Type 381LQ 105 °C Compact, High Ripple, Snap-In Aluminum

Higher Capacitance per Case Size



Type 381LQ is on average 23% smaller and more than 5 mm shorter than Type 381LX. This is achieved with a new can closure method that permits installing capacitor elements into smaller cans. Approaching the robust capability of the 381L the new 381LQ enables you to shrink equipment size and retain the original performance.

Highlights

- More capacitance per case
- Compares to the 381L

Specifications

Temperature Range	–40 °C to + 105 °C ≤ 315 Vdc –25 °C to + 105 °C ≥ 350 Vdc
Rated Voltage Range	10 Vdc to 450 Vdc
Capacitance Range	100 µF to 100,000 µF
Capacitance Tolerance	± 20%
Leakage Current	≤3 $\sqrt{CV}$ µA, 4 mA max, 5 minutes
Ripple Current Multipliers	Ambient Temperature **45 °C** / **60 °C** / **70 °C** / **85 °C** / **105 °C** 2.35 / 2.20 / 2.00 / 1.70 / 1.00 Frequency **Voltage** / **50 Hz** / **60 Hz** / **120 Hz** / **500 kHz** / **1 kHz** / **10 kHz & Up** 10 - 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: $Z_{-20°C}/Z_{+25°C}$ ≤ 10 (10 Vdc) ≤ 8 (16–50 Vdc) ≤ 4 (63–100 Vdc) ≤ 3 (150–450 Vdc)
Endurance Life Test	2000 h at full load at 105 °C Δ Capacitance ±20% ESR 200% of limit DCL 100% of limit
Shelf Life Test	1000 h at 105 °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 each plane
RoHS Compliant	

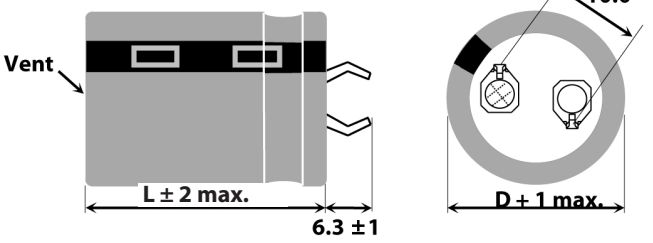
Type 381LQ 105 ºC Compact, High Ripple, Snap-In Aluminum

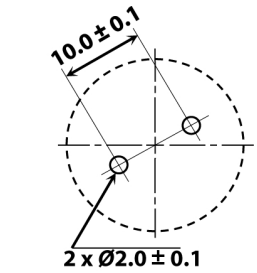
Higher Capacitance per Case Size

Part Numbering System

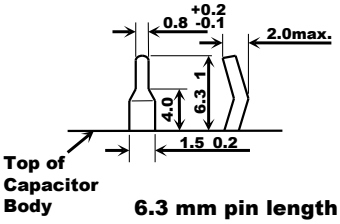
381LQ	821	M	400	A05	2	A	+D
Type	Cap	Tolerance	Voltage	Case Code	Insulating Sleeve	Pin Style	
381LQ	**471** = 470 µF	**M =** ±20%	**160** = 160 Vdc		**2** = PVC	**Blank** = 2 pins snap-in 6.3 mm L	**Blank =** no end disk if <250 V
	332 = 3300 µF		**450** = 450 Vdc			**A** = 2 pins snap-in 4.0 mm L	**D =** end disk, any voltage
	103 = 10,000 µF						

Outline Drawing

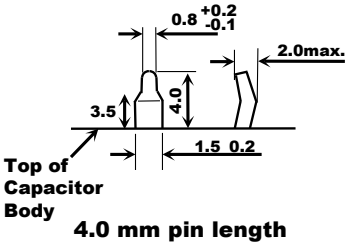




PC Board Mounting Holes



6.3 mm pin length



4.0 mm pin length option (add "A" to end of part#)

Dimensions shown are in mm

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.

Insulated Case Dimensions

	DIAMETER		LENGTH		Typical
Case	D		L		Weight
Code	mm	inches	mm	inches	(grams)
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
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

	DIAMETER		LENGTH		Typical
Case	D		L		Weight
Code	mm	inches	mm	inches	(grams)
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	49
K05	30	1.18	50	1.97	53
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	60
A45	35	1.38	45	1.77	67
A05	35	1.38	50	1.97	74

Type 381LQ 105 ºC Compact, High Ripple, Snap-In Aluminum

Higher Capacitance per Case Size

Ratings

Cap. (µF)	Catalog Part Number	ESR Max @ 25 ºC 120 Hz Ω	ESR Max @ 25 ºC 20 kHz Ω	Ripple Amps @ 105 ºC 120 Hz (A)	Ripple Amps @ 105 ºC 20 kHz (A)	Nominal Size D x L (mm)
10 Vdc (13 Vdc Surge)						
12000	381LQ123M010H012	0.076	0.065	2.20	2.53	22 x 25
18000	381LQ183M010H022	0.051	0.043	2.40	2.76	22 x 30
18000	381LQ183M010H012	0.051	0.043	2.40	2.76	25 x 25
22000	381LQ223M010H032	0.041	0.035	2.60	2.99	22 x 35
22000	381LQ223M010J022	0.041	0.035	2.60	2.99	25 x 30
27000	381LQ273M010H042	0.034	0.029	3.10	3.57	22 x 40
27000	381LQ273M010J032	0.034	0.029	3.10	3.57	25 x 35
27000	381LQ273M010K012	0.034	0.029	3.10	3.57	30 x 25
33000	381LQ333M010H452	0.028	0.023	3.40	3.91	22 x 45
33000	381LQ333M010J042	0.028	0.023	3.40	3.91	25 x 40
39000	381LQ393M010J452	0.026	0.022	3.70	4.26	25 x 45
39000	381LQ393M010K022	0.026	0.023	3.70	4.26	30 x 30
39000	381LQ393M010A012	0.026	0.022	3.70	4.26	35 x 25
47000	381LQ473M010J052	0.024	0.021	4.20	4.83	25 x 50
47000	381LQ473M010K032	0.024	0.022	4.20	4.83	30 x 35
47000	381LQ473M010A022	0.024	0.021	4.20	4.83	35 x 30
56000	381LQ563M010K042	0.023	0.021	5.00	5.75	30 x 40
56000	381LQ563M010A032	0.023	0.020	5.00	5.75	35 x 35
68000	381LQ683M010K452	0.022	0.020	5.40	6.21	30 x 45
68000	381LQ683M010A042	0.022	0.019	5.40	6.21	35 x 40
82000	381LQ823M010A452	0.021	0.019	6.10	7.02	35 x 45
100000	381LQ104M010A052	0.020	0.019	6.90	7.94	35 x 50
16 Vdc (20 Vdc Surge)						
10000	381LQ103M016H012	0.075	0.063	2.60	2.99	22 x 25
12000	381LQ123M016H022	0.062	0.053	2.90	3.34	22 x 30
12000	381LQ123M016J012	0.062	0.053	2.90	3.34	25 x 25
15000	381LQ153M016H032	0.050	0.042	3.20	3.68	22 x 35
18000	381LQ183M016H042	0.041	0.035	3.50	4.03	22 x 40
18000	381LQ183M016J022	0.041	0.035	3.50	4.03	25 x 30
22000	381LQ223M016H452	0.034	0.029	3.80	4.37	22 x 45
22000	381LQ223M016J032	0.034	0.029	3.80	4.37	25 x 35
22000	381LQ223M016H012	0.034	0.029	3.80	4.37	30 x 25
27000	381LQ273M016H052	0.028	0.023	4.20	4.83	22 x 50
27000	381LQ273M016J042	0.028	0.023	4.20	4.83	25 x 40
27000	381LQ273M016K022	0.028	0.023	4.20	4.83	30 x 30
27000	381LQ273M016A012	0.028	0.023	4.20	4.83	35 x 25
33000	381LQ333M016J452	0.023	0.019	4.70	5.41	25 x 45
33000	381LQ333M016K032	0.023	0.019	4.70	5.41	30 x 35
33000	381LQ333M016A022	0.023	0.020	4.70	5.41	35 x 30
39000	381LQ393M016K042	0.022	0.018	5.10	5.87	30 x 40
39000	381LQ393M016A032	0.022	0.020	5.10	5.87	35 x 35
47000	381LQ473M016K452	0.016	0.014	5.50	6.33	30 x 45
47000	381LQ473M016A042	0.021	0.019	5.50	6.33	35 x 40
56000	381LQ563M016K052	0.020	0.018	6.00	6.90	30 x 50
56000	381LQ563M016A452	0.020	0.018	6.00	6.90	35 x 45
25 Vdc (32 Vdc Surge)						
6800	381LQ682M025H012	0.085	0.064	2.40	2.76	22 x 25
8200	381LQ822M025H022	0.071	0.053	2.70	3.11	22 x 30
8200	381LQ822M025J012	0.071	0.053	2.70	3.11	25 x 25
10000	381LQ103M025H032	0.058	0.044	3.00	3.45	22 x 35
12000	381LQ123M025H042	0.048	0.036	3.20	3.68	22 x 40
12000	381LQ123M025J022	0.048	0.036	3.20	3.68	25 x 30
15000	381LQ153M025H452	0.039	0.029	3.60	4.14	22 x 45
15000	381LQ153M025J032	0.039	0.029	3.60	4.14	25 x 35
15000	381LQ153M025K012	0.039	0.029	3.60	4.14	30 x 25
18000	381LQ183M025H052	0.032	0.024	3.90	4.49	22 x 50
18000	381LQ183M025J042	0.032	0.024	3.90	4.49	25 x 40
18000	381LQ183M025K022	0.032	0.024	3.90	4.49	30 x 30
18000	381LQ183M025A012	0.032	0.024	3.90	4.49	35 x 25
22000	381LQ223M025J452	0.026	0.020	4.30	4.95	25 x 45
22000	381LQ223M025K032	0.026	0.020	4.30	4.95	30 x 35
22000	381LQ223M025A022	0.026	0.020	4.30	4.95	35 x 30
27000	381LQ273M025K042	0.021	0.016	4.80	5.52	30 x 40
27000	381LQ273M025A032	0.021	0.016	4.80	5.52	35 x 35
33000	381LQ333M025K452	0.018	0.013	5.50	6.33	30 x 45
33000	381LQ333M025A042	0.018	0.014	5.50	6.33	35 x 40
39000	381LQ393M025K052	0.017	0.013	5.80	6.67	30 x 50
39000	381LQ393M025A452	0.017	0.014	5.80	6.67	35 x 45
47000	381LQ473M025A052	0.017	0.014	6.30	7.25	35 x 50
35 Vdc (44 Vdc Surge)						
4700	381LQ472M035H012	0.106	0.079	2.20	2.53	22 x 25
5600	381LQ562M035H022	0.089	0.067	2.40	2.76	22 x 30
5600	381LQ562M035J012	0.089	0.067	2.40	2.76	25 x 25
6800	381LQ682M035H032	0.073	0.055	2.60	2.99	22 x 35
8200	381LQ822M035H042	0.061	0.045	2.90	3.34	22 x 40
8200	381LQ822M035J022	0.061	0.045	2.90	3.34	25 x 30
10000	381LQ103M035H452	0.050	0.037	3.20	3.68	22 x 45
10000	381LQ103M035J032	0.050	0.037	3.20	3.68	25 x 35
10000	381LQ103M035K012	0.050	0.037	3.20	3.68	30 x 25
12000	381LQ123M035J042	0.041	0.031	3.50	4.03	25 x 40
12000	381LQ123M035K022	0.041	0.031	3.50	4.03	30 x 30
12000	381LQ123M035A012	0.041	0.031	3.50	4.03	35 x 25
15000	381LQ153M035J452	0.033	0.025	3.90	4.49	25 x 45
15000	381LQ153M035K032	0.033	0.025	3.90	4.49	30 x 35
15000	381LQ153M035A022	0.033	0.025	3.90	4.49	35 x 30
18000	381LQ183M035K042	0.028	0.021	4.30	4.95	30 x 40
18000	381LQ183M035A032	0.028	0.021	4.30	4.95	35 x 35
22000	381LQ223M035K452	0.023	0.017	5.00	5.75	30 x 45
22000	381LQ223M035A042	0.023	0.017	5.00	5.75	35 x 40

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Cap. (µF)	Catalog Part Number	ESR Max @ 25 ºC 120 Hz Ω	ESR Max @ 25 ºC 20 kHz Ω	Ripple Amps @ 105 ºC 120 Hz (A)	Ripple Amps @ 105 ºC 20 kHz (A)	Nominal Size D x L (mm)
27000	381LQ273M035K052	0.018	0.014	5.30	6.10	30 x 50
27000	381LQ273M035A452	0.018	0.014	5.30	6.10	35 x 45
33000	381LQ333M035A052	0.015	0.012	5.90	6.79	35 x 50
50 Vdc (63 Vdc Surge)						
2700	381LQ272M050H012	0.154	0.115	1.80	2.07	22 x 25
3300	381LQ332M050H022	0.126	0.094	2.00	2.30	22 x 30
3900	381LQ392M050H032	0.106	0.080	2.20	2.53	22 x 35
3900	381LQ392M050J012	0.106	0.080	2.20	2.53	25 x 25
4700	381LQ472M050H042	0.088	0.066	2.50	2.88	22 x 40
4700	381LQ472M050J022	0.088	0.066	2.50	2.88	25 x 30
5600	381LQ562M050H452	0.074	0.056	2.80	3.22	22 x 45
5600	381LQ562M050J032	0.074	0.056	2.80	3.22	25 x 35
4700	381LQ472M050H042	0.088	0.066	2.50	2.88	22 x 40
4700	381LQ472M050J022	0.088	0.066	2.50	2.88	25 x 30
5600	381LQ562M050H452	0.074	0.056	2.80	3.22	22 x 45
5600	381LQ562M050J032	0.074	0.056	2.80	3.22	25 x 35
5600	381LQ562M050K012	0.074	0.056	2.80	3.22	30 x 25
6800	381LQ682M050H052	0.061	0.046	3.30	3.80	22 x 50
6800	381LQ682M050J042	0.061	0.046	3.30	3.80	25 x 40
6800	381LQ682M050K022	0.061	0.046	3.30	3.80	30 x 30
6800	381LQ682M050A012	0.061	0.046	3.30	3.80	35 x 25
8200	381LQ822M050J452	0.051	0.038	3.60	4.14	25 x 45
8200	381LQ822M050K032	0.051	0.038	3.60	4.14	30 x 35
10000	381LQ103M050J052	0.041	0.031	4.00	4.60	25 x 50
10000	381LQ103M050K042	0.041	0.031	4.00	4.60	30 x 40
10000	381LQ103M050A022	0.041	0.031	4.00	4.60	35 x 30
12000	381LQ123M050K452	0.035	0.026	4.50	5.18	30 x 45
12000	381LQ123M050A032	0.035	0.028	4.50	5.18	35 x 35
15000	381LQ153M050K052	0.028	0.021	4.80	5.52	30 x 50
15000	381LQ153M050A042	0.028	0.022	4.80	5.52	35 x 40
18000	381LQ183M050A452	0.023	0.018	5.60	6.44	35 x 45
63 Vdc (79 Vdc Surge)						
2200	381LQ222M063H012	0.151	0.113	2.00	2.30	22 x 25
2700	381LQ272M063H022	0.123	0.092	2.20	2.53	22 x 30
2700	381LQ272M063J012	0.123	0.092	2.20	2.53	25 x 25
3300	381LQ332M063H032	0.100	0.075	2.50	2.88	22 x 35
3900	381LQ392M063H042	0.085	0.064	2.70	3.11	22 x 40
3900	381LQ392M063J022	0.085	0.064	2.70	3.11	25 x 30
3900	381LQ392M063K012	0.085	0.064	2.70	3.11	30 x 25
4700	381LQ472M063H452	0.071	0.053	3.00	3.45	22 x 45
4700	381LQ472M063J032	0.071	0.053	3.00	3.45	25 x 35
5600	381LQ562M063H052	0.059	0.044	3.30	3.80	22 x 50
5600	381LQ562M063J042	0.059	0.044	3.30	3.80	25 x 40
5600	381LQ562M063K022	0.059	0.044	3.30	3.80	30 x 30
5600	381LQ562M063A012	0.059	0.044	3.30	3.80	35 x 25
6800	381LQ682M063J452	0.049	0.037	3.60	4.14	25 x 45
6800	381LQ682M063K032	0.049	0.037	3.60	4.14	30 x 35
6800	381LQ682M063A022	0.049	0.037	3.60	4.14	35 x 30
8200	381LQ822M063K042	0.040	0.030	3.90	4.49	30 x 40
8200	381LQ822M063A032	0.040	0.030	3.90	4.49	35 x 35
10000	381LQ103M063K452	0.033	0.025	4.40	5.06	30 x 45
10000	381LQ103M063A042	0.033	0.025	4.40	5.06	35 x 40
12000	381LQ123M063K052	0.028	0.021	4.80	5.52	30 x 50
12000	381LQ123M063A452	0.028	0.022	4.80	5.52	35 x 45
15000	381LQ153M063A052	0.022	0.018	5.40	6.21	35 x 50
80 Vdc (100 Vdc Surge)						
1200	381LQ122M080H012	0.235	0.176	1.50	1.73	22 x 25
1500	381LQ152M080H022	0.188	0.141	1.70	1.96	22 x 30
1500	381LQ152M080J012	0.188	0.141	1.70	1.96	25 x 25
1800	381LQ182M080H032	0.157	0.117	1.80	2.07	22 x 35
2200	381LQ222M080H042	0.128	0.096	2.10	2.42	22 x 40
2200	381LQ222M080J022	0.128	0.096	2.10	2.42	25 x 30
2700	381LQ272M080H452	0.104	0.078	2.40	2.76	22 x 45
2700	381LQ272M080J032	0.104	0.078	2.40	2.76	25 x 35
2700	381LQ272M080K012	0.104	0.078	2.40	2.76	30 x 25
3300	381LQ332M080H052	0.085	0.064	2.60	2.99	22 x 50
3300	381LQ332M080J042	0.085	0.064	2.60	2.99	25 x 40
3300	381LQ332M080K022	0.085	0.064	2.60	2.99	30 x 30
3300	381LQ332M080A012	0.085	0.064	2.60	2.99	35 x 25
3900	381LQ392M080J452	0.072	0.054	3.00	3.45	25 x 45
3900	381LQ392M080K032	0.072	0.054	3.00	3.45	30 x 35
4700	381LQ472M080J052	0.060	0.045	3.30	3.80	25 x 50
4700	381LQ472M080K042	0.060	0.045	3.30	3.80	30 x 40
4700	381LQ472M080A022	0.060	0.045	3.30	3.80	35 x 30
5600	381LQ562M080K452	0.050	0.038	3.70	4.26	30 x 45
5600	381LQ562M080A032	0.050	0.038	3.70	4.26	35 x 35
6800	381LQ682M080K052	0.041	0.031	3.90	4.49	30 x 50
6800	381LQ682M080A042	0.041	0.032	3.90	4.49	35 x 40
8200	381LQ822M080A452	0.034	0.027	4.50	5.18	35 x 45
100 Vdc (125 Vdc Surge)						
820	381LQ821M100H012	0.303	0.197	1.40	1.61	22 x 25
1200	381LQ122M100H022	0.207	0.135	1.80	2.07	22 x 30
1200	381LQ122M100J012	0.207	0.135	1.80	2.07	25 x 25
1500	381LQ152M100H032	0.166	0.108	2.10	2.42	22 x 35
1500	381LQ152M100J022	0.166	0.108	2.10	2.42	25 x 30
1800	381LQ182M100H042	0.138	0.090	2.30	2.65	22 x 40
1800	381LQ182M100J032	0.138	0.090	2.30	2.65	25 x 35
1800	381LQ182M100K012	0.138	0.090	2.30	2.65	30 x 25

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Cap. (µF)	Catalog Part Number	ESR Max @ 25 ºC 120 Hz Ω	ESR Max @ 25 ºC 20 kHz Ω	Ripple Amps @ 105 ºC 120 Hz (A)	Ripple Amps @ 105 ºC 20 kHz (A)	Nominal Size D x L (mm)
100 Vdc (125 Vdc Surge)						
2200	381LQ222M100H452	0.113	0.073	2.60	2.99	22 x 45
2200	381LQ222M100J042	0.113	0.073	2.60	2.99	25 x 40
2200	381LQ222M100K022	0.113	0.073	2.60	2.99	30 x 30
2200	381LQ222M100A012	0.113	0.073	2.60	2.99	35 x 25
2700	381LQ272M100J452	0.092	0.060	2.90	3.34	25 x 45
2700	381LQ272M100K032	0.092	0.060	2.90	3.34	30 x 35
3300	381LQ332M100J052	0.075	0.049	3.20	3.68	25 x 50
3300	381LQ332M100K042	0.075	0.049	3.20	3.68	30 x 40
3300	381LQ332M100A022	0.075	0.049	3.20	3.68	35 x 30
3900	381LQ392M100K452	0.064	0.043	3.60	4.14	30 x 45
3900	381LQ392M100A032	0.064	0.043	3.60	4.14	35 x 35
4700	381LQ472M100K052	0.053	0.038	3.80	4.37	30 x 50
4700	381LQ472M100A042	0.053	0.037	3.80	4.37	35 x 40
5600	381LQ562M100A452	0.044	0.031	4.20	4.83	35 x 45
6800	381LQ682M100A052	0.037	0.027	4.70	5.41	35 x 50
160 Vdc (200 Vdc Surge)						
470	381LQ471M160H012	0.423	0.190	1.40	1.96	22 x 25
560	381LQ561M160H022	0.355	0.160	1.50	2.10	22 x 30
680	381LQ681M160H022	0.293	0.132	1.70	2.38	22 x 30
680	381LQ681M160J012	0.293	0.132	1.70	2.38	25 x 25
820	381LQ821M160H032	0.243	0.109	2.00	2.80	22 x 35
820	381LQ821M160J022	0.243	0.109	2.00	2.80	25 x 30
1000	381LQ102M160H042	0.199	0.090	2.20	3.08	22 x 40
1000	381LQ102M160J032	0.199	0.090	2.20	3.08	25 x 35
1000	381LQ102M160K012	0.216	0.108	2.20	3.08	30 x 25
1200	381LQ122M160H452	0.166	0.075	2.30	3.22	22 x 45
1200	381LQ122M160J042	0.166	0.075	2.30	3.22	25 x 40
1200	381LQ122M160K022	0.166	0.075	2.30	3.22	30 x 30
1200	381LQ122M160A012	0.180	0.090	2.30	3.22	35 x 25
1500	381LQ152M160J452	0.133	0.060	2.50	3.50	25 x 45
1500	381LQ152M160K032	0.133	0.060	2.50	3.50	30 x 35
1500	381LQ152M160A022	0.155	0.077	2.50	3.50	35 x 30
1800	381LQ182M160J052	0.110	0.055	2.70	3.78	25 x 50
1800	381LQ182M160K042	0.110	0.055	2.70	3.78	30 x 40
1800	381LQ182M160A022	0.120	0.060	2.70	3.78	35 x 30
2200	381LQ222M160K452	0.090	0.045	2.90	4.06	30 x 45
2200	381LQ222M160A032	0.098	0.049	2.90	4.06	35 x 35
2700	381LQ272M160K052	0.080	0.040	3.10	4.34	30 x 50
2700	381LQ272M160A042	0.086	0.043	3.10	4.34	35 x 40
3300	381LQ332M160A052	0.070	0.042	3.30	4.62	35 x 50
180 Vdc (225 Vdc Surge)						
560	381LQ561M180H022	0.355	0.160	1.50	2.10	22 x 30
560	381LQ561M180J012	0.355	0.160	1.50	2.10	25 x 25

Cap. (µF)	Catalog Part Number	ESR Max @ 25 ºC 120 Hz Ω	ESR Max @ 25 ºC 20 kHz Ω	Ripple Amps @ 105 ºC 120 Hz (A)	Ripple Amps @ 105 ºC 20 kHz (A)	Nominal Size D x L (mm)
180 Vdc (225 Vdc Surge)						
680	381LQ681M180H032	0.293	0.132	1.70	2.38	22 x 35
680	381LQ681M180J022	0.293	0.132	1.70	2.38	25 x 30
820	381LQ821M180H042	0.243	0.109	2.00	2.80	22 x 40
820	381LQ821M180J022	0.243	0.109	2.00	2.80	25 x 30
820	381LQ821M180K012	0.243	0.109	2.00	2.80	30 x 25
1000	381LQ102M180H452	0.199	0.090	2.20	3.08	22 x 45
1000	381LQ102M180J042	0.199	0.090	2.20	3.08	25 x 40
1000	381LQ102M180K022	0.199	0.090	2.20	3.08	30 x 30
1000	381LQ102M180A012	0.216	0.097	2.20	3.08	35 x 25
1200	381LQ122M180J452	0.166	0.075	2.30	3.22	25 x 45
1200	381LQ122M180K032	0.166	0.075	2.30	3.22	30 x 35
1500	381LQ152M180J052	0.133	0.060	2.50	3.50	25 x 50
1500	381LQ152M180K042	0.133	0.060	2.50	3.50	30 x 40
1500	381LQ152M180A022	0.155	0.077	2.50	3.50	35 x 30
1800	381LQ182M180K452	0.110	0.050	2.70	3.78	30 x 45
1800	381LQ182M180A032	0.129	0.064	2.70	3.78	35 x 35
2200	381LQ222M180K052	0.090	0.041	2.90	4.06	30 x 50
2200	381LQ222M180A042	0.098	0.049	2.90	4.06	35 x 40
2700	381LQ272M180A052	0.086	0.043	3.10	4.34	35 x 50
200 Vdc (250 Vdc Surge)						
390	381LQ391M200H012	0.510	0.230	1.31	1.83	22 x 25
470	381LQ471M200H022	0.423	0.190	1.45	2.03	22 x 30
560	381LQ561M200H022	0.355	0.160	1.67	2.34	22 x 30
680	381LQ681M200H042	0.293	0.132	1.75	2.45	22 x 40
680	381LQ681M200J022	0.293	0.132	1.75	2.45	25 x 30
820	381LQ821M200H452	0.243	0.109	2.04	2.86	22 x 45
820	381LQ821M200J032	0.243	0.109	2.04	2.86	25 x 35
820	381LQ821M200K012	0.243	0.109	2.04	2.86	30 x 25
1000	381LQ102M200H052	0.199	0.090	2.30	3.22	22 x 50
1000	381LQ102M200J042	0.199	0.090	2.10	2.90	25 x 40
1000	381LQ102M200J452	0.199	0.090	2.30	3.22	25 x 45
1000	381LQ102M200K022	0.199	0.090	2.30	3.22	30 x 30
1000	381LQ102M200A012	0.216	0.097	2.30	3.22	35 x 25
1200	381LQ122M200J452	0.166	0.075	2.40	3.30	25 x 45
1200	381LQ122M200J052	0.166	0.075	2.65	3.71	25 x 50
1200	381LQ122M200K032	0.166	0.075	2.65	3.71	30 x 35
1200	381LQ122M200A022	0.180	0.090	2.65	3.71	35 x 30
1500	381LQ152M200K042	0.133	0.060	2.80	3.92	30 x 40
1500	381LQ152M200A022	0.114	0.072	2.80	3.92	35 x 30
1800	381LQ182M200K452	0.110	0.050	3.08	4.31	30 x 45
1800	381LQ182M200A042	0.129	0.084	3.08	4.31	35 x 40
2200	381LQ222M200K052	0.090	0.041	3.48	4.87	30 x 50
2200	381LQ222M200A452	0.096	0.044	3.48	4.87	35 x 45

Type 381LQ 105 ºC Compact, High Ripple, Snap-In Aluminum

Higher Capacitance per Case Size

Cap. (µF)	Catalog Part Number	ESR Max @ 25 ºC 120 Hz Ω	ESR Max @ 25 ºC 20 kHz Ω	Ripple Amps @ 105 ºC 120 Hz (A)	Ripple Amps @ 105 ºC 20 kHz (A)	Nominal Size D x L (mm)
250 Vdc (300 Vdc Surge)						
270	381LQ271M250H012	0.614	0.276	1.10	1.54	22 x 25
330	381LQ331M250H022	0.502	0.226	1.20	1.68	22 x 30
330	381LQ331M250J012	0.502	0.226	1.20	1.68	25 x 25
390	381LQ391M250H022	0.425	0.191	1.20	1.70	22 x 30
390	381LQ391M250H032	0.425	0.191	1.30	1.82	22 x 35
390	381LQ391M250J012	0.425	0.191	1.30	1.82	25 x 25
470	381LQ471M250H032	0.353	0.159	1.30	1.82	22 x 35
470	381LQ471M250H042	0.353	0.159	1.40	1.96	22 x 40
470	381LQ471M250J022	0.353	0.159	1.40	1.96	25 x 30
470	381LQ471M250K012	0.353	0.159	1.40	1.96	30 x 25
560	381LQ561M250H042	0.296	0.133	1.40	1.96	22 x 40
560	381LQ561M250H452	0.296	0.133	1.50	2.10	22 x 45
560	381LQ561M250J032	0.296	0.133	1.50	2.10	25 x 35
560	381LQ561M250K012	0.296	0.133	1.50	2.10	30 x 25
680	381LQ681M250H452	0.244	0.110	1.50	2.10	22 x 45
680	381LQ681M250H052	0.244	0.110	1.70	2.38	22 x 50
680	381LQ681M250J042	0.244	0.110	1.70	2.38	25 x 40
680	381LQ681M250K022	0.244	0.110	1.70	2.38	30 x 30
680	381LQ681M250A012	0.244	0.110	1.70	2.38	35 x 25
820	381LQ821M250J452	0.202	0.091	2.00	2.80	25 x 45
820	381LQ821M250K032	0.202	0.091	2.00	2.80	30 x 35
820	381LQ821M250A022	0.202	0.091	2.00	2.80	35 x 30
1000	381LQ102M250J052	0.166	0.075	2.20	3.08	25 x 50
1000	381LQ102M250K042	0.166	0.075	2.20	3.08	30 x 40
1000	381LQ102M250A022	0.166	0.075	2.20	3.08	35 x 30
1200	381LQ122M250K452	0.138	0.062	2.30	3.22	30 x 45
1200	381LQ122M250A032	0.138	0.062	2.30	3.22	35 x 35
1500	381LQ152M250A452	0.110	0.050	2.50	3.50	35 x 45
1800	381LQ182M250A452	0.092	0.041	2.50	3.50	35 x 45
1800	381LQ182M250A052	0.092	0.041	2.70	3.78	35 x 50
315 Vdc (365 Vdc Surge)						
150	381LQ151M315H012	1.105	0.497	0.82	1.15	22 x 25
180	381LQ181M315H022	0.921	0.414	0.90	1.26	22 x 30
220	381LQ221M315H022	0.754	0.339	1.00	1.40	22 x 30
270	381LQ271M315J022	0.614	0.276	1.10	1.54	25 x 30
330	381LQ331M315H452	0.502	0.226	1.20	1.68	22 x 45
330	381LQ331M315J032	0.502	0.226	1.20	1.68	25 x 35
330	381LQ331M315K012	0.502	0.226	1.20	1.68	30 x 25
390	381LQ391M315J042	0.425	0.191	1.30	1.82	25 x 40
390	381LQ391M315K022	0.425	0.191	1.30	1.82	30 x 30
390	381LQ391M315A012	0.425	0.191	1.30	1.82	35 x 25
470	381LQ471M315J452	0.353	0.159	1.40	1.96	25 x 45
470	381LQ471M315K032	0.353	0.159	1.40	1.96	30 x 35
560	381LQ561M315J052	0.296	0.133	1.50	2.10	25 x 50
560	381LQ561M315K042	0.296	0.133	1.50	2.10	30 x 40
560	381LQ561M315A022	0.296	0.133	1.50	2.10	35 x 30
680	381LQ681M315K452	0.244	0.116	1.70	2.38	30 x 45
680	381LQ681M315A032	0.244	0.116	1.70	2.38	35 x 35
820	381LQ821M315K052	0.202	0.091	2.00	2.80	30 x 50
820	381LQ821M315A042	0.202	0.091	2.00	2.80	35 x 40
1000	381LQ102M315A452	0.166	0.075	2.30	3.22	35 x 45
350 Vdc (400 Vdc Surge)						
120	381LQ121M350H012	1.382	0.622	0.75	1.05	22 x 25
150	381LQ151M350H022	1.105	0.497	0.82	1.15	22 x 30
180	381LQ181M350H022	0.921	0.414	0.90	1.26	22 x 30
180	381LQ181M350J012	0.921	0.414	0.90	1.26	25 x 25
220	381LQ221M350H032	0.754	0.339	1.00	1.40	22 x 35
220	381LQ221M350J022	0.754	0.339	1.00	1.40	25 x 30
270	381LQ271M350J032	0.614	0.276	1.10	1.54	25 x 35
270	381LQ271M350K012	0.614	0.276	1.10	1.54	30 x 25
330	381LQ331M350J042	0.502	0.226	1.20	1.68	25 x 40
330	381LQ331M350K022	0.502	0.226	1.20	1.68	30 x 30
390	381LQ391M350J452	0.425	0.191	1.30	1.82	25 x 45
390	381LQ391M350K032	0.425	0.191	1.30	1.82	30 x 35
470	381LQ471M350J052	0.353	0.159	1.40	1.96	25 x 50
470	381LQ471M350A022	0.353	0.159	1.40	1.96	35 x 30
560	381LQ561M350K452	0.296	0.133	1.50	2.10	30 x 45
560	381LQ561M350A032	0.296	0.133	1.50	2.10	35 x 35
680	381LQ681M350K052	0.244	0.110	1.70	2.38	30 x 50
680	381LQ681M350A042	0.244	0.110	1.70	2.38	35 x 40
820	381LQ821M350A452	0.202	0.091	1.90	2.66	35 x 45
400 Vdc (450 Vdc Surge)						
100	381LQ101M400H012	1.824	0.821	0.70	0.98	22 x 25
120	381LQ121M400H022	1.520	0.684	0.75	1.05	22 x 30
150	381LQ151M400H022	1.216	0.547	0.88	1.23	22 x 30
180	381LQ181M400H032	1.013	0.458	0.95	1.33	22 x 35
180	381LQ181M400J022	1.013	0.458	0.95	1.33	25 x 30
220	381LQ221M400H042	0.829	0.373	1.00	1.40	22 x 45
220	381LQ221M400H452	0.829	0.373	1.10	1.54	22 x 45
220	381LQ221M400J032	0.829	0.373	1.10	1.54	25 x 35
220	381LQ221M400K012	0.829	0.373	1.10	1.54	30 x 25
270	381LQ271M400H452	0.675	0.304	1.10	1.54	22 x 45
270	381LQ271M400H052	0.675	0.304	1.22	1.71	22 x 50
270	381LQ271M400J042	0.675	0.304	1.22	1.71	25 x 40
270	381LQ271M400K022	0.675	0.304	1.22	1.71	30 x 30
270	381LQ271M400A012	0.675	0.304	1.22	1.71	35 x 25
330	381LQ331M400J452	0.553	0.249	1.44	2.02	25 x 45

Type 381LQ 105 ºC Compact, High Ripple, Snap-In Aluminum

Higher Capacitance per Case Size

Cap. (µF)	Catalog Part Number	ESR Max @ 25 ºC 120 Hz Ω	ESR Max @ 25 ºC 20 kHz Ω	Ripple Amps @ 105 ºC 120 Hz (A)	Ripple Amps @ 105 ºC 20 kHz (A)	Nominal Size D x L (mm)
400 Vdc (450 Vdc Surge)						
330	381LQ331M400K032	0.553	0.249	1.44	2.02	30 x 35
330	381LQ331M400A022	0.553	0.249	1.44	2.02	35 x 30
390	381LQ391M400J052	0.468	0.210	1.55	2.17	25 x 50
390	381LQ391M400K032	0.468	0.210	1.40	1.95	30 x 35
390	381LQ391M400K042	0.468	0.210	1.55	2.17	30 x 40
390	381LQ391M400A022	0.468	0.210	1.55	2.17	35 x 30
470	381LQ471M400K452	0.388	0.175	1.68	2.35	30 x 45
470	381LQ471M400A032	0.388	0.175	1.68	2.35	35 x 35
560	381LQ561M400K052	0.326	0.147	1.90	2.66	30 x 50
560	381LQ561M400A042	0.326	0.147	1.90	2.66	35 x 40
680	381LQ681M400A452	0.268	0.121	2.12	2.97	35 x 45
820	381LQ821M400A052	0.200	0.090	2.30	3.20	35 x 50
420 Vdc (470 Vdc Surge)						
120	381LQ121M420H022	1.520	0.684	0.75	1.05	22 x 30
120	381LQ121M420J012	1.520	0.684	0.75	1.05	25 x 25
150	381LQ151M420H032	1.220	0.550	0.85	1.20	22 x 35
180	381LQ181M420H042	1.100	0.460	0.90	1.30	22 x 40
180	381LQ181M420J022	1.100	0.460	0.90	1.30	25 x 30
220	381LQ221M420H452	0.830	0.370	1.05	1.50	22 x 45
220	381LQ221M420J032	0.830	0.370	1.05	1.50	25 x 35
220	381LQ221M420K012	0.830	0.370	1.05	1.50	30 x 25
270	381LQ271M420H052	0.675	0.305	1.20	1.70	22 x 50
270	381LQ271M420J042	0.675	0.305	1.20	1.70	25 x 40
270	381LQ271M420K022	0.675	0.305	1.20	1.70	30 x 30
270	381LQ271M420A012	0.675	0.305	1.20	1.70	35 x 25
330	381LQ331M420J052	0.550	0.250	1.40	2.00	25 x 50
330	381LQ331M420K032	0.550	0.250	1.40	2.00	30 x 35
330	381LQ331M420A032	0.550	0.250	1.40	2.00	35 x 35
390	381LQ391M420K042	0.470	0.210	1.55	2.15	30 x 40
390	381LQ391M420A032	0.470	0.210	1.55	2.15	35 x 35
470	381LQ471M420K452	0.390	0.175	1.70	2.40	30 x 45
470	381LQ471M420A032	0.390	0.175	1.70	2.40	35 x 35
560	381LQ561M420K052	0.330	0.150	1.90	2.65	30 x 50
560	381LQ561M420A452	0.330	0.150	1.90	2.65	35 x 45
680	381LQ681M420A052	0.270	0.120	2.10	2.95	35 x 50
450 Vdc (500 Vdc Surge)						
100	381LQ101M450H022	1.824	0.821	0.64	0.90	22 x 30
100	381LQ101M450J012	1.824	0.821	0.64	0.90	25 x 25
120	381LQ121M450H032	1.520	0.684	0.72	1.01	22 x 35
120	381LQ121M450J022	1.520	0.684	0.72	1.01	25 x 30
150	381LQ151M450H042	1.216	0.547	0.79	1.11	22 x 40
150	381LQ151M450J022	1.216	0.547	0.79	1.11	25 x 30
150	381LQ151M450K012	1.216	0.547	0.79	1.11	30 x 25
180	381LQ181M450H452	1.013	0.456	0.87	1.22	22 x 45
180	381LQ181M450J032	1.013	0.456	0.80	1.10	25 x 35
180	381LQ181M450J042	1.013	0.456	0.87	1.22	25 x 40
180	381LQ181M450K022	1.013	0.456	0.87	1.22	30 x 30
220	381LQ221M450H052	0.829	0.373	0.90	1.25	22 x 50
220	381LQ221M450J452	0.829	0.373	1.00	1.40	25 x 45
220	381LQ221M450K022	0.829	0.373	1.00	1.40	30 x 30
220	381LQ221M450A012	0.829	0.373	1.00	1.40	35 x 25
270	381LQ271M450J052	0.675	0.304	1.19	1.67	25 x 50
270	381LQ271M450K032	0.675	0.304	1.10	1.50	30 x 35
270	381LQ271M450K042	0.675	0.304	1.19	1.67	30 x 40
270	381LQ271M450A022	0.675	0.304	1.19	1.67	35 x 30
330	381LQ331M450K042	0.553	0.249	1.25	1.75	30 x 40
330	381LQ331M450K452	0.553	0.249	1.38	1.93	30 x 45
330	381LQ331M450A032	0.553	0.249	1.38	1.93	35 x 35
390	381LQ391M450K452	0.468	0.210	1.40	1.95	30 x 45
390	381LQ391M450A042	0.468	0.210	1.55	2.17	35 x 40
470	381LQ471M450A452	0.388	0.175	1.74	2.44	35 x 45
560	381LQ561M450A052	0.326	0.147	1.90	2.66	35 x 50
390	381LQ391M450K052	0.680	0.210	1.55	2.17	30 x 50
390	381LQ391M450A042	0.468	0.210	1.55	2.17	35 x 40
470	381LQ471M450A452	0.388	0.175	1.74	2.44	35 x 45
560	381LQ561M450A052	0.326	0.147	1.90	2.66	35 x 50

Type 381LQ 105 °C Compact, High Ripple, Snap-In Aluminum

Higher Capacitance per Case Size

Typical Performance Curves

