.89	1.658
LC400M0120BPF-2530	120	400	25X30	0.15	0.85	1.658
LC400M0120BPF-3025	120	400	30X25	0.15	0.87	1.658
LC400M0150BPF-2245	150	400	22X45	0.15	0.93	1.326
LC400M0150BPF-2535	150	400	25X35	0.15	0.90	1.326
LC400M0150BPF-3030	150	400	30X30	0.15	0.94	1.326
LC400M0150BPF-3525	150	400	35X25	0.15	0.96	1.326
LC400M0180BPF-2250	180	400	22X50	0.15	1.14	1.105
LC400M0180BPF-2540	180	400	25X40	0.15	1.11	1.105
LC400M0180BPF-3030	180	400	30X30	0.15	1.10	1.105
LC400M0180BPF-3525	180	400	35X25	0.15	1.12	1.105

Table 1-5Type , Standard Ratings and Catalog Number (LIFE:105°C,5000Hr.)

Catalog Number	Capacitance (μ F)	Rated Voltage (V.DC)	Size (mm) D X L	Dissipation Factor (Tan δ)	Ripple 120HZ (A/rms)	ESR
LC400M0220BPF-2545	220	400	25X45	0.15	1.20	0.905
LC400M0220BPF-3035	220	400	30X35	0.15	1.20	0.905
LC400M0220BPF-3530	220	400	35X30	0.15	1.24	0.905
LC400M0270BPF-2550	270	400	25X50	0.15	1.36	0.737
LC400M0270BPF-3040	270	400	30X40	0.15	1.38	0.737
LC400M0270BPF-3530	270	400	35X30	0.15	1.35	0.737
LC400M0330BPF-3045	330	400	30X45	0.15	1.51	0.603
LC400M0330BPF-3535	330	400	35X35	0.15	1.50	0.603
LC400M0390BPF-3050	390	400	30X50	0.15	1.70	0.510
LC400M0390BPF-3540	390	400	35X40	0.15	1.70	0.510
LC400M0470BPF-3545	470	400	35X45	0.15	1.90	0.423
LC450M0056BPF-2225	56	450	22X25	0.25	0.55	5.921
LC450M0068BPF-2230	68	450	22X30	0.25	0.65	4.876
LC450M0082BPF-2235	82	450	22X35	0.25	0.80	4.044
LC450M0082BPF-2525	82	450	25X25	0.25	0.75	4.044
LC450M0100BPF-2240	100	450	22X40	0.25	0.89	3.316
LC450M0100BPF-2530	100	450	25X30	0.25	0.85	3.316
LC450M0120BPF-2245	120	450	22X45	0.25	0.95	2.763
LC450M0120BPF-2535	120	450	25X35	0.25	0.92	2.763
LC450M0120BPF-3025	120	450	30X25	0.25	0.90	2.763
LC450M0150BPF-2250	150	450	22X50	0.25	1.14	2.210
LC450M0150BPF-2540	150	450	25X40	0.25	1.11	2.210
LC450M0150BPF-3030	150	450	30X30	0.25	1.10	2.210
LC450M0180BPF-2545	180	450	25X45	0.25	1.25	1.842
LC450M0180BPF-3035	180	450	30X35	0.25	1.24	1.842
LC450M0180BPF-3525	180	450	35X25	0.25	1.20	1.842
LC450M0220BPF-2550	220	450	25X50	0.25	1.36	1.507
LC450M0220BPF-3040	220	450	30X40	0.25	1.38	1.507
LC450M0220BPF-3530	220	450	35X30	0.25	1.35	1.507
LC450M0270BPF-3045	270	450	30X45	0.25	1.51	1.228
LC450M0270BPF-3535	270	450	35X35	0.25	1.50	1.228
LC450M0330BPF-3050	330	450	30X50	0.25	1.70	1.005
LC450M0330BPF-3540	330	450	35X40	0.25	1.70	1.005
LC450M0330BPF-3545	330	450	35X45	0.25	1.70	1.005
LC450M0390BPF-3545	390	450	35X45	0.25	1.90	0.850
LC450M0470BPF-3550	470	450	35X50	0.25	2.10	0.705

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