

## 23% Smaller for Same Capacitance



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

- ◆ New, more capacitance per case
- ◆ Compare to Type 381L

## Specifications

### Operating Temperature:

–40 °C to +105 °C, ≤315 Vdc  
–25 °C to +105 °C, ≥350 Vdc

### Rated Voltage:

10 to 450 Vdc

### Capacitance:

100 µF to 100,000 µF ±20%

### Leakage Current:

≤3  $\sqrt{CV}$  µA, 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

|             | 50 Hz | 60 Hz | 120 Hz | 500 Hz | 1 kHz | 10 kHz & up |
|-------------|-------|-------|--------|--------|-------|-------------|
| 10-100 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        |

### Load Life:

2000 h at full load at 105 °C

ΔCapacitance ±10%

ESR 125% of limit

DCL 100% of limit

### EIA Ripple Life:

8000 h at 85 °C per EIA IS-749 with 105 °C ripple current.

ΔCapacitance ±10%

ESR 200% of limit

CL 100% of limit

### Shelf Life:

1000 h at 105 °C,

ΔCapacitance ± 10%

ESR 200% of limit

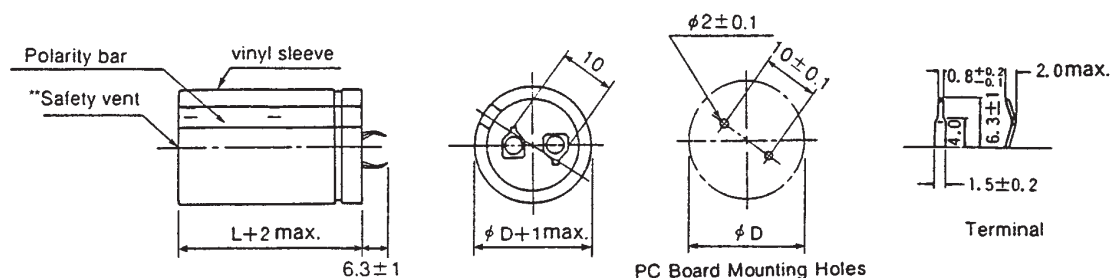
DCL 100% of limit

### Vibration:

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

# Type 381LQ 105 °C Compact, High-Ripple Snap-in

## Outline Drawing



## Insulated Case Dimensions

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

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

## Part Numbering System

381LQ

Type

471

Capacitance

471 = 470  $\mu$ F

332 = 3300  $\mu$ F

M

Tolerance

M =  $\pm 20\%$

160

Rated Voltage

160 = 160 V

450 = 450 V

HO1

Case Code

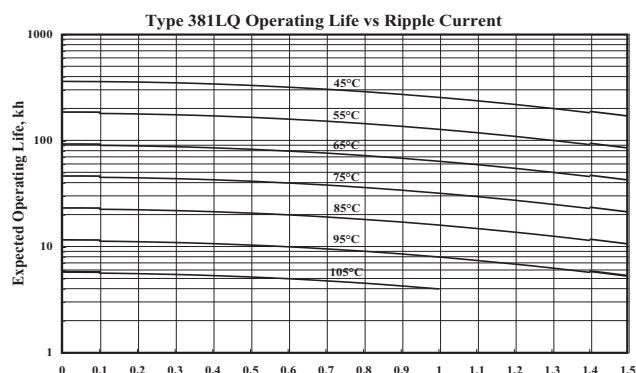
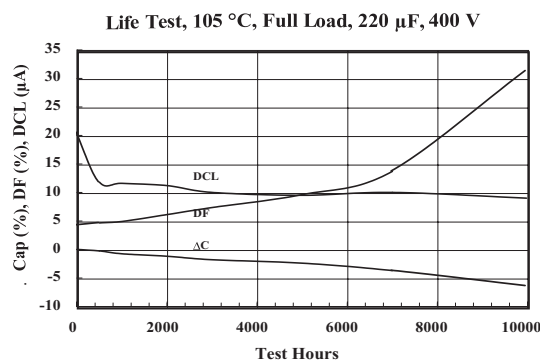
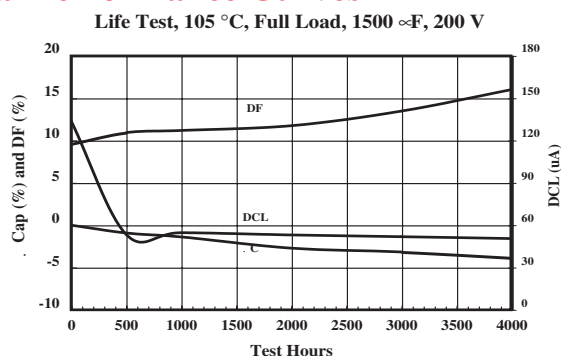
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Insulation

2 = PVC

# Type 381LQ 105 °C Compact, High-Ripple Snap-in

## Typical Performance Curves



## Ratings

| Cap.<br>( $\mu$ F)    | Catalog<br>Part Number | ESR Max<br>@ 25 °C<br>120 Hz<br>( $\Omega$ ) | ESR Max<br>@ 25 °C<br>20 kHz<br>( $\Omega$ ) | Ripple Amps<br>@ 105 °C<br>120 Hz<br>(A) | Ripple Amps<br>@ 105 °C<br>20 kHz<br>(A) | Nominal<br>Size<br>D x L<br>(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                          |

| Cap.<br>( $\mu$ F)    | Catalog<br>Part Number | ESR Max<br>@ 25 °C<br>120 Hz<br>( $\Omega$ ) | ESR Max<br>@ 25 °C<br>20 kHz<br>( $\Omega$ ) | Ripple Amps<br>@ 105 °C<br>120 Hz<br>(A) | Ripple Amps<br>@ 105 °C<br>20 kHz<br>(A) | Nominal<br>Size<br>D x L<br>(mm) |
|-----------------------|------------------------|----------------------------------------------|----------------------------------------------|------------------------------------------|------------------------------------------|----------------------------------|
| 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                          |

# Type 381LQ 105 °C Compact, High-Ripple Snap-in

| Cap.<br>(µF)          | Catalog<br>Part Number | ESR Max<br>@ 25 °C |               | Ripple Amps<br>@ 105 °C |               | Nominal<br>Size<br>D x L<br>(mm) |
|-----------------------|------------------------|--------------------|---------------|-------------------------|---------------|----------------------------------|
|                       |                        | 120 Hz<br>(Ω)      | 20 kHz<br>(Ω) | 120 Hz<br>(A)           | 20 kHz<br>(A) |                                  |
| 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                 | 381LQ153M035A032       | 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                          |
| 27000                 | 381LQ273M035K052       | 0.018              | 0.014         | 5.30                    | 6.10          | 30 x 50                          |

| Cap.<br>(µF)          | Catalog<br>Part Number | ESR Max<br>@ 25 °C |               | Ripple Amps<br>@ 105 °C |               | Nominal<br>Size<br>D x L<br>(mm) |
|-----------------------|------------------------|--------------------|---------------|-------------------------|---------------|----------------------------------|
|                       |                        | 120 Hz<br>(Ω)      | 20 kHz<br>(Ω) | 120 Hz<br>(A)           | 20 kHz<br>(A) |                                  |
| 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                          |

# Type 381LQ 105 °C Compact, High-Ripple Snap-in

| Cap.<br>(μF)            | Catalog<br>Part Number | ESR Max<br>@ 25 °C |               | Ripple Amps<br>@ 105 °C |               | Nominal<br>Size<br>D x L<br>(mm) |
|-------------------------|------------------------|--------------------|---------------|-------------------------|---------------|----------------------------------|
|                         |                        | 120 Hz<br>(Ω)      | 20 kHz<br>(Ω) | 120 Hz<br>(A)           | 20 kHz<br>(A) |                                  |
| 80 Vdc (100 Vdc Surge)  |                        |                    |               |                         |               |                                  |
| 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                          |
| 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                          |
| 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                          |
| 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                          |
| 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                          |

# Type 381LQ 105 °C Compact, High-Ripple Snap-in

| Cap.<br>(µF)            | Catalog<br>Part Number | ESR Max<br>@ 25 °C |               | Ripple Amps<br>@ 105 °C |               | Nominal<br>Size<br>D x L<br>(mm) |
|-------------------------|------------------------|--------------------|---------------|-------------------------|---------------|----------------------------------|
|                         |                        | 120 Hz<br>(Ω)      | 20 kHz<br>(Ω) | 120 Hz<br>(A)           | 20 kHz<br>(A) |                                  |
| 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                    | 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                    | 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                          |
| 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                     | 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                     | 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                     | 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                          |
| 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                          |

## Type 381LQ 105 °C Compact, High-Ripple Snap-in

| Cap.<br>(μF)            | Catalog<br>Part Number | ESR Max<br>@ 25 °C |               | Ripple Amps<br>@ 105 °C |               | Nominal<br>Size<br>D x L<br>(mm) |
|-------------------------|------------------------|--------------------|---------------|-------------------------|---------------|----------------------------------|
|                         |                        | 120 Hz<br>(Ω)      | 20 kHz<br>(Ω) | 120 Hz<br>(A)           | 20 kHz<br>(A) |                                  |
| 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                     | 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                     | 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                          |
| 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                     | 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                          |
| 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                     | 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                     | 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                     | 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                     | 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                     | 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                          |