

Types 380L, 382L, 380LX & 382LX, 85 °C High-Capacitance Snap-In

2-pin Types: 380L and 380LX. 4-pin or 5-pin Types: 382L and 382LX



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.

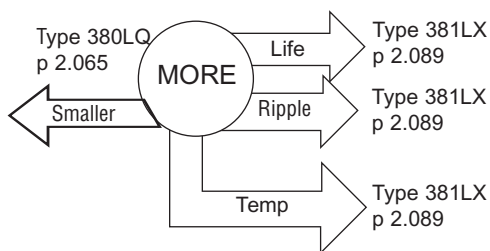
Highlights

- 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

Operating Temperature:	-40 °C to 85 °C up to 300 V, -25 °C to 85 °C ≥315 V
Rated Voltage:	16 Vdc to 500 Vdc
Capacitance:	33 μF to 270,000 μF ±20%
Leakage Current:	≤3√CV μA at 5 min.

Ripple Current Multipliers:



Ambient Temperature

45 °C	60 °C	70 °C	85 °C
1.5	1.4	1.3	1.0

Frequency

	50 Hz	60 Hz	120 Hz	500 Hz	2 kHz	10 kHz & up
16-100 Vdc	0.93	0.95	1.00	1.05	1.08	1.15
160-450 Vdc	0.75	0.80	1.00	1.20	1.25	1.40

EIA Ripple Life: 3,000 h @ full load at +85 °C per EIA IS-749

ΔCapacitance ±20%
ESR 200% of limit
DCL 100% of limit

Load Life Test: 3,000 h @ full load at +85 °C

ΔCapacitance ±20%
ESR 200% of limit
DCL 100% of limit

Shelf Life: 1,000 h @ 85 °C

ΔCapacitance ±20%
ESR 200% of limit
DCL 100% of limit

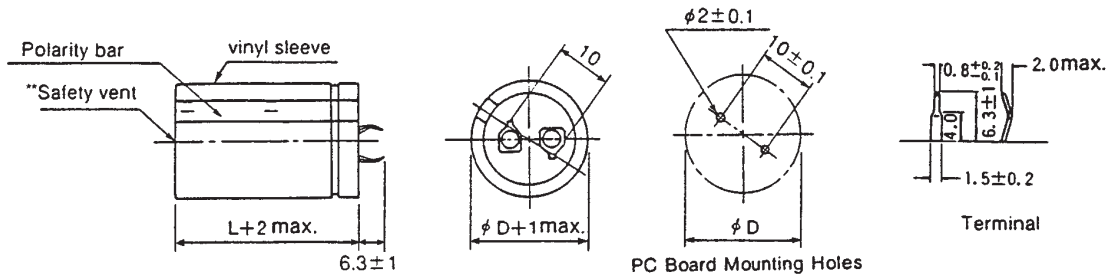
Vibration: 10 to 55 Hz, 0.06" and 10 g max, 2 h in each plane

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Outline Drawings

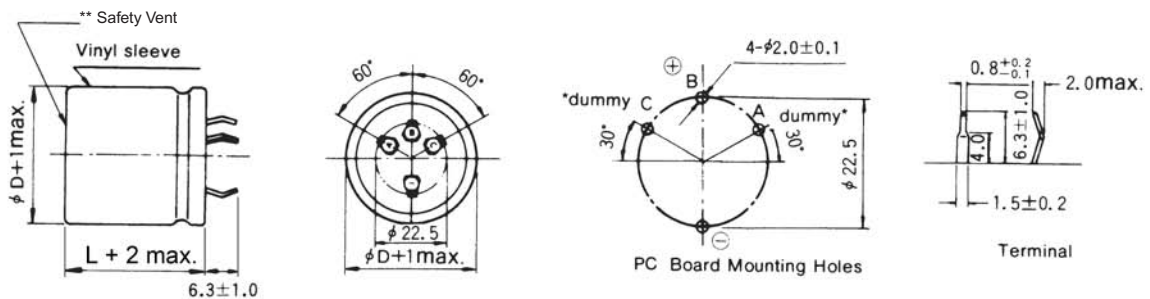
Two Pins

380L/LX (22 through 40 mm diameter)



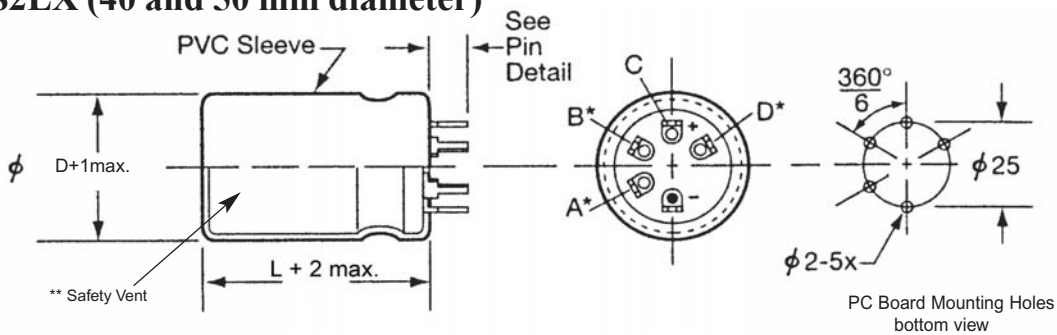
Four Pins

382L/LX (35 and 40 mm diameter)

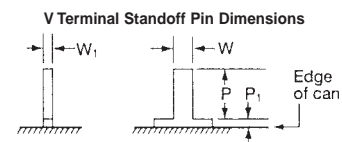


Five Pins

382L/382LX (40 and 50 mm diameter)



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



Type	P	P ₁	W	W ₁
V	3.75 ± 0.1	0.6 min.	1.5 ± 0.1	0.7

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.

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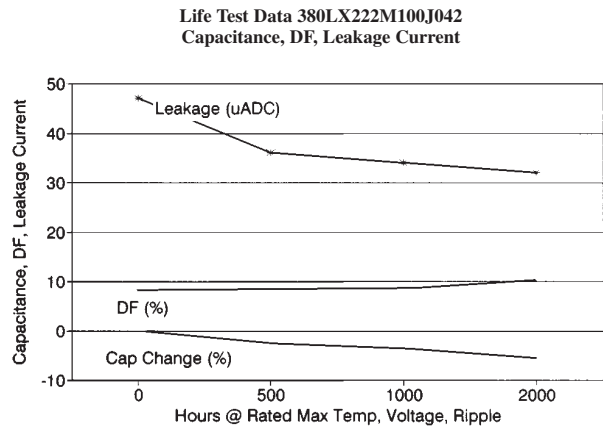
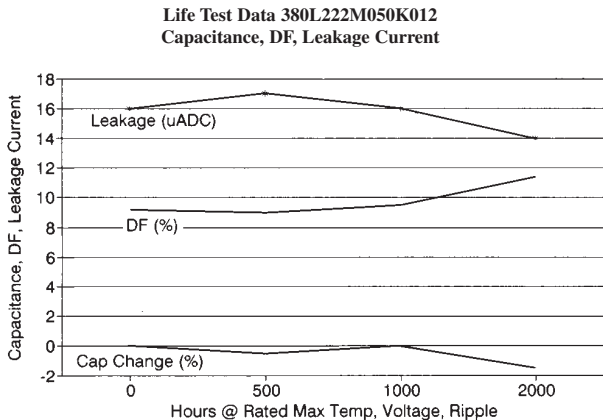
Insulated Case Dimensions

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

Part Numbering System

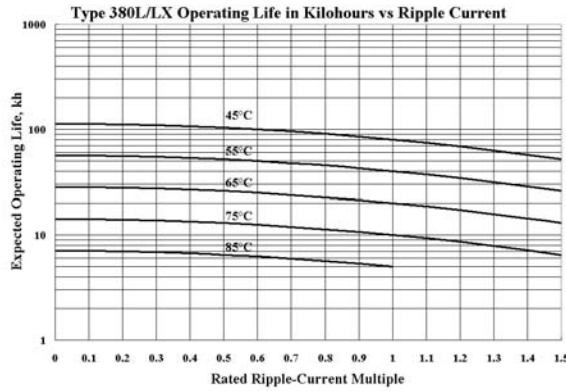
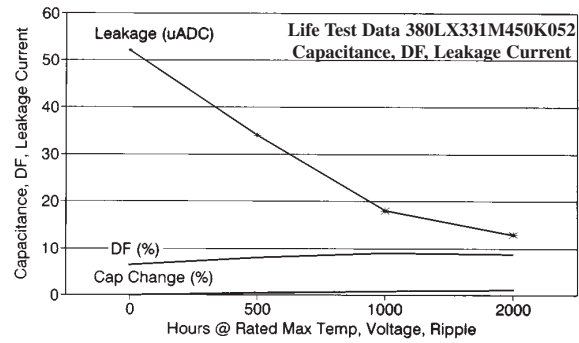
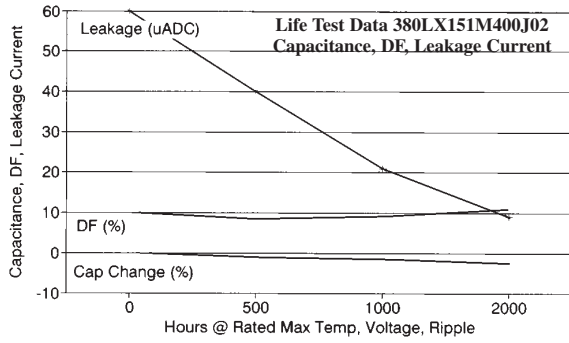
<p>382LX</p> <p>↓</p> <p>Type</p> <p>380L (2 pins) 380LX (2 pins) 382L (4 or 5 pins) 382LX (4 or 5 pins)</p>	<p>272</p> <p>↓</p> <p>Capacitance</p> <p>272 = 2700 μF 333 = 33000 μF</p>	<p>M</p> <p>↓</p> <p>Tolerance</p> <p>M = ±20%</p>	<p>200</p> <p>↓</p> <p>Rated Voltage</p> <p>Vdc</p>	<p>N05</p> <p>↓</p> <p>Case Code</p>	<p>2</p> <p>↓</p> <p>Insulation</p> <p>2 = PVC</p>	<p>V</p> <p>↓</p> <p>382L/LX</p> <p>4 or 5 Pin Mount</p> <p>blank = 4 pins (35 or 40 mm dia) V = 5 pins (40 or 50 mm dia)</p>
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Typical Performance Curves



Types 380L, 382L, 380LX & 382LX, 85 °C High-Capacitance Snap-In

Typical Performance Curves



Ratings

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)	
16 Vdc (20 Vdc Surge)										
4700	380LX472M016H202	0.160	0.135	1.60 1.80	22 x 20	56000	382LX563M016N042	0.022 0.021	9.00 10.40	40 x 40
4700	380LX472M016H012	0.160	0.135	1.77 2.00	22 x 20	68000	380LX683M016A052	0.018 0.017	9.00 10.40	35 x 50
6800	380LX682M016H012	0.110	0.092	2.60 3.00	22 x 25	82000	380LX823M016A062	0.016 0.015	10.00 11.50	35 x 63
6800	380LX682M016J202	0.110	0.092	1.80 2.10	25 x 20	82000	382LX823M016N052	0.016 0.015	10.30 11.80	40 x 50
8200	380LX822M016H012	0.090	0.078	3.10 3.60	22 x 25	100000	380LX104M016A082	0.015 0.014	11.00 12.70	35 x 80
10000	380LX103M016H022	0.075	0.062	3.80 4.30	22 x 30	100000	382LX104M016N062	0.018 0.017	11.40 13.00	40 x 63
10000	380LX103M016J012	0.075	0.062	3.80 4.30	25 x 25	120000	380LX124M016A102	0.014 0.013	12.81 14.73	35 x 105
10000	380LX103M016K202	0.084	0.070	2.40 2.80	30 x 20	120000	382LX124M016N082	0.017 0.016	12.40 14.30	40 x 80
12000	380LX123M016H022	0.062	0.052	4.50 5.20	22 x 30	120000	382LX124M016B052V	0.014 0.013	13.17 15.15	50 x 50
12000	380LX123M016J012	0.062	0.052	4.50 5.20	25 x 25	150000	382LX154M016B062V	0.012 0.011	14.40 16.56	50 x 63
15000	380LX153M016H032	0.054	0.045	5.30 6.00	22 x 35	180000	382LX184M016N102	0.013 0.012	14.85 17.08	40 x 105
15000	380LX153M016J022	0.054	0.045	5.30 6.00	25 x 30	180000	382LX184M016B082V	0.011 0.010	15.69 18.04	50 x 80
15000	380LX153M016A202	0.055	0.048	3.20 3.70	35 x 20	220000	382LX224M016B092V	0.010 0.009	16.73 19.24	50 x 92
18000	380LX183M016H042	0.045	0.040	5.60 6.40	22 x 40	270000	382LX274M016B102V	0.009 0.008	17.79 20.46	50 x 105
18000	380LX183M016J022	0.045	0.040	5.60 6.40	25 x 30	25 Vdc (32 Vdc Surge)				
22000	380LX223M016H452	0.038	0.032	6.10 7.00	22 x 45	3300	380LX332M025H202	0.177 0.140	1.60 1.80	22 x 20
22000	380LX223M016J032	0.038	0.032	6.10 7.00	25 x 35	3300	380LX332M025H012	0.161 0.130	1.70 1.90	22 x 25
22000	380LX223M016K022	0.038	0.032	6.10 7.00	30 x 30	4700	380LX472M025H012	0.110 0.090	2.40 2.75	22 x 25
22000	380LX223M016K022	0.038	0.032	6.10 7.00	30 x 30	4700	380LX472M025J202	0.125 0.100	1.80 2.10	25 x 20
27000	380LX273M016J452	0.031	0.025	6.30 7.30	25 x 45	5600	380LX562M025H012	0.095 0.075	2.90 3.30	22 x 25
27000	380LX273M016K032	0.031	0.025	6.30 7.30	30 x 35	6800	380LX682M025H022	0.078 0.063	3.50 4.00	22 x 30
33000	380LX333M016J052	0.025	0.021	6.80 7.80	25 x 50	6800	380LX682M025J012	0.078 0.063	3.50 4.00	25 x 25
33000	380LX333M016K042	0.025	0.021	6.80 7.90	30 x 40	6800	380LX682M025K202	0.078 0.063	2.30 2.60	30 x 20
33000	380LX333M016A022	0.025	0.021	6.80 7.90	35 x 30	8200	380LX822M025H022	0.065 0.049	3.60 4.10	22 x 30
39000	380LX393M016K452	0.022	0.018	6.95 8.00	30 x 45	8200	380LX822M025J012	0.065 0.049	3.60 4.10	25 x 25
39000	380LX393M016A032	0.022	0.018	6.95 8.00	35 x 35	10000	380LX103M025H032	0.058 0.046	3.80 4.30	22 x 35
47000	380LX473M016K052	0.020	0.017	7.50 8.60	30 x 50	10000	380LX103M025J022	0.058 0.046	3.80 4.30	25 x 30
47000	380LX473M016A042	0.022	0.020	7.50 8.60	35 x 40	10000	380LX103M025K012	0.058 0.046	3.80 4.30	30 x 25
56000	380LX563M016A452	0.020	0.018	8.70 10.00	35 x 45	10000	380LX103M025A202	0.060 0.050	2.70 3.10	35 x 20

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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		
100 Vdc (125 Vdc Surge)							
470	380LX471M100H202	0.450	0.300	1.00	1.20	22 x 20	
470	380LX471M100H212	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	
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	
160 Vdc (200 Vdc Surge)							
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	
180 Vdc (225 Vdc Surge)							
330	380LX331M180H012	0.603	0.308	1.80	2.50	22 x 25	
390	380LX391M180H022	0.510	0.260	1.20	1.60	22 x 30	
390	380LX391M180J012	0.510	0.260	1.20	1.60	25 x 25	
470	380LX471M180H032	0.423	0.216	2.10	2.90	22 x 35	
470	380LX471M180J012	0.423	0.216	2.10	2.90	25 x 25	
560	380LX561M180H032	0.355	0.181	2.30	3.20	22 x 35	
560	380LX561M180J022	0.355	0.181	2.30	3.20	25 x 30	
680	380LX681M180H042	0.293	0.149	2.50	3.50	22 x 40	
680	380LX681M180J032	0.293	0.149	2.50	3.50	25 x 35	

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		120 Hz	20 kHz	120 Hz	20 kHz				120 Hz	20 kHz	120 Hz	20 kHz	
180	380LX181M500J052	0.920	0.368	1.38	1.93	25 x 50	150	380LX151M500J452	1.105	0.442	1.29	1.80	25 x 45
180	380LX181M500K042	0.92	0.368	1.38	1.93	30 x 40	150	380LX151M500A012	1.105	0.442	1.29	1.80	35 x 25
180	380LX181M500A022	0.921	0.388	1.38	1.93	35 x 30	180	380LX181M500A032	0.912	0.555	1.60	2.20	35 x 35
180	380LX181M500A032	0.92	0.555	1.60	2.20	35 x 35	180	380LX181M500J052	0.921	0.388	1.38	1.93	25 x 50
220	380LX221M500K452	0.754	0.339	1.50	2.10	30 x 45	180	380LX181M500A022	0.921	0.388	1.38	1.93	35 x 30
220	380LX221M500K052	0.654	0.397	2.00	2.70	30 x 50	220	380LX221M500K052	0.654	0.397	2.00	2.70	30 x 50
220	380LX221M500A032	0.754	0.339	1.50	2.10	35 x 35	220	380LX221M500A042	0.749	0.456	1.90	2.50	35 x 40
220	380LX221M500A042	0.749	0.456	1.90	2.50	35 x 40	220	380LX221M500K452	0.754	0.339	1.50	2.10	30 x 45
270	380LX271M500A042	0.614	0.278	1.76	2.46	35 x 40	220	380LX221M500A032	0.754	0.339	1.50	2.10	35 x 35
270	380LX271M500A052	0.529	0.322	2.30	3.10	35 x 50	270	380LX271M500A052	0.529	0.322	2.30	3.10	35 x 50
270	382L271M500N042	0.549	0.342	2.40	3.20	40 x 40	270	382L271M500N042	0.549	0.342	2.40	3.20	40 x 40
330	380LX331M500A452	0.502	0.251	1.99	2.79	35 x 45	270	380LX271M500A042	0.614	0.278	1.76	2.46	35 x 40
330	382LX331M500N042	0.502	0.276	2.16	3.00	40 x 40	330	380LX331M500A452	0.502	0.251	1.99	2.79	35 x 45
390	380LX391M500A052	0.425	0.234	2.22	3.11	35 x 50	330	382LX331M500N042	0.502	0.276	2.16	3.00	40 x 40
390	380LX391M500A062	0.423	0.257	2.70	3.60	35 x 63	390	382L391M500N052	0.388	0.242	2.90	3.90	40 x 50
390	382L391M500N052	0.388	0.242	2.90	3.90	40 x 50	390	380LX391M500A062	0.423	0.257	2.70	3.60	35 x 63
470	380LX471M500A062	0.353	0.194	2.58	3.61	35 x 63	390	380LX391M500A052	0.425	0.234	2.22	3.11	35 x 50
470	380LX471M500A072	0.353	0.215	3.20	4.20	35 x 70	470	382L471M500N062	0.311	0.194	3.40	4.50	40 x 63
470	382LX471M500N052	0.353	0.194	2.70	3.78	40 x 50	470	380LX471M500A062	0.353	0.194	2.58	3.61	35 x 63
470	382L471M500N062	0.311	0.194	3.40	4.50	40 x 63	470	380LX471M500A072	0.353	0.215	3.20	4.20	35 x 70
560	380LX561M500A082	0.295	0.179	3.60	4.80	35 x 80	470	382LX471M500N052	0.353	0.194	2.70	3.78	40 x 50
560	382LX561M500N062	0.326	0.179	3.11	4.35	40 x 63	560	380LX561M500A082	0.295	0.179	3.60	4.80	35 x 80
560	382LX561M500B052V	0.355	0.195	3.52	4.05	50 x 50	560	382LX561M500N062	0.326	0.179	3.11	4.35	40 x 63
680	382L681M500N082	0.218	0.135	4.50	6.00	40 x 80	560	382LX561M500B052V	0.355	0.195	3.52	4.05	50 x 50
680	380LX681M500A0822	0.244	0.134	3.21	4.49	35 x 80	680	382L681M500N082	0.218	0.135	4.50	6.00	40 x 80
680	382LX681M500B062V	0.293	0.161	4.07	5.70	50 x 63	680	380LX681M500A082	0.244	0.134	3.21	4.49	35 x 80
820	380LX821M500A102	0.202	0.111	3.97	5.56	35 x 105	680	382LX681M500B062V	0.293	0.161	4.07	5.70	50 x 63
820	382LX821M500N082	0.222	0.122	3.88	5.43	40 x 80	820	380LX821M500A102	0.202	0.111	3.97	5.56	35 x 105
1000	382LX102M500B082V	0.199	0.109	5.05	7.07	50 x 80	820	382LX821M500N082	0.222	0.122	3.88	5.43	40 x 80
1200	382LX122M500N102	0.152	0.084	5.90	8.26	40 x 105	1000	382LX102M500B082V	0.199	0.109	5.05	7.07	50 x 80
1200	382LX122M500B092V	0.166	0.091	5.74	8.04	50 x 92	1200	382LX122M500N102	0.152	0.084	5.90	8.26	40 x 105
1500	382LX152M500B102V	0.144	0.079	6.65	9.31	50 x 105	1200	382LX122M500B092V	0.166	0.091	5.74	8.04	50 x 92
							1500	382LX152M500B102V	0.144	0.079	6.65	9.31	50 x 105