

# Type 380LX / 382LX 85 °C High Capacitance, Snap-In Aluminum

2, 4 and 5 pin styles available



The excellent value of Type 380L/LX capacitors finds application in switching power supply input and output circuits and even motor drives where the high surface area of multiple units in parallel approaches the ripple capability of our Type 520C computer-grade capacitor. Type 380LX delivers more capacitance per can size while Type 380L available in the largest case sizes gives lower ESR for the same capacitance. Types 382L and 382LX give the choice of 4 or 5 leads for stable, reverse proof mounting.

## Highlights

- Latest available ratings, worldwide
- Top performance in power supplies and motor drives
- Big selection of 46 case sizes
- 2, 4 and 5 leads available

## Specifications

Temperature Range	-40 °C to +85 °C ≤ 250 Vdc -25 °C to +85 °C ≥ 315 Vdc																													
Rated Voltage Range	16 Vdc to 500 Vdc																													
Capacitance Range	33 µF to 270,000 µF																													
Capacitance Tolerance	± 20%																													
Leakage Current	≤ 3√CV µA at 5 min																													
Ripple Current Multipliers	<p>Ambient Temperature</p> <table border="1"> <thead> <tr> <th>45 °C</th> <th>60 °C</th> <th>70 °C</th> <th>85 °C</th> </tr> </thead> <tbody> <tr> <td>1.5</td> <td>1.4</td> <td>1.3</td> <td>1.0</td> </tr> </tbody> </table> <p>Frequency</p> <table border="1"> <thead> <tr> <th></th> <th>50 Hz</th> <th>60 Hz</th> <th>120 Hz</th> <th>500 kHz</th> <th>1 kHz</th> <th>10 kHz &amp; Up</th> </tr> </thead> <tbody> <tr> <td>16 - 100 WV</td> <td>0.93</td> <td>0.95</td> <td>1.00</td> <td>1.05</td> <td>1.08</td> <td>1.15</td> </tr> <tr> <td>160 - 450 WV</td> <td>0.75</td> <td>0.80</td> <td>1.00</td> <td>1.20</td> <td>1.25</td> <td>1.40</td> </tr> </tbody> </table>	45 °C	60 °C	70 °C	85 °C	1.5	1.4	1.3	1.0		50 Hz	60 Hz	120 Hz	500 kHz	1 kHz	10 kHz & Up	16 - 100 WV	0.93	0.95	1.00	1.05	1.08	1.15	160 - 450 WV	0.75	0.80	1.00	1.20	1.25	1.40
45 °C	60 °C	70 °C	85 °C																											
1.5	1.4	1.3	1.0																											
	50 Hz	60 Hz	120 Hz	500 kHz	1 kHz	10 kHz & Up																								
16 - 100 WV	0.93	0.95	1.00	1.05	1.08	1.15																								
160 - 450 WV	0.75	0.80	1.00	1.20	1.25	1.40																								
Low Temperature Characteristics	Impedance ratio: $Z_{-20°C} / Z_{+25°C}$ ≤ 8 (16–50 Vdc) ≤ 4 (63–100 Vdc) ≤ 3 (150–500 Vdc)																													
Endurance Life Test	3,000 h @ full load at +85 °C Δ Capacitance ±20% ESR 200% of limit DCL 100% of limit																													
Shelf Life Test	1,000 h @ 85 °C Δ Capacitance ±20% ESR 200% of limit DCL 100% of limit																													
Vibration	10 to 55 Hz, 0.06" and 10 g max, 2 h in each plane																													
RoHS Compliant																														

# Type 380LX / 382LX 85 °C High Capacitance, Snap-In Aluminum

2, 4 and 5 pin styles available

## Part Numbering System



## Outline Drawings    Dimensions shown are in mm

### Two Pins

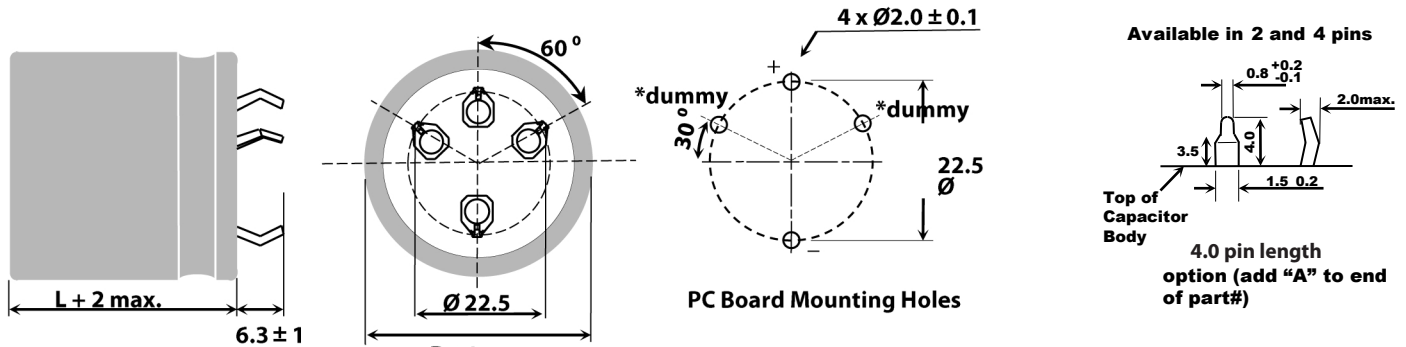
380L/LX (22 through 40 mm diameter)



PC Board Mounting Holes

### Four Pins

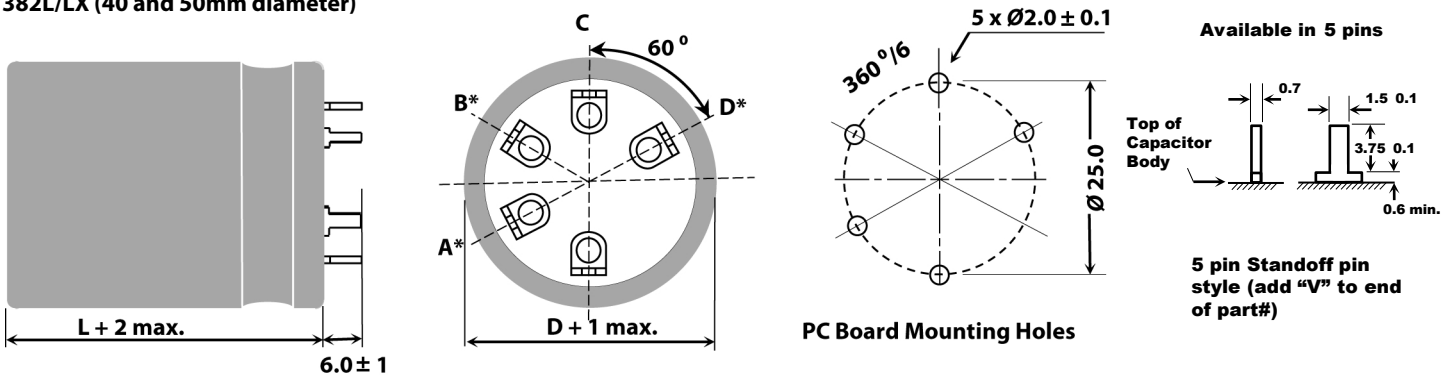
382L/LX (35 and 40mm diameter)



PC Board Mounting Holes

### Five Pins

382L/LX (40 and 50mm diameter)



PC Board Mounting Holes

Note that for 200 volts and under the insulating end disc is optional - If one is needed add a (+D) to the end of the part numbering system.

Terminal	Connection	
	40 mm Dia.	50 mm Dia.
A	dummy	negative (-)
B	dummy	dummy
C	positive (+)	positive (+)
D	dummy	positive (+)
-	negative (-)	negative (-)

### Notes:

- \* Use dummy terminals for mechanical support only. Make no electrical connection because they resistively connect through the electrolyte to the negative terminal.
- \*\* Safety Vent may be on the bottom or on the side of the can.

# Type 380LX / 382LX 85 °C High Capacitance, Snap-In Aluminum

2, 4 and 5 pin styles available

Insulated

Case Code	DIAMETER "D"		LENGTH "L"		Typical Weight (grams)	Case Code	DIAMETER "D"		LENGTH "L"		Typical Weight (grams)
	mm	inches	mm	inches			mm	inches			
H20	22	0.87	20	0.79	14	A20	35	1.38	20	0.79	35
H01	22	0.87	25	0.98	16	A01	35	1.38	25	0.98	42
H02	22	0.87	30	1.18	19	A02	35	1.38	30	1.18	48
H03	22	0.87	35	1.38	22	A03	35	1.38	35	1.38	54
H04	22	0.87	40	1.57	24	A04	35	1.38	40	1.57	62
H45	22	0.87	45	1.77	28	A45	35	1.38	45	1.77	67
H05	22	0.87	50	1.97	31	A05	35	1.38	50	1.97	74
J20	25	0.98	20	0.79	16	A55	35	1.38	55	2.17	80
J01	25	0.98	25	0.98	20	A06	35	1.38	63	2.48	88
J02	25	0.98	30	1.18	24	A07	35	1.38	70	2.76	98
J03	25	0.98	35	1.38	27	A08	35	1.38	80	3.15	112
J04	25	0.98	40	1.57	31	A10	35	1.38	105	4.13	144
J45	25	0.98	45	1.77	35	N04	40	1.57	40	1.57	82
J05	25	0.98	50	1.97	38	N05	40	1.57	50	1.97	105
K20	30	1.18	20	0.79	25	N06	40	1.57	63	2.48	130
K01	30	1.18	25	0.98	30	N08	40	1.57	80	3.15	185
K02	30	1.18	30	1.18	35	N10	40	1.57	105	4.13	265
K03	30	1.18	35	1.38	40	B05	50	1.97	50	1.97	136
K04	30	1.18	40	1.57	44	B06	50	1.97	63	2.48	168
K45	30	1.18	45	1.77	48	B08	50	1.97	80	3.15	239
K05	30	1.18	50	1.97	53	B09	50	1.97	92	3.62	241
						B10	50	1.97	105	4.13	325

## Typical Performance Curves



# Type 380LX / 382LX 85 °C High Capacitance, Snap-In Aluminum

2, 4 and 5 pin styles available

## Typical Performance Curves



# Type 380LX / 382LX 85 °C High Capacitance, Snap-In Aluminum

2, 4 and 5 pin styles available

Cap. ( $\mu$ F)	Catalog Part Number	Max. ESR $\Omega$ @ 25 °C		Ripple Amps Max. @ 85 °C		Nominal Size D x L (mm)	Cap. ( $\mu$ F)	Catalog Part Number	Max. ESR $\Omega$ @ 25 °C		Ripple Amps Max. @ 85 °C		Nominal Size D x L (mm)
		120 Hz	20 kHz	120 Hz	20 kHz				120 Hz	20 kHz	120 Hz	20 kHz	
<b>16 Vdc (20 Vdc Surge)</b>							<b>25 Vdc (32 Vdc Surge)</b>						
4700	380LX472M016H202	0.160	0.135	1.60	1.80	22 x 20	3300	380LX332M025H202	0.177	0.140	1.60	1.80	22 x 20
4700	380LX472M016H012	0.160	0.135	1.77	2.00	22 x 25	3300	380LX332M025H012	0.161	0.130	1.70	1.90	22 x 25
6800	380LX682M016H012	0.110	0.092	2.60	3.00	22 x 25	4700	380LX472M025H012	0.110	0.090	2.40	2.75	22 x 25
6800	380LX682M016J202	0.110	0.092	1.80	2.10	25 x 20	4700	380LX472M025J202	0.125	0.100	1.80	2.10	25 x 20
8200	380LX822M016H012	0.090	0.078	3.10	3.60	22 x 25	5600	380LX562M025H012	0.095	0.075	2.90	3.30	22 x 25
10000	380LX103M016H022	0.075	0.062	3.80	4.30	22 x 30	6800	380LX682M025H022	0.078	0.063	3.50	4.00	22 x 30
10000	380LX103M016J012	0.143	0.118	3.80	4.30	25 x 25	6800	380LX682M025J012	0.078	0.063	3.50	4.00	25 x 25
10000	380LX103M016K202	0.084	0.070	2.40	2.80	30 x 20	6800	380LX682M025K202	0.078	0.063	2.30	2.60	30 x 20
12000	380LX123M016H022	0.119	0.098	4.50	5.20	22 x 30	8200	380LX822M025H022	0.065	0.049	3.60	4.10	22 x 30
12000	380LX123M016J012	0.119	0.098	4.50	5.20	25 x 25	8200	380LX822M025J012	0.065	0.049	3.60	4.10	25 x 25
15000	380LX153M016H032	0.054	0.045	5.30	6.00	22 x 35	10000	380LX103M025H032	0.058	0.046	3.80	4.30	22 x 35
15000	380LX153M016J022	0.054	0.045	5.30	6.00	25 x 30	10000	380LX103M025J022	0.058	0.046	3.80	4.30	25 x 30
15000	380LX153M016A202	0.055	0.048	3.20	3.70	35 x 20	10000	380LX103M025K012	0.136	0.108	3.28	3.68	30 x 25
18000	380LX183M016H042	0.045	0.040	5.60	6.40	22 x 40	10000	380LX103M025A202	0.060	0.050	2.70	3.10	35 x 20
18000	380LX183M016J022	0.045	0.040	5.60	6.40	25 x 30	12000	380LX123M025H042	0.050	0.040	4.10	4.70	22 x 40
22000	380LX223M016H452	0.065	0.055	6.10	7.00	22 x 45	12000	380LX123M025J032	0.050	0.040	4.10	4.70	25 x 35
22000	380LX223M016J032	0.065	0.055	6.10	7.00	25 x 35	12000	380LX123M025K022	0.050	0.040	4.10	4.70	30 x 30
22000	380LX223M016K022	0.065	0.055	6.10	7.00	30 x 30	15000	380LX153M025H052	0.040	0.030	4.60	5.30	22 x 50
27000	380LX273M016J452	0.031	0.025	6.30	7.30	25 x 45	15000	380LX153M025J042	0.040	0.030	4.60	5.30	25 x 40
27000	380LX273M016K032	0.031	0.025	6.30	7.30	30 x 35	15000	380LX153M025K022	0.040	0.030	4.60	5.30	30 x 30
33000	380LX333M016J052	0.025	0.021	6.80	7.80	25 x 50	18000	380LX183M025J452	0.035	0.028	5.50	6.30	25 x 45
33000	380LX333M016K042	0.025	0.021	6.80	7.90	30 x 40	18000	380LX183M025K032	0.035	0.028	5.50	6.30	30 x 35
33000	380LX333M016A022	0.025	0.021	6.80	7.90	35 x 30	22000	380LX223M025J052	0.030	0.023	6.10	7.00	25 x 50
39000	380LX393M016K452	0.022	0.018	6.95	8.00	30 x 45	22000	380LX223M025K042	0.030	0.023	6.10	7.00	30 x 40
39000	380LX393M016A032	0.022	0.018	6.95	8.00	35 x 35	27000	380LX273M025K452	0.023	0.020	6.20	7.10	30 x 45
47000	380LX473M016K052	0.030	0.026	7.50	8.60	30 x 50	27000	380LX273M025A03	0.023	0.020	6.20	7.10	35 x 35
47000	380LX473M016A042	0.030	0.026	7.50	8.60	35 x 40	33000	380LX333M025K052	0.020	0.017	6.80	7.90	30 x 50
56000	380LX563M016A452	0.020	0.018	8.70	10.00	35 x 45	33000	380LX333M025A042	0.020	0.017	6.80	7.90	35 x 40
56000	382LX563M016N042	0.022	0.021	9.00	10.40	40 x 40	33000	382L333M025N042	0.026	0.016	7.30	8.00	40 x 40
68000	380LX683M016A052	0.018	0.017	9.00	10.40	35 x 50	39000	380LX393M025A452	0.020	0.017	7.40	8.50	35 x 45
82000	380LX823M016A062	0.016	0.015	10.00	11.50	35 x 63	39000	382LX393M025N042	0.020	0.018	8.00	9.20	40 x 40
82000	382LX823M016N052	0.016	0.015	10.30	11.80	40 x 50	47000	380LX473M025A052	0.024	0.021	8.00	9.20	35 x 50
100000	380LX104M016A082	0.015	0.014	11.00	12.70	35 x 80	47000	380L473M025A062	0.017	0.009	8.30	9.50	35 x 63
100000	382LX104M016N062	0.018	0.017	11.40	13.00	40 x 63	56000	380L563M025A072	0.015	0.008	9.10	10.30	35 x 70
120000	380LX124M016A102	0.014	0.013	12.81	14.73	35 x 105	56000	382L563M025N062	0.015	0.009	9.50	10.30	40 x 63
120000	382LX124M016N082	0.017	0.016	12.40	14.30	40 x 80	56000	380LX563M025A062	0.024	0.020	8.60	9.90	35 x 63
120000	382LX124M016B052V	0.014	0.013	13.17	15.15	50 x 50	56000	382LX563M025N052	0.016	0.015	9.00	10.30	40 x 50
150000	382LX154M016B062V	0.012	0.011	14.40	16.56	50 x 63	68000	380LX683M025A082	0.013	0.011	10.40	12.00	35 x 80
180000	382LX184M016N102	0.013	0.012	14.85	17.08	40 x 105	68000	382LX683M025N062	0.017	0.015	10.25	11.80	40 x 63
180000	382LX184M016B082V	0.011	0.010	15.69	18.04	50 x 80	82000	382LX823M025B052V	0.016	0.015	12.29	14.13	50 x 50
220000	382LX224M016B092V	0.010	0.009	16.73	19.24	50 x 92	100000	380LX104M025A102	0.010	0.008	11.97	13.77	35 x 105
270000	382LX274M016B102V	0.009	0.008	17.79	20.46	50 x 105	100000	382LX104M025B062V	0.014	0.013	13.45	15.47	50 x 63

# Type 380LX / 382LX 85 °C High Capacitance, Snap-In Aluminum

2, 4 and 5 pin styles available

Cap. (µF)	Catalog Part Number	Max. ESR Ω@ 25 °C		Ripple Amps Max. @ 85 °C		Nominal Size D x L (mm)	Cap. (µF)	Catalog Part Number	Max. ESR Ω@ 25 °C		Ripple Amps Max. @ 85 °C		Nominal Size D x L (mm)
		120 Hz	20 kHz	120 Hz	20 kHz				120 Hz	20 kHz	120 Hz	20 kHz	
<b>25 Vdc (32 Vdc Surge)</b>							<b>35 Vdc (44 Vdc Surge)</b>						
100000	382LX104M025N082	0.012	0.011	12.00	13.40	40 x 80	47000	382LX473M035N062	0.016	0.013	9.60	11.00	40 x 63
120000	382LX124M025B082V	0.012	0.011	15.29	17.58	50 x 80	56000	382LX563M035B052V	0.015	0.012	10.94	12.58	50 x 50
150000	382LX154M025N102	0.011	0.010	14.07	16.18	40 x 105	56000	382LX563M035N082	0.015	0.012	10.30	11.90	40 x 80
150000	382LX154M025B092V	0.011	0.010	16.01	18.41	50 x 92	68000	380LX683M035A102	0.010	0.008	10.62	12.21	35 x 105
180000	382LX184M025B102V	0.010	0.009	16.89	19.42	50 x 105	68000	382LX683M035B062V	0.013	0.011	11.93	13.72	50 x 63
<b>35 Vdc (44 Vdc Surge)</b>							<b>50 Vdc (63 Vdc Surge)</b>						
2200	380LX222M035H202	0.211	0.160	1.40	1.60	22 x 20	82000	382LX823M035B082V	0.012	0.010	13.06	15.02	50 x 80
2200	380LX222M035H012	0.166	0.125	1.50	1.75	22 x 25	100000	382LX104M035B092V	0.011	0.009	13.97	16.07	50 x 92
3300	380LX332M035H012	0.110	0.085	2.30	2.60	22 x 25	120000	382LX124M035B102V	0.010	0.008	14.86	17.09	50 x 105
3300	380LX332M035J202	0.120	0.090	1.70	2.00	25 x 20	<b>50 Vdc (63 Vdc Surge)</b>						
3900	380LX392M035H012	0.095	0.070	2.70	3.10	22 x 25	1500	380LX152M050H202	0.255	0.200	1.20	1.40	22 x 20
4700	380LX472M035H022	0.080	0.060	3.30	3.70	22 x 30	1500	380LX152M050H012	0.220	0.170	1.25	1.45	22 x 25
4700	380LX472M035J012	0.080	0.060	3.30	3.70	25 x 25	2200	380LX222M050H012	0.150	0.115	1.80	2.10	22 x 25
4700	380LX472M035K202	0.090	0.066	2.00	2.30	30 x 20	2200	380LX222M050J202	0.175	0.130	1.40	1.60	25 x 20
5600	380LX562M035H022	0.083	0.063	3.40	3.90	22 x 30	2700	380LX272M050H012	0.125	0.095	2.20	2.60	22 x 25
5600	380LX562M035J012	0.083	0.063	3.40	3.90	25 x 25	3300	380LX332M050H022	0.100	0.075	2.70	3.10	22 x 30
6800	380LX682M035H032	0.068	0.051	3.70	4.20	22 x 35	3300	380LX332M050J012	0.158	0.118	2.70	3.10	25 x 25
6800	380LX682M035A202	0.070	0.053	2.40	2.80	35 x 20	3300	380LX332M050K202	0.117	0.090	1.70	2.00	30 x 20
6800	380LX682M035J022	0.069	0.051	3.70	4.20	25 x 30	3900	380LX392M050H022	0.085	0.065	2.80	3.20	22 x 30
8200	380LX822M035H042	0.057	0.043	4.00	4.60	22 x 40	3900	380LX392M050J012	0.085	0.065	2.80	3.20	25 x 25
8200	380LX822M035J032	0.057	0.043	4.00	4.60	25 x 35	4700	380LX472M050H032	0.110	0.082	3.00	3.50	22 x 35
10000	380LX103M035H452	0.050	0.037	4.40	5.10	22 x 45	4700	380LX472M050J022	0.110	0.082	3.00	3.50	25 x 30
10000	380LX103M035J042	0.050	0.037	4.40	5.10	25 x 40	4700	380LX472M050K012	0.110	0.082	3.00	3.50	30 x 25
10000	380LX103M035K022	0.050	0.037	4.40	5.10	30 x 30	4700	380LX472M050A202	0.080	0.060	2.10	2.40	35 x 20
10000	380LX103M035A012	0.050	0.037	4.40	5.10	35 x 25	5600	380LX562M050H042	0.060	0.045	3.40	3.90	22 x 40
12000	380LX123M035J452	0.044	0.033	5.10	5.80	25 x 45	5600	380LX562M050J032	0.060	0.045	3.40	3.90	25 x 35
12000	380LX123M035K032	0.044	0.033	5.10	5.80	30 x 35	5600	380LX562M050K022	0.060	0.045	3.40	3.90	30 x 30
12000	380LX123M035A022	0.044	0.033	5.10	5.80	35 x 30	6800	380LX682M050H052	0.050	0.040	3.90	4.40	22 x 50
15000	380LX153M035J052	0.057	0.044	5.60	6.40	25 x 50	6800	380LX682M050J042	0.050	0.040	3.90	4.40	25 x 40
15000	380LX153M035K042	0.036	0.027	5.60	6.40	30 x 40	6800	380LX682M050K022	0.050	0.040	3.90	4.40	30 x 30
15000	380LX153M035A022	0.036	0.027	5.60	6.40	35 x 30	8200	380LX822M050J452	0.040	0.030	4.40	5.10	25 x 45
18000	380LX183M035K452	0.048	0.037	5.70	6.50	30 x 45	8200	380LX822M050K032	0.040	0.030	4.40	5.10	30 x 35
18000	380LX183M035A032	0.048	0.037	5.70	6.50	35 x 35	10000	380LX103M050J052	0.040	0.030	5.00	5.70	25 x 50
22000	380LX223M035K052	0.026	0.020	6.10	7.00	30 x 50	10000	380LX103M050K042	0.040	0.030	5.00	5.70	30 x 40
22000	380LX223M035A042	0.026	0.020	6.10	7.00	35 x 40	10000	380LX103M050A022	0.040	0.030	5.00	5.70	35 x 30
27000	380LX273M035A452	0.021	0.017	6.80	7.90	35 x 45	12000	380LX123M050K452	0.033	0.025	5.60	6.40	30 x 45
27000	382LX273M035N042	0.021	0.017	6.80	7.90	40 x 40	12000	380LX123M050A032	0.033	0.025	5.60	6.40	35 x 35
33000	380LX333M035A052	0.018	0.014	7.15	8.22	35 x 50	15000	380LX153M050K052	0.037	0.028	6.40	7.40	30 x 50
33000	380L333M035A062	0.018	0.009	7.80	8.70	35 x 63	15000	380LX153M050A042	0.037	0.028	6.40	7.40	35 x 40
39000	380LX393M035A062	0.015	0.012	7.90	9.10	35 x 63	18000	380L183M050A062	0.018	0.010	7.80	8.70	35 x 63
39000	380L393M035A072	0.015	0.008	8.60	9.50	35 x 70	18000	380LX183M050A452	0.022	0.017	6.90	7.90	35 x 45
39000	382LX393M035N052	0.017	0.014	8.00	9.20	40 x 50	18000	382LX183M050N042	0.023	0.017	6.94	7.98	40 x 40
47000	380LX473M035A082	0.015	0.011	9.50	10.90	35 x 80	22000	380L223M050A072	0.025	0.020	8.60	9.50	35 x 70

# Type 380LX / 382LX 85 °C High Capacitance, Snap-In Aluminum

2, 4 and 5 pin styles available

Cap. ( $\mu$ F)	Catalog Part Number	Max. ESR $\Omega$ @ 25 °C		Ripple Amps Max. @ 85 °C		Nominal Size D x L (mm)	Cap. ( $\mu$ F)	Catalog Part Number	Max. ESR $\Omega$ @ 25 °C		Ripple Amps Max. @ 85 °C		Nominal Size D x L (mm)
		120 Hz	20 kHz	120 Hz	20 kHz				120 Hz	20 kHz	120 Hz	20 kHz	
<b>50 Vdc (63 Vdc Surge)</b>							<b>63 Vdc (79 Vdc Surge)</b>						
22000	380LX223M050A052	0.025	0.020	7.60	8.70	35 x 50	10000	382L103M063N042	0.028	0.017	6.60	7.20	40 x 40
27000	380L273M050A082	0.013	0.008	9.30	10.10	35 x 80	10000	380LX103M063A042	0.033	0.025	6.50	7.50	35 x 40
27000	382L273M050N062	0.018	0.009	9.00	9.60	40 x 63	12000	380L123M063A062	0.019	0.010	7.70	8.60	35 x 63
27000	380LX273M050A062	0.018	0.015	8.30	9.60	35 x 63	12000	380LX123M063A052	0.028	0.021	7.20	8.30	35 x 50
27000	382LX273M050N052	0.025	0.020	8.10	9.30	40 x 50	12000	382LX123M063N042	0.035	0.028	7.15	8.22	40 x 40
33000	380LX333M050A082	0.015	0.012	9.20	10.60	35 x 80	15000	380L153M063A072	0.016	0.009	8.50	9.40	35 x 70
33000	382LX333M050N062	0.018	0.014	9.10	10.50	40 x 63	15000	380LX153M063A062	0.028	0.021	7.70	8.90	35 x 63
33000	382LX333M050B052V	0.018	0.014	10.48	12.05	50 x 50	18000	380LX183M063A082	0.023	0.012	9.40	10.80	35 x 80
47000	382LX473M050B062V	0.013	0.010	11.54	13.27	50 x 63	18000	382LX183M063N062	0.028	0.022	9.25	10.60	40 x 63
47000	380LX473M050A102	0.014	0.011	10.27	11.81	35 x 105	27000	382LX273M063N082	0.018	0.015	10.00	11.50	40 x 80
56000	382LX563M050N102	0.012	0.009	11.47	13.19	40 x 105	27000	380LX273M063A102	0.015	0.012	10.38	11.94	35 x 105
56000	382LX563M050B082V	0.012	0.009	12.46	14.33	50 x 80	27000	382LX273M063B052V	0.018	0.015	10.86	12.49	50 x 50
68000	382LX683M050B092V	0.011	0.009	13.17	15.15	50 x 92	33000	382LX333M063N102	0.015	0.012	11.76	13.52	40 x 105
82000	382LX823M050B102V	0.011	0.008	13.87	15.95	50 x 105	33000	382LX333M063B062V	0.017	0.013	11.57	13.42	50 x 63
<b>63 Vdc (79 Vdc Surge)</b>							<b>80 Vdc (100 Vdc Surge)</b>						
1000	380LX102M063H202	0.380	0.290	1.20	1.40	22 x 20	51000	382LX513M063B092V	0.012	0.010	13.34	15.34	50 x 92
1000	380LX102M063H012	0.332	0.250	1.20	1.40	22 x 25	56000	382LX563M063B102V	0.012	0.009	13.93	16.02	50 x 105
1500	380LX152M063H012	0.221	0.167	1.70	2.00	22 x 25							
1500	380LX152M063J202	0.250	0.190	1.30	1.50	25 x 20	680	380LX681M080H202	0.450	0.330	1.00	1.20	22 x 20
2200	380LX222M063H022	0.151	0.114	2.50	2.90	22 x 30	680	380LX681M080H012	0.390	0.295	1.00	1.20	22 x 25
2200	380LX222M063J012	0.151	0.114	2.50	2.90	25 x 25	1000	380LX102M080H012	0.265	0.200	1.50	1.75	22 x 25
2200	380LX222M063K202	0.170	0.130	1.50	1.70	30 x 20	1000	380LX102M080J202	0.300	0.225	1.20	1.40	25 x 20
2700	380LX272M063H032	0.123	0.093	3.70	4.30	22 x 35	1200	380LX122M080H012	0.220	0.170	1.80	2.10	22 x 25
2700	380LX272M063J022	0.123	0.093	3.70	4.30	25 x 30	1500	380LX152M080H022	0.177	0.134	2.30	2.60	22 x 30
3300	380LX332M063H042	0.110	0.080	4.10	4.70	22 x 40	1500	380LX152M080J012	0.177	0.134	2.30	2.60	25 x 25
3300	380LX332M063J022	0.110	0.080	4.10	4.70	25 x 30	1500	380LX152M080K202	0.200	0.150	1.40	1.60	30 x 20
3300	380LX332M063K012	0.110	0.080	4.10	4.70	30 x 25	1800	380LX182M080H032	0.147	0.109	2.50	2.90	22 x 35
3300	380LX332M063A202	0.125	0.095	1.70	2.00	35 x 20	1800	380LX182M080J022	0.147	0.109	2.50	2.90	25 x 30
3900	380LX392M063H452	0.100	0.075	4.40	5.10	22 x 45	2200	380LX222M080H042	0.155	0.117	2.70	3.10	22 x 40
3900	380LX392M063J032	0.100	0.075	4.40	5.10	25 x 35	2200	380LX222M080J022	0.155	0.117	2.70	3.10	25 x 30
3900	380LX392M063K022	0.100	0.075	4.40	5.10	30 x 30	2200	380LX222M080K012	0.155	0.117	2.70	3.10	30 x 25
4700	380LX472M063H052	0.080	0.060	4.90	5.60	22 x 50	2200	380LX222M080A202	0.135	0.100	1.70	2.00	35 x 20
4700	380LX472M063J042	0.080	0.060	4.90	5.60	25 x 40	2700	380LX272M080H452	0.098	0.075	2.80	3.20	22 x 45
4700	380LX472M063K022	0.080	0.060	4.90	5.60	30 x 30	2700	380LX272M080J032	0.098	0.075	2.80	3.20	25 x 35
4700	380LX472M063A012	0.080	0.060	4.90	5.60	35 x 25	2700	380LX272M080K022	0.098	0.075	2.80	3.20	30 x 30
5600	380LX562M063A022	0.070	0.050	5.40	6.20	35 x 30	3300	380LX332M080H052	0.085	0.065	3.20	3.70	22 x 50
5600	380LX562M063J452	0.070	0.050	5.40	6.20	25 x 45	3300	380LX332M080J042	0.085	0.065	3.20	3.70	25 x 40
5600	380LX562M063K032	0.070	0.050	5.40	6.20	30 x 35	3300	380LX332M080K022	0.085	0.065	3.20	3.70	30 x 30
6800	380LX682M063J052	0.060	0.045	5.80	6.70	25 x 50	3900	380LX392M080J452	0.080	0.060	3.60	4.10	25 x 45
6800	380LX682M063K042	0.060	0.045	5.80	6.70	30 x 40	3900	380LX392M080K032	0.080	0.060	3.60	4.10	30 x 35
6800	380LX682M063A022	0.060	0.045	5.80	6.70	35 x 30	4700	380LX472M080J052	0.065	0.050	4.10	4.70	25 x 50
8200	380LX822M063K452	0.067	0.050	6.00	6.90	30 x 45	4700	380LX472M080K042	0.072	0.055	4.10	4.70	30 x 40
8200	380LX822M063A032	0.067	0.050	6.00	6.90	35 x 35	5600	380LX562M080K452	0.055	0.040	4.60	5.20	30 x 45

# Type 380LX / 382LX 85 °C High Capacitance, Snap-In Aluminum

2, 4 and 5 pin styles available

Cap. (µF)	Catalog Part Number	Max. ESR Ω @ 25 °C		Ripple Amps Max. @ 85 °C		Nominal Size D x L (mm)
		120 Hz	20 kHz	120 Hz	20 kHz	
<b>80 Vdc (100 Vdc Surge)</b>						
5600	380LX562M080A032	0.055	0.040	4.60	5.20	35 x 35
6800	380LX682M080K052	0.045	0.035	5.20	5.90	30 x 50
6800	380LX682M080A042	0.045	0.035	5.20	5.90	35 x 40
8200	380LX822M080A052	0.040	0.030	5.80	6.70	35 x 50
8200	382LX822M080N042	0.040	0.030	5.83	6.70	40 x 40
10000	380LX103M080A062	0.033	0.025	6.40	7.34	35 x 63
12000	380L123M080A072	0.020	0.012	8.10	9.00	35 x 70
12000	382L123M080N052	0.025	0.016	7.50	8.00	40 x 50
15000	380L153M080A082	0.017	0.010	8.80	9.60	35 x 80
15000	382L153M080N062	0.020	0.013	8.50	9.20	40 x 63
18000	382L183M080N082	0.014	0.009	10.30	10.80	40 x 80
18000	382LX183M080B052V	0.023	0.017	10.00	11.50	50 x 50
22000	380LX223M080A102	0.015	0.011	9.86	11.34	35 x 105
22000	382LX223M080B062V	0.019	0.014	11.08	12.74	50 x 63
27000	382LX273M080N102	0.015	0.012	11.35	13.05	40 x 105
27000	382LX273M080B082V	0.015	0.012	12.33	14.18	50 x 80
33000	382LX333M080B092V	0.014	0.010	13.37	15.38	50 x 92
39000	382LX393M080B102V	0.013	0.010	14.34	16.49	50 x 105
<b>100 Vdc (125 Vdc Surge)</b>						
470	380LX471M100H202	0.450	0.300	1.00	1.20	22 x 20
470	380LX471M100H012	0.450	0.300	1.10	1.30	22 x 25
560	380LX561M100H012	0.400	0.250	1.30	1.50	22 x 25
680	380LX681M100H012	0.320	0.210	1.60	1.85	22 x 25
680	380LX681M100J202	0.390	0.295	1.10	1.30	25 x 20
1000	380LX102M100H022	0.220	0.150	2.00	2.30	22 x 30
1000	380LX102M100J012	0.220	0.150	2.00	2.30	25 x 25
1000	380LX102M100K202	0.250	0.165	1.20	1.40	30 x 20
1200	380LX122M100H032	0.195	0.125	2.30	2.70	22 x 35
1200	380LX122M100J022	0.180	0.120	2.30	2.70	25 x 30
1500	380LX152M100H042	0.155	0.100	2.60	3.00	22 x 40
1500	380LX152M100J022	0.155	0.100	2.60	3.00	25 x 30
1500	380LX152M100K012	0.155	0.100	2.60	3.00	30 x 25
1500	380LX152M100A202	0.177	0.120	1.50	1.70	35 x 20
1800	380LX182M100H452	0.130	0.085	2.80	3.30	22 x 45
1800	380LX182M100J032	0.140	0.090	2.80	3.30	25 x 35
1800	380LX182M100K022	0.140	0.090	2.80	3.30	30 x 30
2200	380LX222M100H052	0.121	0.080	3.10	3.60	22 x 50
2200	380LX222M100J042	0.121	0.080	3.10	3.60	25 x 40
2200	380LXM222100K022	0.121	0.080	3.10	3.60	30 x 30
2200	380LX222M100A012	0.121	0.078	3.14	3.61	35 x 25
2700	380LX272M100J452	0.104	0.068	3.70	4.30	25 x 45
2700	380LX272M100K032	0.104	0.068	3.70	4.30	30 x 35
2700	380LX272M100A022	0.104	0.068	3.70	4.30	35 x 30
<b>100 Vdc (125 Vdc Surge)</b>						
3300	380LX332M100J052	0.090	0.060	4.10	4.70	25 x 50
3300	380LX332M100K042	0.090	0.060	4.10	4.70	30 x 40
3900	380LX392M100K452	0.080	0.050	4.50	5.20	30 x 45
3900	380LX392M100A032	0.080	0.050	4.50	5.20	35 x 35
4700	380LX472M100K052	0.070	0.050	5.10	5.90	30 x 50
4700	380LX472M100A042	0.070	0.050	5.10	5.90	35 x 40
5600	382LX562M100N042	0.060	0.045	5.80	6.60	40 x 40
5600	380LX562M100A452	0.060	0.040	5.80	6.60	35 x 45
6800	380LX682M100A052	0.050	0.040	6.60	7.60	35 x 50
6800	380L682M100A062	0.024	0.014	7.20	8.10	35 x 63
6800	382L682M100N052	0.026	0.017	7.40	7.90	40 x 50
8200	380LX822M100A062	0.040	0.030	7.00	8.10	35 x 63
8200	380L822M100A072	0.021	0.012	8.00	8.90	35 x 70
8200	382LX822M100N052	0.040	0.030	7.30	8.40	40 x 50
8200	382L822M100N062	0.021	0.013	8.40	9.10	40 x 63
10000	380LX103M100A082	0.033	0.025	8.70	9.60	35 x 80
10000	382LX103M100N062	0.033	0.025	8.00	9.20	40 x 63
10000	382LX103M100B052V	0.033	0.025	8.82	10.14	50 x 50
12000	382LX123M100N082	0.028	0.021	8.65	10.00	40 x 80
12000	380LX123M100A102	0.028	0.021	8.57	9.86	35 x 105
15000	382LX153M100N102	0.022	0.017	10.12	11.64	40 x 105
15000	382LX153M100B062V	0.022	0.017	10.07	11.58	50 x 63
18000	382LX183M100B082V	0.018	0.014	11.00	12.65	50 x 80
22000	382LX223M100B092V	0.015	0.011	11.76	13.52	50 x 92
27000	382LX273M100B102V	0.014	0.010	12.53	14.41	50 x 105
<b>160 Vdc (200 Vdc Surge)</b>						
220	380LX221M160H202	1.000	0.500	0.80	1.10	22 x 20
220	380LX221M160H012	0.850	0.420	0.90	1.25	22 x 25
270	380LX271M160H012	0.700	0.340	1.20	1.65	22 x 25
270	380LX271M160J202	0.800	0.400	0.90	1.20	25 x 20
330	380LX331M160H012	0.603	0.308	1.50	2.00	22 x 25
390	380LX391M160H012	0.470	0.240	1.60	2.30	22 x 25
390	380LX391M160H022	0.470	0.240	1.60	2.30	22 x 30
390	380LX391M160J012	0.470	0.240	1.60	2.30	25 x 25
390	380LX391M160K202	0.600	0.300	1.10	1.50	30 x 20
470	380LX471M160H022	0.423	0.216	2.10	3.00	22 x 30
470	380LX471M160J012	0.423	0.216	2.10	3.00	25 x 25
560	380LX561M160H022	0.355	0.178	2.25	3.15	22 x 30
560	380LX561M160J012	0.355	0.178	2.25	3.15	25 x 25
560	380LX561M160A202	0.420	0.210	1.30	1.80	35 x 20
680	380LX681M160H032	0.293	0.146	2.50	3.50	22 x 35
680	380LX681M160J022	0.293	0.146	2.50	3.50	25 x 30
680	380LX681M160K012	0.293	0.149	2.50	3.50	30 x 25



# Type 380LX / 382LX 85 °C High Capacitance, Snap-In Aluminum

2, 4 and 5 pin styles available

Cap. (µF)	Catalog Part Number	Max. ESR Ω@ 25 °C		Ripple Amps Max. @ 85 °C		Nominal Size D x L (mm)	Cap. (µF)	Catalog Part Number	Max. ESR Ω@ 25 °C		Ripple Amps Max. @ 85 °C		Nominal Size D x L (mm)
		120 Hz	20 kHz	120 Hz	20 kHz				120 Hz	20 kHz	120 Hz	20 kHz	
<b>160 Vdc (200 Vdc Surge)</b>							<b>180 Vdc (225 Vdc Surge)</b>						
820	380LX821M160H042	0.260	0.130	2.50	3.50	22 x 40	820	380LX821M180H452	0.243	0.124	2.80	3.90	22 x 45
820	380LX821M160H452	0.260	0.130	2.80	3.90	22 x 45	820	380LX821M180J042	0.243	0.124	2.80	3.90	25 x 40
820	380LX821M160J032	0.260	0.130	2.80	3.90	25 x 35	820	380LX821M180K022	0.243	0.124	2.80	3.90	30 x 30
820	380LX821M160K012	0.260	0.130	2.75	3.85	30 x 25	1000	380LX102M180J452	0.199	0.102	3.00	4.20	25 x 45
1000	380LX102M160H452	0.220	0.110	3.00	4.20	22 x 45	1000	380LX102M180K032	0.199	0.102	3.00	4.20	30 x 35
1000	380LX102M160J042	0.220	0.110	3.00	4.20	25 x 40	1200	380LX122M180J052	0.166	0.085	3.30	4.60	25 x 50
1000	380LX102M160K022	0.220	0.110	3.00	4.20	30 x 30	1200	380LX122M180K042	0.166	0.085	3.30	4.60	30 x 40
1200	380LX122M160J052	0.210	0.115	3.25	4.55	25 x 50	1200	380LX122M180A032	0.166	0.085	3.30	4.60	35 x 35
1200	380LX102M160K032	0.210	0.115	3.25	4.55	30 x 35	1500	380LX152M180K452	0.133	0.068	3.80	5.40	30 x 45
1200	380LX122M160A022	0.210	0.115	3.25	4.55	35 x 30	1500	380LX152M180A042	0.133	0.068	3.80	5.40	35 x 40
1500	380LX152M160J052	0.170	0.090	3.70	5.20	25 x 50	1800	380LX182M180K052	0.111	0.057	4.30	6.00	30 x 50
1500	380LX152M160K032	0.170	0.090	3.70	5.20	30 x 35	1800	380LX182M180A042	0.111	0.057	4.30	6.00	35 x 40
1500	380LX152M160A022	0.166	0.091	3.73	5.22	35 x 30	2200	380LX222M180A052	0.090	0.046	4.90	6.90	35 x 50
1800	380LX182M160K052	0.140	0.085	4.20	5.90	30 x 50	2700	382L272M180N062	0.051	0.027	5.00	6.50	40 x 63
1800	380LX182M160A032	0.140	0.085	4.20	5.90	35 x 35	2700	380L272M180A072	0.054	0.027	4.80	6.20	35 x 70
2200	380LX222M160K052	0.105	0.053	4.78	6.69	30 x 50	3300	380L332M180A082	0.046	0.023	5.40	7.10	35 x 80
2200	380LX222M160A042	0.115	0.075	4.78	6.69	35 x 40	4700	382L472M180N082	0.036	0.020	6.60	8.50	40 x 80
2700	380LX272M160A052	0.090	0.060	5.50	7.60	35 x 50	<b>200 Vdc (250 Vdc Surge)</b>						
2700	382LX272M160N042	0.080	0.045	5.50	7.60	40 x 40	150	380LX151M200H202	1.330	0.600	0.65	0.90	22 x 20
3300	380LX332M160A062	0.065	0.040	6.30	8.80	35 x 63	150	380LX151M200H012	1.220	0.550	0.70	1.00	22 x 25
3300	380LX332M160N052	0.065	0.040	6.30	8.80	40 x 50	220	380LX221M200H012	0.083	0.380	1.00	1.45	22 x 25
3900	380LX392M160A082	0.055	0.030	7.30	10.20	35 x 80	220	380LX221M200J202	0.905	0.410	0.90	1.20	25 x 20
3900	380LX392M160N062	0.055	0.030	7.30	10.20	40 x 63	270	380LX271M200H012	0.610	0.280	1.40	2.00	22 x 25
4700	382L472M160N082	0.036	0.020	6.60	8.50	40 x 80	330	380LX331M200H012	0.550	0.250	1.60	2.20	22 x 25
5600	382LX562M160N082	0.040	0.020	8.30	11.70	40 x 80	330	380LX331M200K202	0.603	0.308	1.00	1.40	30 x 20
5600	382LX562M160B052V	0.040	0.020	8.25	9.50	50 x 50	390	380LX391M200H022	0.470	0.210	1.70	2.40	22 x 30
6800	380LX682M160A102	0.032	0.017	9.10	12.70	35 x 105	390	380LX391M200J012	0.470	0.210	1.70	2.40	25 x 25
8200	382LX822M160B062V	0.026	0.015	8.90	12.50	50 x 63	470	380LX471M200H032	0.390	0.180	1.90	2.60	22 x 35
10000	382LX103M160N102	0.022	0.012	9.90	13.80	40 x 105	470	380LX471M200J022	0.390	0.180	1.90	2.60	25 x 30
10000	382LX103M160B082V	0.022	0.012	9.80	13.70	50 x 80	470	380LX471M200K012	0.423	0.216	1.90	2.60	30 x 25
12000	382LX123M160B092V	0.018	0.010	12.90	18.10	50 x 92	470	380LX471M200A202	0.460	0.210	1.30	1.80	35 x 20
15000	382LX153M160B102V	0.014	0.008	14.10	19.70	50 x 105	560	380LX561M200H042	0.330	0.150	2.40	3.40	22 x 40
<b>180 Vdc (225 Vdc Surge)</b>							560	380LX561M200J022	0.330	0.150	2.43	3.40	25 x 30
330	380LX331M180H012	0.603	0.308	1.80	2.50	22 x 25	560	380LX561M200K012	0.390	0.180	2.15	3.16	30 x 25
390	380LX391M180H022	0.510	0.260	1.20	1.60	22 x 30	680	380LX681M200H452	0.270	0.120	2.70	3.80	22 x 45
390	380LX391M180J012	0.510	0.260	1.20	1.60	25 x 25	680	380LX681M200J032	0.270	0.120	2.70	3.80	25 x 35
470	380LX471M180H032	0.423	0.216	2.10	2.90	22 x 35	680	380LX681M200K022	0.270	0.120	2.70	3.80	30 x 30
470	380LX471M180J012	0.423	0.216	2.10	2.90	25 x 25	820	380LX821M200J452	0.220	0.100	2.90	4.10	25 x 45
560	380LX561M180H032	0.355	0.181	2.30	3.20	22 x 35	820	380LX821M200K022	0.220	0.100	2.90	4.10	30 x 30
560	380LX561M180J022	0.355	0.181	2.30	3.20	25 x 30	820	380LX821M200A012	0.243	0.124	2.90	4.10	35 x 25
680	380LX681M180H042	0.293	0.149	2.50	3.50	22 x 40	1000	380LX102M200J452	0.199	0.090	3.25	4.55	25 x 45
680	380LX681M180J032	0.293	0.149	2.50	3.50	25 x 35	1000	380LX102M200K032	0.199	0.090	3.25	4.55	30 x 35
680	380LX681M180K022	0.293	0.149	2.50	3.50	30 x 30	1000	380LX102M200A022	0.199	0.102	3.30	4.60	35 x 30

# Type 380LX / 382LX 85 °C High Capacitance, Snap-In Aluminum

2, 4 and 5 pin styles available

Cap. (µF)	Catalog Part Number	Max. ESR Ω@ 25 °C		Ripple Amps Max. @ 85 °C		Nominal Size D x L (mm)	Cap. (µF)	Catalog Part Number	Max. ESR Ω@ 25 °C		Ripple Amps Max. @ 85 °C		Nominal Size D x L (mm)
		120 Hz	20 kHz	120 Hz	20 kHz				120 Hz	20 kHz	120 Hz	20 kHz	
<b>200 Vdc (250 Vdc Surge)</b>							<b>250 Vdc (300 Vdc Surge)</b>						
1200	380LX122M200K042	0.166	0.075	3.50	4.90	30 x 40	560	380LX561M250J042	0.326	0.130	2.30	3.20	25 x 40
1200	380LX122M200A022	0.166	0.075	3.50	4.90	35 x 30	560	380LX561M250K022	0.326	0.130	2.30	3.20	30 x 30
1500	380LX152M200K452	0.144	0.072	3.87	5.42	30 x 45	560	380LX561M250A012	0.326	0.130	2.30	3.20	35 x 25
1500	380LX152M200A032	0.144	0.072	3.87	5.42	35 x 35	680	380LX681M250J452	0.268	0.107	2.50	3.50	25 x 45
1800	380LX182M200K052	0.120	0.060	4.32	6.05	30 x 50	680	380LX681M250K032	0.268	0.107	2.50	3.50	30 x 35
1800	380LX182M200A042	0.120	0.060	4.32	6.05	35 x 40	680	380LX681M250A022	0.293	0.149	2.50	3.50	35 x 30
2200	380LX222M200A452	0.098	0.054	4.92	6.89	35 x 45	820	380LX821M250K042	0.222	0.089	2.80	3.90	30 x 40
2200	382LX222M200N042	0.098	0.054	4.92	6.89	40 x 40	820	380LX821M250A022	0.222	0.089	2.80	3.90	35 x 30
2700	380LX272M200A062	0.080	0.045	5.50	7.70	35 x 63	1000	380LX102M250K452	0.182	0.073	3.32	4.65	30 x 45
2700	382LX272M200N052	0.080	0.045	5.40	7.60	40 x 50	1000	380LX102M250A032	0.182	0.073	3.32	4.65	35 x 35
3300	380LX332M200A082	0.065	0.037	6.40	9.00	35 x 80	1200	380LX122M250A042	0.166	0.083	3.53	4.94	35 x 40
3300	382LX332M200N062	0.065	0.037	6.30	8.90	40 x 63	1500	380LX152M250A052	0.133	0.068	4.00	5.70	35 x 50
3900	380LX392M200A082	0.055	0.030	6.60	9.25	35 x 80	1500	382LX152M250N042	0.133	0.066	4.04	5.66	40 x 40
3900	382LX392M200N062	0.055	0.030	6.80	9.50	40 x 63	1800	380LX182M250A062	0.110	0.055	4.50	6.30	35 x 63
3900	382LX392M200B052V	0.055	0.030	8.22	9.45	50 x 50	1800	382LX182M250N052	0.110	0.055	4.50	6.30	40 x 50
4700	382LX472M200N082	0.046	0.025	8.38	11.73	40 x 80	1800	382L182M250N062	0.062	0.030	4.80	6.40	40 x 63
4700	382LX472M200B062V	0.046	0.025	9.32	13.05	50 x 63	2200	380LX222M250A062	0.090	0.045	4.70	6.60	35 x 63
5600	380LX562M200A102	0.038	0.021	8.90	12.46	35 x 105	2200	380LX222M250A082	0.090	0.045	4.90	6.90	35 x 80
6800	382LX682M200N102	0.032	0.017	8.65	12.11	40 x 105	2200	382LX222M250N062	0.090	0.045	4.90	6.90	40 x 63
6800	382LX682M200B082V	0.032	0.017	11.41	15.97	50 x 80	2700	380LX272M250A082	0.074	0.037	5.60	7.90	35 x 80
7500	382LX752M200B092V	0.029	0.016	12.28	17.19	50 x 92	2700	382LX272M250N062	0.074	0.037	5.80	8.10	40 x 63
8200	382LX822M200B102V	0.026	0.014	13.16	18.42	50 x 105	2700	382L272M250N082	0.043	0.021	6.30	8.40	40 x 80
<b>250 Vdc (300 Vdc Surge)</b>							<b>315 Vdc (365 Vdc Surge)</b>						
120	380LX121M250H202	1.658	0.846	0.50	0.60	22 x 20	100	380LX101M315H012	1.989	1.015	0.90	1.30	22 x 25
120	380LX121M250H012	1.520	0.610	0.71	1.00	22 x 25	120	380LX121M315H022	1.658	0.856	1.00	1.40	22 x 30
150	380LX151M250H012	1.220	0.490	0.90	1.25	22 x 25	120	380LX121M315J012	1.658	0.856	1.00	1.40	25 x 25
150	380LX151M250J202	1.326	0.530	0.70	0.90	25 x 20	150	380LX151M315H022	1.326	0.677	1.10	1.60	22 x 30
180	380LX181M250H012	0.920	0.370	1.10	1.50	22 x 25	150	380LX151M315J012	1.326	0.677	1.10	1.60	25 x 25
220	380LX221M250H012	0.754	0.301	1.17	1.64	22 x 25	180	380LX181M315H032	1.105	0.546	1.20	1.70	22 x 35
220	380LX221M250K202	0.830	0.330	0.90	1.20	30 x 20	180	380LX181M315J022	1.105	0.546	1.20	1.70	25 x 30
270	380LX271M250H022	0.620	0.250	1.30	1.80	22 x 30	180	380LX181M315K012	1.105	0.546	1.20	1.70	30 x 25
270	380LX271M250J012	0.620	0.250	1.30	1.80	25 x 25	220	380LX221M315H042	0.904	0.461	1.40	2.00	22 x 40
330	380LX331M250H032	0.550	0.220	1.80	2.50	22 x 35	220	380LX221M315J032	0.904	0.461	1.40	2.00	25 x 35
330	380LX331M250J022	0.550	0.220	1.80	2.50	25 x 30							
330	380LX331M250K012	0.550	0.220	1.80	2.50	30 x 25							
330	380LX331M250A202	0.550	0.220	1.10	1.50	35 x 20							
390	380LX391M250H042	0.510	0.260	1.90	2.70	22 x 40							
390	380LX391M250J022	0.468	0.187	1.91	2.67	25 x 30							
390	380LX391M250K012	0.510	0.260	1.90	2.70	30 x 25							
470	380LX471M250H452	0.390	0.155	2.10	3.00	22 x 45							
470	380LX471M250J032	0.390	0.155	2.10	3.00	25 x 35							
470	380LX471M250K012	0.353	0.141	2.10	3.00	30 x 25							

# Type 380LX / 382LX 85 °C High Capacitance, Snap-In Aluminum

2, 4 and 5 pin styles available

Cap. (µF)	Catalog Part Number	Max. ESR Ω@ 25 °C		Ripple Amps Max. @ 85 °C		Nominal Size D x L (mm)	Cap. (µF)	Catalog Part Number	Max. ESR Ω@ 25 °C		Ripple Amps Max. @ 85 °C		Nominal Size D x L (mm)
		120 Hz	20 kHz	120 Hz	20 kHz				120 Hz	20 kHz	120 Hz	20 kHz	
<b>315 Vdc (365 Vdc Surge)</b>							<b>350 Vdc (400 Vdc Surge)</b>						
220	380LX221M315K012	0.904	0.461	1.40	2.00	30 x 25	330	380LX331M350A022	0.500	0.180	1.90	2.60	35 x 30
270	380LX271M315H452	0.737	0.376	1.60	2.20	22 x 45	390	380LX391M350J052	0.425	0.149	2.06	2.88	25 x 50
270	380LX271M315J042	0.737	0.376	1.60	2.20	25 x 40	390	380LX391M350K042	0.425	0.149	2.06	2.88	30 x 40
270	380LX271M315K022	0.737	0.376	1.60	2.20	30 x 30	390	380LX391M350A022	0.425	0.149	2.06	2.88	35 x 30
330	380LX331M315J452	0.603	0.308	1.80	2.50	25 x 45	470	380LX471M350K052	0.390	0.140	2.40	3.40	30 x 50
330	380LX331M315K022	0.603	0.308	1.80	2.50	30 x 30	470	380LX471M350A032	0.390	0.140	2.40	3.40	35 x 35
330	380LX331M315A012	0.603	0.308	1.80	2.50	35 x 25	560	380LX561M350K052	0.326	0.114	2.60	3.64	30 x 50
390	380LX391M315J052	0.510	0.260	2.00	2.80	25 x 50	560	380LX561M350A042	0.326	0.114	2.60	3.64	35 x 40
390	380LX391M315K032	0.510	0.260	2.00	2.80	30 x 35	680	380LX681M350A452	0.293	0.117	2.96	4.14	35 x 45
390	380LX391M315A022	0.510	0.260	2.00	2.80	35 x 30	680	382LX681M350N042	0.293	0.117	3.00	4.10	40 x 40
470	380LX471M315K042	0.423	0.216	2.30	3.20	30 x 40	820	380LX821M350A052	0.243	0.097	3.55	4.97	35 x 50
470	380LX471M315A032	0.423	0.216	2.30	3.20	35 x 35	1000	380LX102M350A062	0.250	0.110	3.80	5.30	35 x 63
560	380LX561M315K452	0.355	0.181	2.60	3.60	30 x 45	1000	382LX102M350N052	0.250	0.110	3.80	5.30	40 x 50
560	380LX561M315A032	0.355	0.181	2.60	3.60	35 x 35	1200	380LX122M350A082	0.210	0.095	4.40	6.20	35 x 80
680	380LX681M315A452	0.293	0.149	2.90	4.00	35 x 45	1200	382LX122M350N062	0.210	0.095	4.40	6.20	40 x 63
820	380LX821M315A052	0.243	0.124	3.30	4.60	35 x 50	1200	382LX122M350B052V	0.207	0.093	5.18	5.96	50 x 50
1000	380L102M315A062	0.218	0.129	2.70	3.60	35 x 63	1500	382LX152M350B062V	0.166	0.075	6.01	8.41	50 x 63
1200	380L122M315A072	0.182	0.107	3.20	4.20	35 x 70	1800	380LX182M350A102	0.138	0.062	5.79	8.11	35 x 105
1200	382L122M315N052	0.202	0.122	2.90	3.90	40 x 50	1800	382LX182M350N082	0.138	0.062	5.85	8.20	40 x 80
1500	380L152M315A082	0.153	0.090	3.60	4.80	35 x 80	1800	382LX182M350B082V	0.138	0.062	6.89	9.65	50 x 80
1500	382L152M315N062	0.162	0.098	3.40	4.50	40 x 63	2200	382LX222M350N102	0.113	0.051	6.91	9.67	40 x 105
1800	382L182M315N082	0.113	0.069	4.50	6.00	40 x 80	2200	382LX222M350B092V	0.113	0.051	7.79	10.91	50 x 92
<b>350 Vdc (400 Vdc Surge)</b>							<b>400 Vdc (450 Vdc Surge)</b>						
82	380LX820M350H012	2.022	0.708	0.83	1.16	22 x 25	47	380LX470M400H202	3.530	1.240	0.25	0.35	22 x 20
100	380LX101M350H022	1.660	0.580	0.90	1.30	22 x 30	47	380LX470M400H012	3.530	1.240	0.47	0.66	22 x 25
120	380LX121M350H022	1.382	0.484	1.00	1.40	22 x 30	68	380LX680M400H012	2.440	0.850	0.70	0.97	22 x 25
120	380LX121M350J012	1.382	0.484	1.00	1.40	25 x 25	68	380LX680M400J202	2.930	1.000	0.35	0.50	25 x 20
150	380LX151M350H032	1.110	0.390	1.10	1.60	22 x 35	82	380LX820M400H012	2.000	0.710	0.80	1.20	22 x 25
150	380LX151M350J012	1.110	0.390	1.10	1.60	25 x 25	100	380LX101M400H022	1.650	0.580	0.90	1.30	22 x 30
150	380LX151M350K012	1.110	0.390	1.10	1.60	30 x 25	100	380LX101M400J012	1.650	0.580	0.90	1.30	25 x 25
180	380LX181M350H042	0.920	0.320	1.20	1.70	22 x 40	100	380LX101M400K202	1.990	0.700	0.50	0.70	30 x 20
180	380LX181M350J022	0.920	0.320	1.22	1.70	25 x 30	120	380LX121M400H032	1.380	0.490	1.00	1.40	22 x 35
180	380LX181M350K012	0.920	0.320	1.20	1.70	30 x 25	120	380LX121M400J012	1.380	0.490	1.02	1.43	25 x 25
220	380LX221M350H452	0.750	0.260	1.44	2.00	22 x 45	150	380LX151M400H042	1.100	0.390	1.20	1.60	22 x 40
220	380LX221M350J032	0.750	0.260	1.44	2.00	25 x 35	150	380LX151M400J022	1.100	0.390	1.20	1.60	25 x 30
220	380LX221M350K012	0.750	0.260	1.44	2.00	30 x 25	150	380LX151M400K012	1.100	0.390	1.20	1.60	30 x 25
220	380LX221M350A012	0.750	0.260	1.44	2.00	35 x 25	150	380LX151M400A202	1.330	0.470	0.60	0.80	35 x 20
270	380LX271M350J042	0.614	0.215	1.66	2.32	25 x 40	180	380LX181M400H452	0.920	0.320	1.40	2.00	22 x 45
270	380LX271M350K022	0.614	0.215	1.66	2.32	30 x 30	180	380LX181M400J022	0.920	0.320	1.40	2.00	25 x 30
270	380LX271M350A012	0.614	0.215	1.66	2.32	35 x 25	220	380LX221M400H052	0.750	0.260	1.50	2.10	22 x 50
270	380LX271M350A012	0.614	0.215	1.70	2.30	35 x 25	220	380LX221M400J042	0.750	0.260	1.50	2.10	25 x 40
330	380LX331M350J052	0.500	0.180	1.90	2.60	25 x 50	220	380LX221M400K022	0.750	0.260	1.50	2.10	30 x 30
330	380LX331M350K032	0.500	0.180	1.90	2.60	30 x 35							

# Type 380LX / 382LX 85 °C High Capacitance, Snap-In Aluminum

2, 4 and 5 pin styles available

Cap. (µF)	Catalog Part Number	Max. ESR Ω@ 25 °C		Ripple Amps Max. @ 85 °C		Nominal Size D x L (mm)	Cap. (µF)	Catalog Part Number	Max. ESR Ω@ 25 °C		Ripple Amps Max. @ 85 °C		Nominal Size D x L (mm)
		120 Hz	20 kHz	120 Hz	20 kHz				120 Hz	20 kHz	120 Hz	20 kHz	
<b>400 Vdc (450 Vdc Surge)</b>							<b>420 Vdc (470 Vdc Surge)</b>						
270	380LX271M400J452	0.680	0.240	1.70	2.30	25 x 45	330	380LX331M420K452	0.600	0.210	1.90	2.68	30 x 45
270	380LX271M400K032	0.680	0.240	1.70	2.30	30 x 35	330	380LX331M420A032	0.600	0.210	1.90	2.68	35 x 35
270	380LX271M400A022	0.680	0.240	1.70	2.30	35 x 30	390	380LX391M420K052	0.500	0.180	2.10	3.00	30 x 50
330	380LX331M400K042	0.550	0.200	1.90	2.70	30 x 40	390	380LX391M420A042	0.500	0.180	2.10	3.00	35 x 40
330	380LX331M400A022	0.550	0.200	1.90	2.70	35 x 30	470	380LX471M420A452	0.420	0.150	2.40	3.35	35 x 45
390	380LX391M400K452	0.470	0.160	2.10	3.00	30 x 45	560	380LX561M420A052	0.355	0.125	2.70	3.80	35 x 50
390	380LX391M400A032	0.470	0.160	2.10	3.00	35 x 35	<b>450 Vdc (500 Vdc Surge)</b>						
470	380LX471M400A042	0.388	0.136	2.39	3.35	35 x 40	33	380LX330M450H202	6.029	2.400	0.20	0.30	22 x 20
560	380LX561M400A452	0.326	0.114	2.69	3.77	35 x 45	33	380LX330M450H012	6.029	2.400	0.40	0.57	22 x 25
560	382LX561M400N042	0.326	0.114	2.70	3.80	40 x 40	47	380LX470M450H012	4.230	1.690	0.59	0.83	22 x 25
680	380LX681M400A052	0.270	0.095	3.00	4.20	35 x 50	47	380LX470M450J202	4.230	1.690	0.30	0.40	25 x 20
680	382LX681M400N052	0.270	0.095	3.40	4.70	40 x 50	56	380LX560M450H012	3.000	1.190	0.70	1.00	22 x 25
820	380LX821M400A062	0.222	0.078	3.55	4.97	35 x 63	68	380LX680M450H022	2.926	1.170	0.80	1.10	22 x 30
820	382LX821M400N052	0.222	0.078	3.40	4.70	40 x 50	68	380LX680M450K202	2.926	1.170	0.40	0.50	30 x 20
1000	380L102M400A082	0.179	0.099	3.60	4.80	35 x 80	82	380LX820M450H022	2.000	0.810	0.80	1.20	22 x 30
1000	382LX102M400N062	0.199	0.127	4.20	5.80	40 x 63	82	380LX820M450J012	2.000	0.810	0.80	1.20	25 x 25
1000	382LX102M400B052V	0.199	0.080	4.76	5.47	50 x 50	100	380LX101M450H032	1.660	0.660	0.90	1.30	22 x 35
1200	380LX122M400A082	0.152	0.053	4.52	6.33	35 x 80	100	380LX101M450J022	1.660	0.660	0.90	1.30	25 x 30
1200	382LX122M400N062	0.152	0.053	4.52	6.33	40 x 63	100	380LX101M450K012	1.989	1.015	0.90	1.30	30 x 25
1200	382LX122M400B062V	0.166	0.066	5.47	7.66	50 x 63	100	380LX101M450A202	1.989	1.015	0.50	0.70	35 x 20
1500	380LX152M400A102	0.122	0.043	5.44	7.62	35 x 105	120	380LX121M450H042	1.380	0.550	1.00	1.50	22 x 40
1500	382LX152M400N082	0.122	0.043	5.50	7.70	40 x 80	120	380LX121M450J022	1.380	0.550	1.00	1.50	25 x 30
1500	382LX152M400B082V	0.133	0.053	6.47	9.06	50 x 80	120	380LX121M450K012	1.380	0.550	1.00	1.50	30 x 25
1800	382LX182M400N102	0.101	0.035	6.53	9.14	40 x 105	150	380LX151M450H052	1.100	0.440	1.20	1.70	22 x 50
1800	382LX182M400B092V	0.111	0.044	7.35	10.29	50 x 92	150	380LX151M450J042	1.100	0.440	1.20	1.70	25 x 40
2200	382LX222M400B102V	0.090	0.036	8.43	11.80	50 x 105	150	380LX151M450K022	1.100	0.440	1.20	1.70	30 x 30
<b>420 Vdc (470 Vdc Surge)</b>							180	380LX181M450J042	0.921	0.368	1.35	1.89	25 x 40
82	380LX820M420H022	2.430	0.850	0.80	1.15	22 x 30	180	380LX181M450K022	0.921	0.368	1.35	1.89	30 x 30
100	380LX101M420H022	2.000	0.700	0.90	1.30	22 x 30	180	380LX181M450A012	0.921	0.368	1.40	1.90	35 x 25
100	380LX101M420J012	2.000	0.700	0.90	1.30	25 x 25	220	380LX221M450J452	0.754	0.301	1.55	2.17	25 x 45
120	380LX121M420H032	1.660	0.590	1.00	1.40	22 x 35	220	380LX221M450K032	0.754	0.301	1.55	2.17	30 x 35
120	380LX121M420J022	1.660	0.590	1.00	1.40	25 x 30	220	380LX221M450A022	0.904	0.461	1.60	2.20	35 x 30
150	380LX151M420H042	1.330	0.450	1.15	1.60	22 x 40	270	380LX271M450K452	0.680	0.270	1.80	2.50	30 x 45
150	380LX151M420J022	1.330	0.450	1.15	1.60	25 x 30	270	380LX271M450A022	0.680	0.270	1.80	2.50	35 x 30
150	380LX151M420K012	1.330	0.450	1.15	1.60	30 x 25	330	380LX331M450K052	0.550	0.250	2.00	2.80	30 x 50
180	380LX181M420J012	1.100	0.390	1.45	2.00	22 x 45	330	380LX331M450A032	0.553	0.221	2.01	2.81	35 x 35
180	380LX181M420J032	1.100	0.390	1.45	2.00	25 x 35	390	380LX391M450A452	0.510	0.260	2.20	3.10	35 x 45
180	380LX181M420K022	1.100	0.390	1.45	2.00	30 x 30	470	380LX471M450A452	0.423	0.233	2.53	3.54	35 x 45
220	380LX221M420J452	0.900	0.320	1.50	2.10	25 x 45	470	382LX471M450N042	0.423	0.233	2.53	3.54	40 x 40
220	380LX221M420K022	0.900	0.320	1.50	2.10	30 x 30	560	380LX561M450A052	0.355	0.171	2.50	3.50	35 x 50
220	380LX221M420A012	0.900	0.320	1.50	2.10	35 x 25	560	380LX561M450A062	0.355	0.195	2.90	4.10	35 x 63
270	380LX271M420J052	0.740	0.260	1.70	2.30	25 x 50	680	380L681M450A072	0.226	0.120	3.20	4.20	35 x 70
270	380LX271M420K032	0.740	0.260	1.70	2.30	30 x 35	680	382LX681M450N052	0.290	0.160	3.15	4.40	40 x 50
270	380LX271M420A022	0.740	0.260	1.70	1.93	35 x 30	680	382L681M450N062	0.201	0.109	3.40	4.50	40 x 63

# Type 380LX / 382LX 85 °C High Capacitance, Snap-In Aluminum

2, 4 and 5 pin styles available

Cap. (µF)	Catalog Part Number	Max. ESR		Ripple Amps		Nominal Size D x L (mm)
		Ω@ 25 °C		Max. @ 85 °C		
		120 Hz	20 kHz	120 Hz	20 kHz	
<b>450 Vdc (500 Vdc Surge)</b>						
820	382LX821M450N062	0.243	0.133	3.70	5.20	40 x 63
820	380LX821M450A082	0.243	0.133	3.80	5.30	35 x 80
820	382LX821M450B052V	0.263	0.145	4.31	4.96	50 x 50
1000	382LX102M450N082	0.216	0.119	4.20	5.90	40 x 80
1000	382LX102M450B062V	0.216	0.119	4.96	6.94	50 x 63
1200	380LX122M450A102	0.166	0.091	4.80	6.72	35 x 105
1200	382LX122M450N082	0.166	0.091	4.85	6.80	40 x 80
1200	382LX122M450B082V	0.180	0.099	5.71	7.99	50 x 80
1500	382LX152M450N102	0.133	0.073	5.81	8.13	40 x 105
1500	382LX152M450B092V	0.144	0.079	6.55	9.17	50 x 92
1800	382LX182M450B102V	0.120	0.066	7.38	10.30	50 x 105
<b>500 Vdc (550 Vdc Surge)</b>						
33	380LX330M500H012	4.420	2.652	0.60	0.80	22 x 25
47	380LX470M500H012	3.500	2.100	0.63	0.88	22 x 25
56	380LX560M500H022	2.980	1.788	0.70	0.98	22 x 30
68	380LX680M500H032	2.720	1.632	0.78	1.09	22 x 35
68	380LX680M500J012	2.720	1.632	0.78	1.09	25 x 25
82	380LX820M500H042	2.455	1.473	0.88	1.23	22 x 40
82	380LX820M500J022	2.455	1.473	0.88	1.23	25 x 30
82	380LX820M500K012	2.455	1.473	0.90	1.20	30 x 25
100	380LX101M500H452	2.013	1.208	0.99	1.39	22 x 45
100	380LX101M500J032	2.013	1.208	0.99	1.39	25 x 35
100	380LX101M500J042	2.013	1.208	1.10	1.50	25 x 40
100	380LX101M500K022	2.013	1.208	1.10	1.50	30 x 30
100	380LX101M500A012	2.013	1.208	1.10	1.50	35 x 25
120	380LX121M500H052	1.678	1.007	1.13	1.58	22 x 50
120	380LX121M500J042	1.678	1.007	1.13	1.58	25 x 40
120	380LX121M500K022	1.678	1.007	1.13	1.58	30 x 30
120	380LX121M500K032	1.678	1.007	1.40	1.90	30 x 35
120	380LX121M500A022	1.678	1.007	1.40	1.90	35 x 30
150	380LX151M500J452	1.105	0.442	1.29	1.80	25 x 45
150	380LX151M500J052	0.945	0.585	1.40	1.90	25 x 50
150	380LX151M500K032	1.105	0.442	1.29	1.80	30 x 35
150	380LX151M500K042	0.926	0.562	1.60	2.20	30 x 40

Cap. (µF)	Catalog Part Number	Max. ESR		Ripple Amps		Nominal Size D x L (mm)
		Ω@ 25 °C		Max. @ 85 °C		
		120 Hz	20 kHz	120 Hz	20 kHz	
<b>500 Vdc (550 Vdc Surge)</b>						
150	380LX151M500A012	1.342	0.805	1.29	1.80	35 x 25
180	380LX181M500J052	0.920	0.368	1.38	1.93	25 x 50
180	380LX181M500K042	0.920	0.368	1.38	1.93	30 x 40
180	380LX181M500A022	1.119	0.671	1.38	1.93	35 x 30
180	380LX181M500A032	1.119	0.671	1.60	2.20	35 x 35
220	380LX221M500K452	0.754	0.339	1.50	2.10	30 x 45
220	380LX221M500K052	0.654	0.397	2.00	2.70	30 x 50
220	380LX221M500A032	0.915	0.549	1.50	2.10	35 x 35
220	380LX221M500A042	0.915	0.549	1.90	2.50	35 x 40
270	380LX271M500A042	0.746	0.447	1.76	2.46	35 x 40
270	380LX271M500A052	0.746	0.447	2.30	3.10	35 x 50
270	382L271M500N042	0.746	0.447	2.40	3.20	40 x 40
330	380LX331M500A452	0.610	0.366	1.99	2.79	35 x 45
330	382LX331M500N042	0.610	0.366	2.16	3.00	40 x 40
390	380LX391M500A052	0.516	0.310	2.22	3.11	35 x 50
390	380LX391M500A062	0.516	0.310	2.70	3.60	35 x 63
390	382L391M500N052	0.516	0.310	2.90	3.90	40 x 50
470	380LX471M500A062	0.428	0.257	2.58	3.61	35 x 63
470	380LX471M500A072	0.428	0.257	3.20	4.20	35 x 70
470	382LX471M500N052	0.428	0.257	2.70	3.78	40 x 50
470	382L471M500N062	0.428	0.257	3.40	4.50	40 x 63
560	380LX561M500A082	0.360	0.216	3.60	4.80	35 x 80
560	382LX561M500N062	0.360	0.216	3.11	4.35	40 x 63
560	382LX561M500B052V	0.360	0.216	3.52	4.05	50 x 50
680	382L681M500N082	0.296	0.178	4.50	6.00	40 x 80
680	380LX681M500A082	0.296	0.178	3.21	4.49	35 x 80
680	382LX681M500B062V	0.296	0.178	4.07	5.70	50 x 63
820	380LX821M500A102	0.246	0.147	3.97	5.56	35 x 105
820	382LX821M500N082	0.246	0.147	3.88	5.43	40 x 80
1000	382LX102M500B082V	0.201	0.121	5.05	7.07	50 x 80
1200	382LX122M500N102	0.168	0.101	5.90	8.26	40 x 105
1200	382LX122M500B092V	0.168	0.101	5.74	8.04	50 x 92
1500	382LX152M500B102V	0.134	0.081	6.65	9.31	50 x 105

## Данный компонент на территории Российской Федерации

### Вы можете приобрести в компании MosChip.

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

### Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: [info@moschip.ru](mailto:info@moschip.ru)

Skype отдела продаж:

moschip.ru

moschip.ru\_4

moschip.ru\_6

moschip.ru\_9