

## LS Series

### Features

- Snap-in terminal type
- 85°C, 3,000 hours assured
- RoHS Compliance



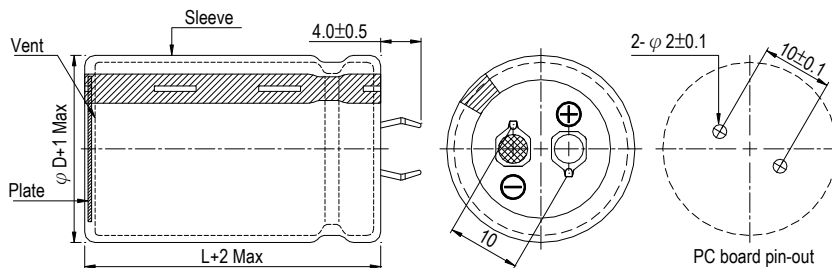
Sleeve & Marking Color: Black & White

### Specifications

| Items                                      | Performance   |   |
|--|---|---|
| Category Temperature Range                 | 16 ~ 400V   | 420 ~ 500V  |
|  | -40°C ~ +85°C   | -25°C ~ +85°C   |
| Capacitance Tolerance                      | ±20% (at 120Hz, 20°C)   |   |
| Leakage Current (at 20°C)                  | $I = 3\sqrt{CV}$ or 1.5 mA whichever is smaller (after 5 minutes)<br>Where, C = rated capacitance in μF V = rated DC working voltage in V                                 |   |
| Tanδ (at 120Hz, 20°C)                      | Rated Voltage   | 16 25 35 50 63 80 100 160 200 250 350 400 420 450 500   |
|  | Tanδ (max)  | 0.50 0.45 0.40 0.35 0.30 0.25 0.20 0.15 0.15 0.15 0.15 0.15 0.15 0.15 0.15  |
| Low Temperature Characteristics (at 120Hz) | Impedance ratio shall not exceed the values given in the table below.   |   |
|  | Rated Voltage   | 16 25 35 50 63 80 100 160 200 250 350 400 420 450 500   |
| Endurance                                  | Impedance Ratio   | Z(-25°C)/Z(+20°C) 4 3 3 2 2 2 4 4 4 4 8 8 8 8 8   |
|  |   | Z(-40°C)/Z(+20°C) 15 10 8 6 5 5 4 8 10 10 16 18 - - -   |
| Shelf Life Test                            | Test Time   | 3,000 Hrs   |
|  | Capacitance Change  | Within ±20% of initial value  |
| Ripple Current & Frequency Multipliers     | Tanδ  | Less than 200% of specified value   |
|  | Leakage Current   | Within specified value  |
| Failure percentage                         | * The above Specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage applied with rated ripple current for 3,000 hours at 85°C. |   |
|  | Failure rate  | * The above Specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1,000 hours at 85°C without voltage applied. The rated voltage shall be applied to the capacitors before the measurements (Refer to JIS C 5101-4 4.1). |
| Failure rate                               | Test Time   | 1,000 Hrs   |
|  | Capacitance Change  | Within ±20% of initial value  |
| Failure rate                               | Tanδ  | Less than 150% of specified value   |
|  | Leakage Current   | Within specified value  |
| Failure rate                               | Case size   | W. V.(V) Freq.(Hz) 50 / 60 100 / 120 500 1k 10k up  |
|  | Length ≤ 55L  | Under 100 0.92 1.00 1.13 1.19 1.20  |
| Failure rate                               |   | 160 ~ 250 0.81 1.00 1.32 1.45 1.50  |
|  | Length ≥ 60L  | 350 to up 0.77 1.00 1.30 1.41 1.43  |
| Failure rate                               |   | 160 ~ 450 0.88 1.00 1.20 1.25 1.40  |
|  | Failure percentage  | ≤ 3% (During useful life)   |
| Failure rate                               | Rated Voltage ≤ 100V DC: ≤ 40 fit (40×10 <sup>-9</sup> /h)  | Rated voltage ≥ 160V DC: ≤ 70 fit (70×10 <sup>-9</sup> /h)  |

### Diagram of Dimensions

Unit: mm





## Dimension & Permissible Ripple Current

| Working Voltage<br>V <sub>DC</sub> | Capacitance<br>120Hz, 20°C<br>μF | φ D×L<br>mm | Ripple Current<br>120 Hz, 85°C<br>A/rms | Tan δ<br>at 120Hz, 20°C | ESR<br>120Hz, 20°C<br>Ω | LC<br>5 minutes<br>mA | Part Number      |
|------------------------------------|----------------------------------|-------------|---|-------------------------|-------------------------|-----------------------|------------------|
| 16                                 | 8,200                            | 20 × 25     | 2.41                                    | 0.50                    | 0.081                   | 1.09                  | LS-822M1C--A2025 |
|                                    | 8,200                            | 22 × 25     | 2.56                                    | 0.50                    | 0.081                   | 1.09                  | LS-822M1C--A2225 |
|                                    | 10,000                           | 20 × 25     | 2.46                                    | 0.50                    | 0.066                   | 1.20                  | LS-103M1C--A2025 |
|                                    | 10,000                           | 22 × 25     | 2.60                                    | 0.50                    | 0.066                   | 1.20                  | LS-103M1C--A2225 |
|                                    | 10,000                           | 25 × 25     | 2.81                                    | 0.50                    | 0.066                   | 1.20                  | LS-103M1C--A2525 |
|                                    | 12,000                           | 20 × 30     | 2.92                                    | 0.50                    | 0.055                   | 1.31                  | LS-123M1C--A2030 |
|                                    | 12,000                           | 22 × 25     | 2.88                                    | 0.50                    | 0.055                   | 1.31                  | LS-123M1C--A2225 |
|                                    | 12,000                           | 25 × 25     | 2.96                                    | 0.50                    | 0.055                   | 1.31                  | LS-123M1C--A2525 |
|                                    | 15,000                           | 20 × 35     | 3.49                                    | 0.50                    | 0.044                   | 1.47                  | LS-153M1C--A2035 |
|                                    | 15,000                           | 22 × 30     | 3.45                                    | 0.50                    | 0.044                   | 1.47                  | LS-153M1C--A2230 |
|                                    | 15,000                           | 25 × 25     | 3.38                                    | 0.50                    | 0.044                   | 1.47                  | LS-153M1C--A2525 |
|                                    | 15,000                           | 30 × 25     | 3.73                                    | 0.50                    | 0.044                   | 1.47                  | LS-153M1C--A3025 |
|                                    | 18,000                           | 20 × 40     | 3.72                                    | 0.50                    | 0.037                   | 1.50                  | LS-183M1C--A2040 |
|                                    | 18,000                           | 22 × 30     | 3.47                                    | 0.50                    | 0.037                   | 1.50                  | LS-183M1C--A2230 |
|                                    | 18,000                           | 25 × 25     | 3.47                                    | 0.50                    | 0.037                   | 1.50                  | LS-183M1C--A2525 |
|                                    | 22,000                           | 20 × 45     | 4.07                                    | 0.50                    | 0.030                   | 1.50                  | LS-223M1C--A2045 |
|                                    | 22,000                           | 22 × 35     | 3.84                                    | 0.50                    | 0.030                   | 1.50                  | LS-223M1C--A2235 |
|                                    | 22,000                           | 25 × 30     | 3.93                                    | 0.50                    | 0.030                   | 1.50                  | LS-223M1C--A2530 |
|                                    | 22,000                           | 30 × 25     | 4.08                                    | 0.50                    | 0.030                   | 1.50                  | LS-223M1C--A3025 |
|                                    | 22,000                           | 35 × 25     | 4.15                                    | 0.50                    | 0.030                   | 1.50                  | LS-223M1C--A3525 |
|                                    | 27,000                           | 22 × 45     | 4.63                                    | 0.50                    | 0.025                   | 1.50                  | LS-273M1C--A2245 |
|                                    | 27,000                           | 25 × 40     | 4.72                                    | 0.50                    | 0.025                   | 1.50                  | LS-273M1C--A2540 |
|                                    | 33,000                           | 22 × 50     | 5.20                                    | 0.50                    | 0.020                   | 1.50                  | LS-333M1C--A2250 |
|                                    | 33,000                           | 25 × 45     | 5.41                                    | 0.50                    | 0.020                   | 1.50                  | LS-333M1C--A2545 |
|                                    | 33,000                           | 30 × 35     | 5.40                                    | 0.50                    | 0.020                   | 1.50                  | LS-333M1C--A3035 |
|                                    | 33,000                           | 35 × 25     | 5.19                                    | 0.50                    | 0.020                   | 1.50                  | LS-333M1C--A3525 |
|                                    | 39,000                           | 30 × 40     | 6.02                                    | 0.50                    | 0.017                   | 1.50                  | LS-393M1C--A3040 |
|                                    | 39,000                           | 35 × 30     | 5.88                                    | 0.50                    | 0.017                   | 1.50                  | LS-393M1C--A3530 |
|                                    | 47,000                           | 30 × 45     | 6.95                                    | 0.50                    | 0.014                   | 1.50                  | LS-473M1C--A3045 |
|                                    | 47,000                           | 35 × 35     | 6.85                                    | 0.50                    | 0.014                   | 1.50                  | LS-473M1C--A3535 |
| 56,000                             | 35 × 40                          | 7.39        | 0.50                                    | 0.012                   | 1.50                    | LS-563M1C--A3540      |                  |
| 68,000                             | 35 × 45                          | 8.06        | 0.50                                    | 0.010                   | 1.50                    | LS-683M1C--A3545      |                  |
| 25                                 | 5,600                            | 20 × 25     | 2.18                                    | 0.45                    | 0.107                   | 1.12                  | LS-562M1E--A2025 |
|                                    | 5,600                            | 22 × 25     | 2.31                                    | 0.45                    | 0.107                   | 1.12                  | LS-562M1E--A2225 |
|                                    | 6,800                            | 20 × 25     | 2.25                                    | 0.45                    | 0.088                   | 1.24                  | LS-682M1E--A2025 |
|                                    | 6,800                            | 22 × 25     | 2.38                                    | 0.45                    | 0.088                   | 1.24                  | LS-682M1E--A2225 |
|                                    | 6,800                            | 25 × 25     | 2.78                                    | 0.45                    | 0.088                   | 1.24                  | LS-682M1E--A2525 |
|                                    | 8,200                            | 20 × 30     | 2.30                                    | 0.45                    | 0.073                   | 1.36                  | LS-822M1E--A2030 |
|                                    | 8,200                            | 22 × 25     | 2.43                                    | 0.45                    | 0.073                   | 1.36                  | LS-822M1E--A2225 |
|                                    | 8,200                            | 25 × 25     | 2.85                                    | 0.45                    | 0.073                   | 1.36                  | LS-822M1E--A2525 |
|                                    | 10,000                           | 20 × 35     | 2.97                                    | 0.45                    | 0.060                   | 1.50                  | LS-103M1E--A2035 |
|                                    | 10,000                           | 22 × 30     | 2.97                                    | 0.45                    | 0.060                   | 1.50                  | LS-103M1E--A2230 |
|                                    | 10,000                           | 25 × 25     | 2.93                                    | 0.45                    | 0.060                   | 1.50                  | LS-103M1E--A2525 |
|                                    | 10,000                           | 30 × 25     | 3.21                                    | 0.45                    | 0.060                   | 1.50                  | LS-103M1E--A3025 |
|                                    | 12,000                           | 22 × 35     | 3.33                                    | 0.45                    | 0.050                   | 1.50                  | LS-123M1E--A2235 |
|                                    | 12,000                           | 25 × 30     | 3.26                                    | 0.45                    | 0.050                   | 1.50                  | LS-123M1E--A2530 |
|                                    | 12,000                           | 30 × 25     | 3.59                                    | 0.45                    | 0.050                   | 1.50                  | LS-123M1E--A3025 |
|                                    | 12,000                           | 35 × 25     | 3.58                                    | 0.45                    | 0.050                   | 1.50                  | LS-123M1E--A3525 |
|                                    | 15,000                           | 22 × 40     | 3.68                                    | 0.45                    | 0.040                   | 1.50                  | LS-153M1E--A2240 |
|                                    | 15,000                           | 25 × 35     | 3.77                                    | 0.45                    | 0.040                   | 1.50                  | LS-153M1E--A2535 |
|                                    | 15,000                           | 30 × 25     | 3.60                                    | 0.45                    | 0.040                   | 1.50                  | LS-153M1E--A3025 |
|                                    | 15,000                           | 35 × 25     | 3.96                                    | 0.45                    | 0.040                   | 1.50                  | LS-153M1E--A3525 |
|                                    | 18,000                           | 22 × 45     | 4.36                                    | 0.45                    | 0.033                   | 1.50                  | LS-183M1E--A2245 |
|                                    | 18,000                           | 25 × 35     | 4.20                                    | 0.45                    | 0.033                   | 1.50                  | LS-183M1E--A2535 |
|                                    | 18,000                           | 30 × 30     | 4.40                                    | 0.45                    | 0.033                   | 1.50                  | LS-183M1E--A3030 |
|                                    | 18,000                           | 35 × 25     | 4.34                                    | 0.45                    | 0.033                   | 1.50                  | LS-183M1E--A3525 |
|                                    | 22,000                           | 25 × 45     | 4.71                                    | 0.45                    | 0.027                   | 1.50                  | LS-223M1E--A2545 |
|                                    | 22,000                           | 30 × 35     | 4.70                                    | 0.45                    | 0.027                   | 1.50                  | LS-223M1E--A3035 |
|                                    | 22,000                           | 35 × 25     | 4.60                                    | 0.45                    | 0.027                   | 1.50                  | LS-223M1E--A3525 |
|                                    | 27,000                           | 30 × 45     | 5.79                                    | 0.45                    | 0.022                   | 1.50                  | LS-273M1E--A3045 |
|                                    | 27,000                           | 35 × 35     | 5.71                                    | 0.45                    | 0.022                   | 1.50                  | LS-273M1E--A3535 |
|                                    | 33,000                           | 35 × 40     | 6.31                                    | 0.45                    | 0.018                   | 1.50                  | LS-333M1E--A3540 |
| 39,000                             | 35 × 45                          | 6.92        | 0.45                                    | 0.015                   | 1.50                    | LS-393M1E--A3545      |                  |
| 35                                 | 4,700                            | 22 × 25     | 2.21                                    | 0.40                    | 0.113                   | 1.22                  | LS-472M1V--A2225 |
|                                    | 4,700                            | 25 × 25     | 2.42                                    | 0.40                    | 0.113                   | 1.22                  | LS-472M1V--A2525 |

## Dimension & Permissible Ripple Current

| Working Voltage<br>V <sub>DC</sub> | Capacitance<br>120Hz, 20°C<br>μF | φ D×L<br>mm | Ripple Current<br>120 Hz, 85°C<br>A/rms | Tan δ<br>at 120Hz, 20°C | ESR<br>120Hz, 20°C<br>Ω | LC<br>5 minutes<br>mA | Part Number      |
|------------------------------------|----------------------------------|-------------|---|-------------------------|-------------------------|-----------------------|------------------|
| <b>35</b>                          | 5,600                            | 20 × 30     | 2.54                                    | 0.40                    | 0.095                   | 1.33                  | LS-562M1V--A2030 |
|                                    | 5,600                            | 22 × 30     | 2.69                                    | 0.40                    | 0.095                   | 1.33                  | LS-562M1V--A2230 |
|                                    | 5,600                            | 25 × 25     | 2.69                                    | 0.40                    | 0.095                   | 1.33                  | LS-562M1V--A2525 |
|                                    | 6,800                            | 20 × 35     | 2.60                                    | 0.40                    | 0.078                   | 1.46                  | LS-682M1V--A2035 |
|                                    | 6,800                            | 22 × 35     | 2.70                                    | 0.40                    | 0.078                   | 1.46                  | LS-682M1V--A2235 |
|                                    | 6,800                            | 25 × 25     | 2.67                                    | 0.40                    | 0.078                   | 1.46                  | LS-682M1V--A2525 |
|                                    | 6,800                            | 30 × 25     | 2.99                                    | 0.40                    | 0.078                   | 1.46                  | LS-682M1V--A3025 |
|                                    | 8,200                            | 20 × 40     | 3.02                                    | 0.40                    | 0.065                   | 1.50                  | LS-822M1V--A2040 |
|                                    | 8,200                            | 22 × 35     | 3.09                                    | 0.40                    | 0.065                   | 1.50                  | LS-822M1V--A2235 |
|                                    | 8,200                            | 25 × 30     | 3.12                                    | 0.40                    | 0.065                   | 1.50                  | LS-822M1V--A2530 |
|                                    | 8,200                            | 30 × 25     | 3.04                                    | 0.40                    | 0.065                   | 1.50                  | LS-822M1V--A3025 |
|                                    | 10,000                           | 22 × 40     | 3.22                                    | 0.40                    | 0.053                   | 1.50                  | LS-103M1V--A2240 |
|                                    | 10,000                           | 25 × 35     | 3.37                                    | 0.40                    | 0.053                   | 1.50                  | LS-103M1V--A2535 |
|                                    | 10,000                           | 30 × 25     | 3.36                                    | 0.40                    | 0.053                   | 1.50                  | LS-103M1V--A3025 |
|                                    | 10,000                           | 35 × 25     | 3.32                                    | 0.40                    | 0.053                   | 1.50                  | LS-103M1V--A3525 |
|                                    | 12,000                           | 22 × 45     | 3.71                                    | 0.40                    | 0.044                   | 1.50                  | LS-123M1V--A2245 |
|                                    | 12,000                           | 25 × 40     | 3.79                                    | 0.40                    | 0.044                   | 1.50                  | LS-123M1V--A2540 |
|                                    | 12,000                           | 30 × 30     | 3.74                                    | 0.40                    | 0.044                   | 1.50                  | LS-123M1V--A3030 |
|                                    | 12,000                           | 35 × 25     | 3.75                                    | 0.40                    | 0.044                   | 1.50                  | LS-123M1V--A3525 |
|                                    | 15,000                           | 25 × 45     | 4.55                                    | 0.40                    | 0.035                   | 1.50                  | LS-153M1V--A2545 |
|                                    | 15,000                           | 30 × 35     | 4.54                                    | 0.40                    | 0.035                   | 1.50                  | LS-153M1V--A3035 |
|                                    | 15,000                           | 35 × 25     | 4.37                                    | 0.40                    | 0.035                   | 1.50                  | LS-153M1V--A3525 |
|                                    | 18,000                           | 25 × 50     | 4.84                                    | 0.40                    | 0.029                   | 1.50                  | LS-183M1V--A2550 |
|                                    | 18,000                           | 30 × 40     | 4.87                                    | 0.40                    | 0.029                   | 1.50                  | LS-183M1V--A3040 |
|                                    | 18,000                           | 35 × 30     | 5.03                                    | 0.40                    | 0.029                   | 1.50                  | LS-183M1V--A3530 |
|                                    | 22,000                           | 30 × 45     | 5.79                                    | 0.40                    | 0.024                   | 1.50                  | LS-223M1V--A3045 |
|                                    | 22,000                           | 35 × 35     | 5.71                                    | 0.40                    | 0.024                   | 1.50                  | LS-223M1V--A3535 |
| 27,000                             | 35 × 45                          | 6.81        | 0.40                                    | 0.020                   | 1.50                    | LS-273M1V--A3545      |                  |
| <b>50</b>                          | 2,200                            | 22 × 25     | 1.93                                    | 0.35                    | 0.211                   | 0.99                  | LS-222M1H--A2225 |
|                                    | 2,700                            | 22 × 25     | 2.05                                    | 0.35                    | 0.172                   | 1.10                  | LS-272M1H--A2225 |
|                                    | 3,300                            | 22 × 30     | 2.41                                    | 0.35                    | 0.141                   | 1.22                  | LS-332M1H--A2230 |
|                                    | 3,300                            | 25 × 25     | 2.38                                    | 0.35                    | 0.141                   | 1.22                  | LS-332M1H--A2525 |
|                                    | 3,900                            | 22 × 30     | 2.51                                    | 0.35                    | 0.119                   | 1.32                  | LS-392M1H--A2230 |
|                                    | 3,900                            | 25 × 25     | 2.46                                    | 0.35                    | 0.119                   | 1.32                  | LS-392M1H--A2525 |
|                                    | 4,700                            | 22 × 35     | 2.83                                    | 0.35                    | 0.099                   | 1.45                  | LS-472M1H--A2235 |
|                                    | 4,700                            | 25 × 30     | 3.03                                    | 0.35                    | 0.099                   | 1.45                  | LS-472M1H--A2530 |
|                                    | 4,700                            | 30 × 25     | 3.01                                    | 0.35                    | 0.099                   | 1.45                  | LS-472M1H--A3025 |
|                                    | 5,600                            | 22 × 40     | 3.21                                    | 0.35                    | 0.083                   | 1.50                  | LS-562M1H--A2240 |
|                                    | 5,600                            | 25 × 35     | 3.37                                    | 0.35                    | 0.083                   | 1.50                  | LS-562M1H--A2535 |
|                                    | 5,600                            | 30 × 25     | 3.17                                    | 0.35                    | 0.083                   | 1.50                  | LS-562M1H--A3025 |
|                                    | 5,600                            | 35 × 25     | 3.47                                    | 0.35                    | 0.083                   | 1.50                  | LS-562M1H--A3525 |
|                                    | 6,800                            | 22 × 45     | 3.73                                    | 0.35                    | 0.068                   | 1.50                  | LS-682M1H--A2245 |
|                                    | 6,800                            | 25 × 35     | 3.59                                    | 0.35                    | 0.068                   | 1.50                  | LS-682M1H--A2535 |
|                                    | 6,800                            | 30 × 30     | 3.56                                    | 0.35                    | 0.068                   | 1.50                  | LS-682M1H--A3030 |
|                                    | 6,800                            | 35 × 25     | 3.64                                    | 0.35                    | 0.068                   | 1.50                  | LS-682M1H--A3525 |
|                                    | 8,200                            | 25 × 40     | 4.10                                    | 0.35                    | 0.057                   | 1.50                  | LS-822M1H--A2540 |
|                                    | 8,200                            | 30 × 30     | 4.12                                    | 0.35                    | 0.057                   | 1.50                  | LS-822M1H--A3030 |
|                                    | 8,200                            | 35 × 25     | 4.07                                    | 0.35                    | 0.057                   | 1.50                  | LS-822M1H--A3525 |
|                                    | 10,000                           | 25 × 50     | 4.91                                    | 0.35                    | 0.046                   | 1.50                  | LS-103M1H--A2550 |
|                                    | 10,000                           | 30 × 35     | 4.68                                    | 0.35                    | 0.046                   | 1.50                  | LS-103M1H--A3035 |
|                                    | 10,000                           | 35 × 30     | 4.59                                    | 0.35                    | 0.046                   | 1.50                  | LS-103M1H--A3530 |
|                                    | 12,000                           | 30 × 40     | 5.10                                    | 0.35                    | 0.039                   | 1.50                  | LS-123M1H--A3040 |
|                                    | 12,000                           | 35 × 35     | 5.30                                    | 0.35                    | 0.039                   | 1.50                  | LS-123M1H--A3535 |
|                                    | 15,000                           | 30 × 50     | 6.28                                    | 0.35                    | 0.031                   | 1.50                  | LS-153M1H--A3050 |
|                                    | 15,000                           | 35 × 40     | 6.24                                    | 0.35                    | 0.031                   | 1.50                  | LS-153M1H--A3540 |
| 18,000                             | 35 × 45                          | 7.18        | 0.35                                    | 0.026                   | 1.50                    | LS-183M1H--A3545      |                  |
| <b>63</b>                          | 1,800                            | 22 × 25     | 1.90                                    | 0.30                    | 0.221                   | 1.01                  | LS-182M1J--A2225 |
|                                    | 2,200                            | 22 × 30     | 2.35                                    | 0.30                    | 0.181                   | 1.12                  | LS-222M1J--A2230 |
|                                    | 2,200                            | 25 × 25     | 2.30                                    | 0.30                    | 0.181                   | 1.12                  | LS-222M1J--A2525 |
|                                    | 2,700                            | 22 × 35     | 2.50                                    | 0.30                    | 0.147                   | 1.24                  | LS-272M1J--A2235 |
|                                    | 2,700                            | 25 × 25     | 2.34                                    | 0.30                    | 0.147                   | 1.24                  | LS-272M1J--A2525 |
|                                    | 3,300                            | 22 × 35     | 2.62                                    | 0.30                    | 0.121                   | 1.37                  | LS-332M1J--A2235 |
|                                    | 3,300                            | 25 × 30     | 2.69                                    | 0.30                    | 0.121                   | 1.37                  | LS-332M1J--A2530 |
|                                    | 3,300                            | 30 × 25     | 2.78                                    | 0.30                    | 0.121                   | 1.37                  | LS-332M1J--A3025 |
|                                    | 3,900                            | 22 × 40     | 2.90                                    | 0.30                    | 0.102                   | 1.49                  | LS-392M1J--A2240 |



## Dimension & Permissible Ripple Current

| Working Voltage<br>V <sub>DC</sub> | Capacitance<br>120Hz, 20°C<br>μF | φ D×L<br>mm | Ripple Current<br>120 Hz, 85°C<br>A/rms | Tan δ<br>at 120Hz, 20°C | ESR<br>120Hz, 20°C<br>Ω | LC<br>5 minutes<br>mA | Part Number      |
|------------------------------------|----------------------------------|-------------|---|-------------------------|-------------------------|-----------------------|------------------|
| <b>63</b>                          | 3,900                            | 25 × 35     | 3.09                                    | 0.30                    | 0.102                   | 1.49                  | LS-392M1J--A2535 |
|                                    | 3,900                            | 30 × 30     | 3.09                                    | 0.30                    | 0.102                   | 1.49                  | LS-392M1J--A3030 |
|                                    | 4,700                            | 22 × 50     | 3.49                                    | 0.30                    | 0.085                   | 1.50                  | LS-472M1J--A2250 |
|                                    | 4,700                            | 25 × 40     | 3.37                                    | 0.30                    | 0.085                   | 1.50                  | LS-472M1J--A2540 |
|                                    | 4,700                            | 30 × 30     | 3.37                                    | 0.30                    | 0.085                   | 1.50                  | LS-472M1J--A3030 |
|                                    | 4,700                            | 35 × 25     | 3.36                                    | 0.30                    | 0.085                   | 1.50                  | LS-472M1J--A3525 |
|                                    | 5,600                            | 25 × 45     | 3.77                                    | 0.30                    | 0.071                   | 1.50                  | LS-562M1J--A2545 |
|                                    | 5,600                            | 30 × 35     | 3.75                                    | 0.30                    | 0.071                   | 1.50                  | LS-562M1J--A3035 |
|                                    | 5,600                            | 35 × 30     | 3.88                                    | 0.30                    | 0.071                   | 1.50                  | LS-562M1J--A3530 |
|                                    | 6,800                            | 25 × 50     | 4.41                                    | 0.30                    | 0.059                   | 1.50                  | LS-682M1J--A2550 |
|                                    | 6,800                            | 30 × 40     | 4.41                                    | 0.30                    | 0.059                   | 1.50                  | LS-682M1J--A3040 |
|                                    | 6,800                            | 35 × 30     | 4.04                                    | 0.30                    | 0.059                   | 1.50                  | LS-682M1J--A3530 |
|                                    | 10,000                           | 30 × 50     | 5.49                                    | 0.30                    | 0.040                   | 1.50                  | LS-103M1J--A3050 |
|                                    | 10,000                           | 35 × 40     | 5.47                                    | 0.30                    | 0.040                   | 1.50                  | LS-103M1J--A3540 |
| 12,000                             | 35 × 45                          | 5.97        | 0.30                                    | 0.033                   | 1.50                    | LS-123M1J--A3545      |                  |
| <b>80</b>                          | 1,200                            | 22 × 25     | 1.62                                    | 0.25                    | 0.276                   | 0.93                  | LS-122M1K--A2225 |
|                                    | 1,500                            | 22 × 25     | 1.81                                    | 0.25                    | 0.221                   | 1.04                  | LS-152M1K--A2225 |
|                                    | 1,800                            | 22 × 30     | 2.14                                    | 0.25                    | 0.184                   | 1.14                  | LS-182M1K--A2230 |
|                                    | 1,800                            | 25 × 25     | 2.14                                    | 0.25                    | 0.184                   | 1.14                  | LS-182M1K--A2525 |
|                                    | 2,200                            | 22 × 35     | 2.37                                    | 0.25                    | 0.151                   | 1.26                  | LS-222M1K--A2235 |
|                                    | 2,200                            | 25 × 30     | 2.39                                    | 0.25                    | 0.151                   | 1.26                  | LS-222M1K--A2530 |
|                                    | 2,200                            | 30 × 25     | 2.48                                    | 0.25                    | 0.151                   | 1.26                  | LS-222M1K--A3025 |
|                                    | 2,700                            | 22 × 40     | 2.78                                    | 0.25                    | 0.123                   | 1.39                  | LS-272M1K--A2240 |
|                                    | 2,700                            | 25 × 35     | 2.82                                    | 0.25                    | 0.123                   | 1.39                  | LS-272M1K--A2535 |
|                                    | 2,700                            | 30 × 25     | 2.74                                    | 0.25                    | 0.123                   | 1.39                  | LS-272M1K--A3025 |
|                                    | 3,300                            | 22 × 45     | 3.14                                    | 0.25                    | 0.101                   | 1.50                  | LS-332M1K--A2245 |
|                                    | 3,300                            | 25 × 40     | 3.20                                    | 0.25                    | 0.101                   | 1.50                  | LS-332M1K--A2540 |
|                                    | 3,300                            | 30 × 30     | 3.16                                    | 0.25                    | 0.101                   | 1.50                  | LS-332M1K--A3030 |
|                                    | 3,300                            | 35 × 25     | 3.24                                    | 0.25                    | 0.101                   | 1.50                  | LS-332M1K--A3525 |
|                                    | 3,900                            | 22 × 50     | 3.58                                    | 0.25                    | 0.085                   | 1.50                  | LS-392M1K--A2250 |
|                                    | 3,900                            | 25 × 45     | 3.67                                    | 0.25                    | 0.085                   | 1.50                  | LS-392M1K--A2545 |
|                                    | 3,900                            | 30 × 35     | 3.66                                    | 0.25                    | 0.085                   | 1.50                  | LS-392M1K--A3035 |
|                                    | 3,900                            | 35 × 25     | 3.52                                    | 0.25                    | 0.085                   | 1.50                  | LS-392M1K--A3525 |
|                                    | 4,700                            | 25 × 50     | 4.10                                    | 0.25                    | 0.071                   | 1.50                  | LS-472M1K--A2550 |
|                                    | 4,700                            | 30 × 40     | 4.13                                    | 0.25                    | 0.071                   | 1.50                  | LS-472M1K--A3040 |
|                                    | 4,700                            | 35 × 30     | 4.03                                    | 0.25                    | 0.071                   | 1.50                  | LS-472M1K--A3530 |
|                                    | 5,600                            | 30 × 45     | 4.61                                    | 0.25                    | 0.059                   | 1.50                  | LS-562M1K--A3045 |
|                                    | 5,600                            | 35 × 35     | 4.54                                    | 0.25                    | 0.059                   | 1.50                  | LS-562M1K--A3535 |
|                                    | 6,800                            | 30 × 50     | 5.18                                    | 0.25                    | 0.049                   | 1.50                  | LS-682M1K--A3050 |
|                                    | 6,800                            | 35 × 40     | 5.15                                    | 0.25                    | 0.049                   | 1.50                  | LS-682M1K--A3540 |
|                                    | 8,200                            | 35 × 45     | 5.80                                    | 0.25                    | 0.040                   | 1.50                  | LS-822M1K--A3545 |
|                                    | 10,000                           | 35 × 50     | 6.69                                    | 0.25                    | 0.033                   | 1.50                  | LS-103M1K--A3550 |
|                                    | <b>100</b>                       | 1,200       | 22 × 30                                 | 2.12                    | 0.20                    | 0.221                 | 1.04             |
| 1,200                              |                                  | 25 × 25     | 2.10                                    | 0.20                    | 0.221                   | 1.04                  | LS-122M2A--A2525 |
| 1,500                              |                                  | 22 × 35     | 2.45                                    | 0.20                    | 0.177                   | 1.16                  | LS-152M2A--A2235 |
| 1,500                              |                                  | 25 × 30     | 2.43                                    | 0.20                    | 0.177                   | 1.16                  | LS-152M2A--A2530 |
| 1,500                              |                                  | 30 × 25     | 2.46                                    | 0.20                    | 0.177                   | 1.16                  | LS-152M2A--A3025 |
| 1,800                              |                                  | 22 × 40     | 2.77                                    | 0.20                    | 0.147                   | 1.27                  | LS-182M2A--A2240 |
| 1,800                              |                                  | 25 × 35     | 2.77                                    | 0.20                    | 0.147                   | 1.27                  | LS-182M2A--A2535 |
| 1,800                              |                                  | 30 × 25     | 2.65                                    | 0.20                    | 0.147                   | 1.27                  | LS-182M2A--A3025 |
| 2,200                              |                                  | 22 × 45     | 3.12                                    | 0.20                    | 0.121                   | 1.41                  | LS-222M2A--A2245 |
| 2,200                              |                                  | 25 × 40     | 3.20                                    | 0.20                    | 0.121                   | 1.41                  | LS-222M2A--A2540 |
| 2,200                              |                                  | 30 × 30     | 3.10                                    | 0.20                    | 0.121                   | 1.41                  | LS-222M2A--A3030 |
| 2,200                              |                                  | 35 × 25     | 3.14                                    | 0.20                    | 0.121                   | 1.41                  | LS-222M2A--A3525 |
| 2,700                              |                                  | 25 × 45     | 3.61                                    | 0.20                    | 0.098                   | 1.50                  | LS-272M2A--A2545 |
| 2,700                              |                                  | 30 × 35     | 3.60                                    | 0.20                    | 0.098                   | 1.50                  | LS-272M2A--A3035 |
| 2,700                              |                                  | 35 × 30     | 3.71                                    | 0.20                    | 0.098                   | 1.50                  | LS-272M2A--A3530 |
| 3,300                              |                                  | 25 × 50     | 4.06                                    | 0.20                    | 0.080                   | 1.50                  | LS-332M2A--A2550 |
| 3,300                              |                                  | 30 × 40     | 4.05                                    | 0.20                    | 0.080                   | 1.50                  | LS-332M2A--A3040 |
| 3,300                              |                                  | 35 × 35     | 4.07                                    | 0.20                    | 0.080                   | 1.50                  | LS-332M2A--A3535 |
| 3,900                              |                                  | 30 × 45     | 4.60                                    | 0.20                    | 0.068                   | 1.50                  | LS-392M2A--A3045 |
| 3,900                              |                                  | 35 × 35     | 4.50                                    | 0.20                    | 0.068                   | 1.50                  | LS-392M2A--A3535 |
| 4,700                              |                                  | 30 × 50     | 5.13                                    | 0.20                    | 0.056                   | 1.50                  | LS-472M2A--A3050 |
| 4,700                              |                                  | 35 × 40     | 5.12                                    | 0.20                    | 0.056                   | 1.50                  | LS-472M2A--A3540 |
| 5,600                              |                                  | 35 × 45     | 5.75                                    | 0.20                    | 0.047                   | 1.50                  | LS-562M2A--A3545 |



## Dimension & Permissible Ripple Current

| Working Voltage<br>V <sub>DC</sub> | Capacitance<br>120Hz, 20°C<br>μF | φ D×L<br>mm | Ripple Current<br>120 Hz, 85°C<br>A/rms | Tan δ<br>at 120Hz, 20°C | ESR<br>120Hz, 20°C<br>Ω | LC<br>5 minutes<br>mA | Part Number      |
|------------------------------------|----------------------------------|-------------|---|-------------------------|-------------------------|-----------------------|------------------|
| <b>100</b>                         | 6,800                            | 35 × 50     | 6.01                                    | 0.20                    | 0.039                   | 1.50                  | LS-682M2A--A3550 |
| <b>160</b>                         | 270                              | 20 × 25     | 1.12                                    | 0.15                    | 0.737                   | 0.62                  | LS-271M2C--A2025 |
|                                    | 270                              | 22 × 25     | 1.27                                    | 0.15                    | 0.737                   | 0.62                  | LS-271M2C--A2225 |
|                                    | 330                              | 20 × 30     | 1.28                                    | 0.15                    | 0.603                   | 0.69                  | LS-331M2C--A2030 |
|                                    | 330                              | 22 × 25     | 1.40                                    | 0.15                    | 0.603                   | 0.69                  | LS-331M2C--A2225 |
|                                    | 390                              | 22 × 30     | 1.62                                    | 0.15                    | 0.510                   | 0.75                  | LS-391M2C--A2230 |
|                                    | 470                              | 22 × 30     | 1.77                                    | 0.15                    | 0.423                   | 0.82                  | LS-471M2C--A2230 |
|                                    | 470                              | 25 × 25     | 1.77                                    | 0.15                    | 0.423                   | 0.82                  | LS-471M2C--A2525 |
|                                    | 560                              | 22 × 30     | 1.92                                    | 0.15                    | 0.355                   | 0.90                  | LS-561M2C--A2230 |
|                                    | 560                              | 22 × 35     | 2.05                                    | 0.15                    | 0.355                   | 0.90                  | LS-561M2C--A2235 |
|                                    | 560                              | 25 × 25     | 1.92                                    | 0.15                    | 0.355                   | 0.90                  | LS-561M2C--A2525 |
|                                    | 560                              | 30 × 25     | 2.02                                    | 0.15                    | 0.355                   | 0.90                  | LS-561M2C--A3025 |
|                                    | 680                              | 22 × 35     | 2.12                                    | 0.15                    | 0.293                   | 0.99                  | LS-681M2C--A2235 |
|                                    | 680                              | 25 × 30     | 2.22                                    | 0.15                    | 0.293                   | 0.99                  | LS-681M2C--A2530 |
|                                    | 680                              | 30 × 25     | 2.22                                    | 0.15                    | 0.293                   | 0.99                  | LS-681M2C--A3025 |
|                                    | 820                              | 22 × 40     | 2.32                                    | 0.15                    | 0.243                   | 1.09                  | LS-821M2C--A2240 |
|                                    | 820                              | 25 × 30     | 2.32                                    | 0.15                    | 0.243                   | 1.09                  | LS-821M2C--A2530 |
|                                    | 820                              | 30 × 25     | 2.31                                    | 0.15                    | 0.243                   | 1.09                  | LS-821M2C--A3025 |
|                                    | 820                              | 35 × 25     | 2.50                                    | 0.15                    | 0.243                   | 1.09                  | LS-821M2C--A3525 |
|                                    | 1,000                            | 22 × 50     | 2.88                                    | 0.15                    | 0.199                   | 1.20                  | LS-102M2C--A2250 |
|                                    | 1,000                            | 25 × 40     | 2.86                                    | 0.15                    | 0.199                   | 1.20                  | LS-102M2C--A2540 |
|                                    | 1,000                            | 30 × 30     | 2.82                                    | 0.15                    | 0.199                   | 1.20                  | LS-102M2C--A3030 |
|                                    | 1,000                            | 35 × 25     | 2.79                                    | 0.15                    | 0.199                   | 1.20                  | LS-102M2C--A3525 |
|                                    | 1,200                            | 25 × 45     | 3.27                                    | 0.15                    | 0.166                   | 1.31                  | LS-122M2C--A2545 |
|                                    | 1,200                            | 30 × 35     | 3.25                                    | 0.15                    | 0.166                   | 1.31                  | LS-122M2C--A3035 |
|                                    | 1,200                            | 35 × 30     | 3.24                                    | 0.15                    | 0.166                   | 1.31                  | LS-122M2C--A3530 |
|                                    | 1,500                            | 30 × 40     | 3.77                                    | 0.15                    | 0.133                   | 1.47                  | LS-152M2C--A3040 |
|                                    | 1,500                            | 35 × 35     | 3.75                                    | 0.15                    | 0.133                   | 1.47                  | LS-152M2C--A3535 |
|                                    | 1,800                            | 30 × 45     | 4.10                                    | 0.15                    | 0.111                   | 1.50                  | LS-182M2C--A3045 |
|                                    | 1,800                            | 35 × 35     | 4.08                                    | 0.15                    | 0.111                   | 1.50                  | LS-182M2C--A3535 |
|                                    | 2,200                            | 35 × 45     | 4.72                                    | 0.15                    | 0.090                   | 1.50                  | LS-222M2C--A3545 |
|                                    | 2,700                            | 35 × 55     | 5.53                                    | 0.15                    | 0.074                   | 1.50                  | LS-272M2C--A3555 |
|                                    | 3,300                            | 35 × 70     | 6.80                                    | 0.15                    | 0.060                   | 1.50                  | LS-332M2C--A3570 |
|                                    | 3,300                            | 40 × 50     | 6.34                                    | 0.15                    | 0.060                   | 1.50                  | LS-332M2C--A4050 |
|                                    | 3,900                            | 35 × 80     | 7.84                                    | 0.15                    | 0.051                   | 1.50                  | LS-392M2C--A3580 |
|                                    | 3,900                            | 40 × 60     | 7.45                                    | 0.15                    | 0.051                   | 1.50                  | LS-392M2C--A4060 |
|                                    | 4,700                            | 35 × 90     | 8.62                                    | 0.15                    | 0.042                   | 1.50                  | LS-472M2C--A3590 |
|                                    | 4,700                            | 40 × 80     | 8.79                                    | 0.15                    | 0.042                   | 1.50                  | LS-472M2C--A4080 |
| <b>200</b>                         | 220                              | 22 × 25     | 1.15                                    | 0.15                    | 0.905                   | 0.63                  | LS-221M2D--A2225 |
|                                    | 270                              | 22 × 25     | 1.30                                    | 0.15                    | 0.737                   | 0.70                  | LS-271M2D--A2225 |
|                                    | 330                              | 22 × 25     | 1.40                                    | 0.15                    | 0.603                   | 0.77                  | LS-331M2D--A2225 |
|                                    | 330                              | 25 × 25     | 1.43                                    | 0.15                    | 0.603                   | 0.77                  | LS-331M2D--A2525 |
|                                    | 390                              | 22 × 25     | 1.42                                    | 0.15                    | 0.510                   | 0.84                  | LS-391M2D--A2225 |
|                                    | 390                              | 25 × 25     | 1.63                                    | 0.15                    | 0.510                   | 0.84                  | LS-391M2D--A2525 |
|                                    | 470                              | 22 × 30     | 1.68                                    | 0.15                    | 0.423                   | 0.92                  | LS-471M2D--A2230 |
|                                    | 470                              | 25 × 25     | 1.68                                    | 0.15                    | 0.423                   | 0.92                  | LS-471M2D--A2525 |
|                                    | 470                              | 30 × 25     | 1.85                                    | 0.15                    | 0.423                   | 0.92                  | LS-471M2D--A3025 |
|                                    | 560                              | 22 × 35     | 1.97                                    | 0.15                    | 0.355                   | 1.00                  | LS-561M2D--A2235 |
|                                    | 560                              | 25 × 30     | 2.05                                    | 0.15                    | 0.355                   | 1.00                  | LS-561M2D--A2530 |
|                                    | 560                              | 30 × 25     | 2.05                                    | 0.15                    | 0.355                   | 1.00                  | LS-561M2D--A3025 |
|                                    | 680                              | 22 × 40     | 2.24                                    | 0.15                    | 0.293                   | 1.11                  | LS-681M2D--A2240 |
|                                    | 680                              | 25 × 30     | 2.13                                    | 0.15                    | 0.293                   | 1.11                  | LS-681M2D--A2530 |
|                                    | 680                              | 30 × 25     | 2.21                                    | 0.15                    | 0.293                   | 1.11                  | LS-681M2D--A3025 |
|                                    | 680                              | 35 × 25     | 2.43                                    | 0.15                    | 0.293                   | 1.11                  | LS-681M2D--A3525 |
|                                    | 820                              | 22 × 45     | 2.32                                    | 0.15                    | 0.243                   | 1.21                  | LS-821M2D--A2245 |
|                                    | 820                              | 25 × 35     | 2.23                                    | 0.15                    | 0.243                   | 1.21                  | LS-821M2D--A2535 |
|                                    | 820                              | 30 × 30     | 2.62                                    | 0.15                    | 0.243                   | 1.21                  | LS-821M2D--A3030 |
|                                    | 820                              | 35 × 25     | 2.68                                    | 0.15                    | 0.243                   | 1.21                  | LS-821M2D--A3525 |
|                                    | 1,000                            | 22 × 50     | 2.57                                    | 0.15                    | 0.199                   | 1.34                  | LS-102M2D--A2250 |
|                                    | 1,000                            | 25 × 40     | 2.50                                    | 0.15                    | 0.199                   | 1.34                  | LS-102M2D--A2540 |
|                                    | 1,000                            | 30 × 30     | 2.47                                    | 0.15                    | 0.199                   | 1.34                  | LS-102M2D--A3030 |
|                                    | 1,000                            | 35 × 25     | 2.53                                    | 0.15                    | 0.199                   | 1.34                  | LS-102M2D--A3525 |
|                                    | 1,200                            | 25 × 45     | 2.89                                    | 0.15                    | 0.166                   | 1.47                  | LS-122M2D--A2545 |
|                                    | 1,200                            | 30 × 35     | 2.88                                    | 0.15                    | 0.166                   | 1.47                  | LS-122M2D--A3035 |
|                                    | 1,200                            | 35 × 30     | 2.97                                    | 0.15                    | 0.166                   | 1.47                  | LS-122M2D--A3530 |



## Dimension & Permissible Ripple Current

| Working Voltage<br>V <sub>DC</sub> | Capacitance<br>120Hz, 20°C<br>μF | φ D×L<br>mm | Ripple Current<br>120 Hz, 85°C<br>A/rms | Tan δ<br>at 120Hz, 20°C | ESR<br>120Hz, 20°C<br>Ω | LC<br>5 minutes<br>mA | Part Number      |                  |
|------------------------------------|----------------------------------|-------------|---|-------------------------|-------------------------|-----------------------|------------------|------------------|
| <b>200</b>                         | 1,500                            | 25 × 55     | 3.41                                    | 0.15                    | 0.133                   | 1.50                  | LS-152M2D--A2555 |                  |
|                                    | 1,500                            | 30 × 45     | 3.46                                    | 0.15                    | 0.133                   | 1.50                  | LS-152M2D--A3045 |                  |
|                                    | 1,500                            | 35 × 35     | 3.42                                    | 0.15                    | 0.133                   | 1.50                  | LS-152M2D--A3535 |                  |
|                                    | 1,800                            | 30 × 50     | 3.97                                    | 0.15                    | 0.111                   | 1.50                  | LS-182M2D--A3050 |                  |
|                                    | 1,800                            | 35 × 40     | 3.95                                    | 0.15                    | 0.111                   | 1.50                  | LS-182M2D--A3540 |                  |
|                                    | 2,200                            | 30 × 60     | 4.51                                    | 0.15                    | 0.090                   | 1.50                  | LS-222M2D--A3060 |                  |
|                                    | 2,200                            | 35 × 45     | 4.35                                    | 0.15                    | 0.090                   | 1.50                  | LS-222M2D--A3545 |                  |
|                                    | 2,200                            | 40 × 40     | 4.48                                    | 0.15                    | 0.090                   | 1.50                  | LS-222M2D--A4040 |                  |
|                                    | 2,700                            | 35 × 55     | 4.79                                    | 0.15                    | 0.074                   | 1.50                  | LS-272M2D--A3555 |                  |
|                                    | 2,700                            | 40 × 50     | 5.00                                    | 0.15                    | 0.074                   | 1.50                  | LS-272M2D--A4050 |                  |
|                                    | 3,300                            | 35 × 65     | 5.69                                    | 0.15                    | 0.060                   | 1.50                  | LS-332M2D--A3565 |                  |
|                                    | 3,300                            | 40 × 60     | 5.90                                    | 0.15                    | 0.060                   | 1.50                  | LS-332M2D--A4060 |                  |
|                                    | 3,900                            | 35 × 80     | 6.30                                    | 0.15                    | 0.051                   | 1.50                  | LS-392M2D--A3580 |                  |
|                                    | 3,900                            | 40 × 60     | 5.97                                    | 0.15                    | 0.051                   | 1.50                  | LS-392M2D--A4060 |                  |
|                                    | 4,700                            | 35 × 90     | 7.10                                    | 0.15                    | 0.042                   | 1.50                  | LS-472M2D--A3590 |                  |
|                                    | 4,700                            | 40 × 70     | 6.77                                    | 0.15                    | 0.042                   | 1.50                  | LS-472M2D--A4070 |                  |
|                                    | 5,600                            | 35 × 100    | 7.36                                    | 0.15                    | 0.036                   | 1.50                  | LS-562M2D--A35A0 |                  |
|                                    | 6,800                            | 40 × 100    | 8.65                                    | 0.15                    | 0.029                   | 1.50                  | LS-682M2D--A40A0 |                  |
|                                    | <b>250</b>                       | 180         | 22 × 25                                 | 1.01                    | 0.15                    | 1.106                 | 0.64             | LS-181M2E--A2225 |
|                                    |                                  | 220         | 22 × 25                                 | 1.18                    | 0.15                    | 0.905                 | 0.70             | LS-221M2E--A2225 |
| 220                                |                                  | 25 × 25     | 1.24                                    | 0.15                    | 0.905                   | 0.70                  | LS-221M2E--A2525 |                  |
| 270                                |                                  | 22 × 25     | 1.21                                    | 0.15                    | 0.737                   | 0.78                  | LS-271M2E--A2225 |                  |
| 270                                |                                  | 25 × 25     | 1.49                                    | 0.15                    | 0.737                   | 0.78                  | LS-271M2E--A2525 |                  |
| 330                                |                                  | 22 × 30     | 1.58                                    | 0.15                    | 0.603                   | 0.86                  | LS-331M2E--A2230 |                  |
| 330                                |                                  | 25 × 25     | 1.53                                    | 0.15                    | 0.603                   | 0.86                  | LS-331M2E--A2525 |                  |
| 330                                |                                  | 30 × 25     | 1.59                                    | 0.15                    | 0.603                   | 0.86                  | LS-331M2E--A3025 |                  |
| 390                                |                                  | 22 × 30     | 1.57                                    | 0.15                    | 0.510                   | 0.94                  | LS-391M2E--A2230 |                  |
| 390                                |                                  | 25 × 25     | 1.57                                    | 0.15                    | 0.510                   | 0.94                  | LS-391M2E--A2525 |                  |
| 390                                |                                  | 30 × 25     | 1.77                                    | 0.15                    | 0.510                   | 0.94                  | LS-391M2E--A3025 |                  |
| 470                                |                                  | 22 × 35     | 1.72                                    | 0.15                    | 0.423                   | 1.03                  | LS-471M2E--A2235 |                  |
| 470                                |                                  | 25 × 30     | 1.73                                    | 0.15                    | 0.423                   | 1.03                  | LS-471M2E--A2530 |                  |
| 470                                |                                  | 30 × 25     | 1.80                                    | 0.15                    | 0.423                   | 1.03                  | LS-471M2E--A3025 |                  |
| 560                                |                                  | 22 × 45     | 2.12                                    | 0.15                    | 0.355                   | 1.12                  | LS-561M2E--A2245 |                  |
| 560                                |                                  | 25 × 35     | 2.04                                    | 0.15                    | 0.355                   | 1.12                  | LS-561M2E--A2535 |                  |
| 560                                |                                  | 30 × 25     | 2.01                                    | 0.15                    | 0.355                   | 1.12                  | LS-561M2E--A3025 |                  |
| 560                                |                                  | 35 × 25     | 2.21                                    | 0.15                    | 0.355                   | 1.12                  | LS-561M2E--A3525 |                  |
| 680                                |                                  | 22 × 50     | 2.48                                    | 0.15                    | 0.293                   | 1.24                  | LS-681M2E--A2250 |                  |
| 680                                |                                  | 25 × 45     | 2.54                                    | 0.15                    | 0.293                   | 1.24                  | LS-681M2E--A2545 |                  |
| 680                                |                                  | 30 × 30     | 2.38                                    | 0.15                    | 0.293                   | 1.24                  | LS-681M2E--A3030 |                  |
| 680                                |                                  | 35 × 30     | 2.54                                    | 0.15                    | 0.293                   | 1.24                  | LS-681M2E--A3530 |                  |
| 820                                |                                  | 25 × 50     | 2.92                                    | 0.15                    | 0.243                   | 1.36                  | LS-821M2E--A2550 |                  |
| 820                                |                                  | 30 × 35     | 2.78                                    | 0.15                    | 0.243                   | 1.36                  | LS-821M2E--A3035 |                  |
| 820                                |                                  | 35 × 30     | 2.87                                    | 0.15                    | 0.243                   | 1.36                  | LS-821M2E--A3530 |                  |
| 1,000                              |                                  | 25 × 55     | 3.06                                    | 0.15                    | 0.199                   | 1.50                  | LS-102M2E--A2555 |                  |
| 1,000                              |                                  | 30 × 45     | 3.11                                    | 0.15                    | 0.199                   | 1.50                  | LS-102M2E--A3045 |                  |
| 1,000                              |                                  | 35 × 35     | 3.06                                    | 0.15                    | 0.199                   | 1.50                  | LS-102M2E--A3535 |                  |
| 1,200                              |                                  | 25 × 60     | 3.33                                    | 0.15                    | 0.166                   | 1.50                  | LS-122M2E--A2560 |                  |
| 1,200                              |                                  | 30 × 50     | 3.39                                    | 0.15                    | 0.166                   | 1.50                  | LS-122M2E--A3050 |                  |
| 1,200                              |                                  | 35 × 35     | 3.20                                    | 0.15                    | 0.166                   | 1.50                  | LS-122M2E--A3535 |                  |
| 1,500                              |                                  | 30 × 60     | 4.06                                    | 0.15                    | 0.133                   | 1.50                  | LS-152M2E--A3060 |                  |
| 1,500                              |                                  | 35 × 45     | 3.92                                    | 0.15                    | 0.133                   | 1.50                  | LS-152M2E--A3545 |                  |
| 1,500                              |                                  | 40 × 40     | 4.04                                    | 0.15                    | 0.133                   | 1.50                  | LS-152M2E--A4040 |                  |
| 1,800                              |                                  | 30 × 65     | 4.27                                    | 0.15                    | 0.111                   | 1.50                  | LS-182M2E--A3065 |                  |
| 1,800                              |                                  | 35 × 50     | 4.15                                    | 0.15                    | 0.111                   | 1.50                  | LS-182M2E--A3550 |                  |
| 1,800                              |                                  | 40 × 50     | 4.50                                    | 0.15                    | 0.111                   | 1.50                  | LS-182M2E--A4050 |                  |
| 2,200                              |                                  | 35 × 60     | 4.92                                    | 0.15                    | 0.090                   | 1.50                  | LS-222M2E--A3560 |                  |
| 2,200                              |                                  | 40 × 60     | 5.30                                    | 0.15                    | 0.090                   | 1.50                  | LS-222M2E--A4060 |                  |
| 2,700                              |                                  | 35 × 90     | 5.40                                    | 0.15                    | 0.074                   | 1.50                  | LS-272M2E--A3590 |                  |
| 2,700                              | 40 × 80                          | 6.30        | 0.15                                    | 0.074                   | 1.50                    | LS-272M2E--A4080      |                  |                  |
| 3,300                              | 35 × 90                          | 6.10        | 0.15                                    | 0.060                   | 1.50                    | LS-332M2E--A3590      |                  |                  |
| 3,300                              | 40 × 80                          | 7.00        | 0.15                                    | 0.060                   | 1.50                    | LS-332M2E--A4080      |                  |                  |
| 3,900                              | 35 × 100                         | 7.47        | 0.15                                    | 0.051                   | 1.50                    | LS-392M2E--A35A0      |                  |                  |
| 4,700                              | 40 × 100                         | 8.88        | 0.15                                    | 0.042                   | 1.50                    | LS-472M2E--A40A0      |                  |                  |



## Dimension & Permissible Ripple Current

| Working Voltage<br>V <sub>DC</sub> | Capacitance<br>120Hz, 20°C<br>μF | φ D×L<br>mm | Ripple Current<br>120 Hz, 85°C<br>A/rms | Tan δ<br>at 120Hz, 20°C | ESR<br>120Hz, 20°C<br>Ω | LC<br>5 minutes<br>mA | Part Number      |
|------------------------------------|----------------------------------|-------------|---|-------------------------|-------------------------|-----------------------|------------------|
| <b>350</b>                         | 82                               | 20 × 20     | 0.58                                    | 0.15                    | 2.427                   | 0.51                  | LS-820M2V--A2020 |
|                                    | 82                               | 22 × 25     | 0.70                                    | 0.15                    | 2.427                   | 0.51                  | LS-820M2V--A2225 |
|                                    | 100                              | 20 × 25     | 0.70                                    | 0.15                    | 1.990                   | 0.56                  | LS-101M2V--A2025 |
|                                    | 100                              | 22 × 25     | 0.77                                    | 0.15                    | 1.990                   | 0.56                  | LS-101M2V--A2225 |
|                                    | 100                              | 25 × 20     | 0.73                                    | 0.15                    | 1.990                   | 0.56                  | LS-101M2V--A2520 |
|                                    | 120                              | 20 × 30     | 0.95                                    | 0.15                    | 1.659                   | 0.61                  | LS-121M2V--A2030 |
|                                    | 120                              | 22 × 25     | 0.99                                    | 0.15                    | 1.659                   | 0.61                  | LS-121M2V--A2225 |
|                                    | 120                              | 25 × 20     | 0.80                                    | 0.15                    | 1.659                   | 0.61                  | LS-121M2V--A2520 |
|                                    | 150                              | 20 × 35     | 1.05                                    | 0.15                    | 1.327                   | 0.69                  | LS-151M2V--A2035 |
|                                    | 150                              | 25 × 25     | 1.16                                    | 0.15                    | 1.327                   | 0.69                  | LS-151M2V--A2525 |
|                                    | 150                              | 30 × 25     | 1.24                                    | 0.15                    | 1.327                   | 0.69                  | LS-151M2V--A3025 |
|                                    | 180                              | 20 × 35     | 1.08                                    | 0.15                    | 1.106                   | 0.75                  | LS-181M2V--A2035 |
|                                    | 180                              | 22 × 35     | 1.28                                    | 0.15                    | 1.106                   | 0.75                  | LS-181M2V--A2235 |
|                                    | 180                              | 25 × 30     | 1.30                                    | 0.15                    | 1.106                   | 0.75                  | LS-181M2V--A2530 |
|                                    | 180                              | 30 × 25     | 1.37                                    | 0.15                    | 1.106                   | 0.75                  | LS-181M2V--A3025 |
|                                    | 220                              | 20 × 45     | 1.36                                    | 0.15                    | 0.905                   | 0.83                  | LS-221M2V--A2045 |
|                                    | 220                              | 22 × 40     | 1.40                                    | 0.15                    | 0.905                   | 0.83                  | LS-221M2V--A2240 |
|                                    | 220                              | 25 × 30     | 1.28                                    | 0.15                    | 0.905                   | 0.83                  | LS-221M2V--A2530 |
|                                    | 220                              | 30 × 25     | 1.47                                    | 0.15                    | 0.905                   | 0.83                  | LS-221M2V--A3025 |
|                                    | 270                              | 22 × 45     | 1.62                                    | 0.15                    | 0.737                   | 0.92                  | LS-271M2V--A2245 |
|                                    | 270                              | 25 × 35     | 1.65                                    | 0.15                    | 0.737                   | 0.92                  | LS-271M2V--A2535 |
|                                    | 270                              | 30 × 30     | 1.71                                    | 0.15                    | 0.737                   | 0.92                  | LS-271M2V--A3030 |
|                                    | 270                              | 35 × 25     | 1.72                                    | 0.15                    | 0.737                   | 0.92                  | LS-271M2V--A3525 |
|                                    | 330                              | 22 × 50     | 1.89                                    | 0.15                    | 0.603                   | 1.02                  | LS-331M2V--A2250 |
|                                    | 330                              | 25 × 40     | 1.84                                    | 0.15                    | 0.603                   | 1.02                  | LS-331M2V--A2540 |
|                                    | 330                              | 30 × 30     | 1.74                                    | 0.15                    | 0.603                   | 1.02                  | LS-331M2V--A3030 |
|                                    | 330                              | 35 × 25     | 1.77                                    | 0.15                    | 0.603                   | 1.02                  | LS-331M2V--A3525 |
|                                    | 390                              | 25 × 45     | 2.04                                    | 0.15                    | 0.510                   | 1.11                  | LS-391M2V--A2545 |
|                                    | 390                              | 30 × 35     | 2.12                                    | 0.15                    | 0.510                   | 1.11                  | LS-391M2V--A3035 |
|                                    | 390                              | 35 × 30     | 2.19                                    | 0.15                    | 0.510                   | 1.11                  | LS-391M2V--A3530 |
|                                    | 470                              | 30 × 40     | 2.41                                    | 0.15                    | 0.423                   | 1.22                  | LS-471M2V--A3040 |
|                                    | 470                              | 35 × 30     | 2.25                                    | 0.15                    | 0.423                   | 1.22                  | LS-471M2V--A3530 |
|                                    | 560                              | 30 × 45     | 2.60                                    | 0.15                    | 0.355                   | 1.33                  | LS-561M2V--A3045 |
|                                    | 560                              | 35 × 35     | 2.62                                    | 0.15                    | 0.355                   | 1.33                  | LS-561M2V--A3535 |
|                                    | 680                              | 35 × 40     | 2.80                                    | 0.15                    | 0.293                   | 1.46                  | LS-681M2V--A3540 |
| 820                                | 35 × 45                          | 3.35        | 0.15                                    | 0.243                   | 1.50                    | LS-821M2V--A3545      |                  |
| <b>400</b>                         | 68                               | 20 × 25     | 0.66                                    | 0.15                    | 2.927                   | 0.49                  | LS-680M2G--A2025 |
|                                    | 68                               | 22 × 25     | 0.72                                    | 0.15                    | 2.927                   | 0.49                  | LS-680M2G--A2225 |
|                                    | 82                               | 20 × 25     | 0.72                                    | 0.15                    | 2.427                   | 0.54                  | LS-820M2G--A2025 |
|                                    | 82                               | 22 × 25     | 0.80                                    | 0.15                    | 2.427                   | 0.54                  | LS-820M2G--A2225 |
|                                    | 100                              | 20 × 25     | 0.75                                    | 0.15                    | 1.990                   | 0.60                  | LS-101M2G--A2025 |
|                                    | 100                              | 22 × 25     | 0.81                                    | 0.15                    | 1.990                   | 0.60                  | LS-101M2G--A2225 |
|                                    | 100                              | 25 × 20     | 0.79                                    | 0.15                    | 1.990                   | 0.60                  | LS-101M2G--A2520 |
|                                    | 120                              | 22 × 30     | 1.04                                    | 0.15                    | 1.659                   | 0.66                  | LS-121M2G--A2230 |
|                                    | 120                              | 25 × 25     | 1.06                                    | 0.15                    | 1.659                   | 0.66                  | LS-121M2G--A2525 |
|                                    | 150                              | 20 × 35     | 1.00                                    | 0.15                    | 1.327                   | 0.66                  | LS-151M2G--A2035 |
|                                    | 150                              | 22 × 30     | 1.06                                    | 0.15                    | 1.327                   | 0.73                  | LS-151M2G--A2230 |
|                                    | 150                              | 25 × 25     | 1.06                                    | 0.15                    | 1.327                   | 0.73                  | LS-151M2G--A2525 |
|                                    | 150                              | 30 × 25     | 1.24                                    | 0.15                    | 1.327                   | 0.73                  | LS-151M2G--A3025 |
|                                    | 180                              | 20 × 40     | 1.17                                    | 0.15                    | 1.106                   | 0.80                  | LS-181M2G--A2040 |
|                                    | 180                              | 22 × 35     | 1.16                                    | 0.15                    | 1.106                   | 0.80                  | LS-181M2G--A2235 |
|                                    | 180                              | 25 × 30     | 1.23                                    | 0.15                    | 1.106                   | 0.80                  | LS-181M2G--A2530 |
|                                    | 180                              | 30 × 25     | 1.45                                    | 0.15                    | 1.106                   | 0.80                  | LS-181M2G--A3025 |
|                                    | 180                              | 35 × 25     | 1.54                                    | 0.15                    | 1.106                   | 0.80                  | LS-181M2G--A3525 |
|                                    | 220                              | 20 × 45     | 1.39                                    | 0.15                    | 0.905                   | 0.89                  | LS-221M2G--A2045 |
|                                    | 220                              | 22 × 40     | 1.39                                    | 0.15                    | 0.905                   | 0.89                  | LS-221M2G--A2240 |
|                                    | 220                              | 25 × 30     | 1.33                                    | 0.15                    | 0.905                   | 0.89                  | LS-221M2G--A2530 |
|                                    | 220                              | 30 × 25     | 1.38                                    | 0.15                    | 0.905                   | 0.89                  | LS-221M2G--A3025 |
|                                    | 220                              | 35 × 25     | 1.44                                    | 0.15                    | 0.905                   | 0.89                  | LS-221M2G--A3525 |
|                                    | 270                              | 22 × 45     | 1.54                                    | 0.15                    | 0.737                   | 0.99                  | LS-271M2G--A2245 |
|                                    | 270                              | 25 × 35     | 1.48                                    | 0.15                    | 0.737                   | 0.99                  | LS-271M2G--A2535 |
|                                    | 270                              | 30 × 30     | 1.56                                    | 0.15                    | 0.737                   | 0.99                  | LS-271M2G--A3030 |
|                                    | 270                              | 35 × 25     | 1.53                                    | 0.15                    | 0.737                   | 0.99                  | LS-271M2G--A3525 |
|                                    | 330                              | 22 × 50     | 1.70                                    | 0.15                    | 0.603                   | 1.09                  | LS-331M2G--A2250 |
|                                    | 330                              | 25 × 45     | 1.76                                    | 0.15                    | 0.603                   | 1.09                  | LS-331M2G--A2545 |
|                                    | 330                              | 30 × 35     | 1.76                                    | 0.15                    | 0.603                   | 1.09                  | LS-331M2G--A3035 |



## Dimension & Permissible Ripple Current

| Working Voltage<br>V <sub>DC</sub> | Capacitance<br>120Hz, 20°C<br>μF | φ D×L<br>mm | Ripple Current<br>120 Hz, 85°C<br>A/rms | Tan δ<br>at 120Hz, 20°C | ESR<br>120Hz, 20°C<br>Ω | LC<br>5 minutes<br>mA | Part Number      |
|------------------------------------|----------------------------------|-------------|---|-------------------------|-------------------------|-----------------------|------------------|
| <b>400</b>                         | 330                              | 35 × 25     | 1.68                                    | 0.15                    | 0.603                   | 1.09                  | LS-331M2G--A3525 |
|                                    | 390                              | 25 × 45     | 1.86                                    | 0.15                    | 0.510                   | 1.18                  | LS-391M2G--A2545 |
|                                    | 390                              | 30 × 35     | 1.89                                    | 0.15                    | 0.510                   | 1.18                  | LS-391M2G--A3035 |
|                                    | 390                              | 35 × 30     | 1.97                                    | 0.15                    | 0.510                   | 1.18                  | LS-391M2G--A3530 |
|                                    | 470                              | 25 × 55     | 2.26                                    | 0.15                    | 0.423                   | 1.30                  | LS-471M2G--A2555 |
|                                    | 470                              | 30 × 40     | 2.18                                    | 0.15                    | 0.423                   | 1.30                  | LS-471M2G--A3040 |
|                                    | 470                              | 35 × 30     | 2.12                                    | 0.15                    | 0.423                   | 1.30                  | LS-471M2G--A3530 |
|                                    | 470                              | 40 × 25     | 2.16                                    | 0.15                    | 0.423                   | 1.30                  | LS-471M2G--A4025 |
|                                    | 560                              | 30 × 45     | 2.37                                    | 0.15                    | 0.355                   | 1.42                  | LS-561M2G--A3045 |
|                                    | 560                              | 35 × 35     | 2.34                                    | 0.15                    | 0.355                   | 1.42                  | LS-561M2G--A3535 |
|                                    | 680                              | 30 × 55     | 2.85                                    | 0.15                    | 0.293                   | 1.50                  | LS-681M2G--A3055 |
|                                    | 680                              | 35 × 40     | 2.72                                    | 0.15                    | 0.293                   | 1.50                  | LS-681M2G--A3540 |
|                                    | 680                              | 40 × 35     | 2.79                                    | 0.15                    | 0.293                   | 1.50                  | LS-681M2G--A4035 |
|                                    | 820                              | 30 × 60     | 3.25                                    | 0.15                    | 0.243                   | 1.50                  | LS-821M2G--A3060 |
|                                    | 820                              | 35 × 50     | 3.28                                    | 0.15                    | 0.243                   | 1.50                  | LS-821M2G--A3550 |
|                                    | 820                              | 40 × 40     | 3.23                                    | 0.15                    | 0.243                   | 1.50                  | LS-821M2G--A4040 |
|                                    | 1,000                            | 35 × 55     | 3.77                                    | 0.15                    | 0.199                   | 1.50                  | LS-102M2G--A3555 |
|                                    | 1,000                            | 40 × 45     | 3.75                                    | 0.15                    | 0.199                   | 1.50                  | LS-102M2G--A4045 |
|                                    | 1,200                            | 35 × 65     | 4.50                                    | 0.15                    | 0.166                   | 1.50                  | LS-122M2G--A3565 |
|                                    | 1,200                            | 40 × 60     | 4.68                                    | 0.15                    | 0.166                   | 1.50                  | LS-122M2G--A4060 |
| 1,500                              | 35 × 80                          | 5.51        | 0.15                                    | 0.133                   | 1.50                    | LS-152M2G--A3580      |                  |
| 1,500                              | 40 × 70                          | 5.60        | 0.15                                    | 0.133                   | 1.50                    | LS-152M2G--A4070      |                  |
| 1,800                              | 40 × 80                          | 6.50        | 0.15                                    | 0.111                   | 1.50                    | LS-182M2G--A4080      |                  |
| <b>420</b>                         | 220                              | 22 × 45     | 1.38                                    | 0.15                    | 0.905                   | 0.91                  | LS-221M2P--A2245 |
|                                    | 220                              | 25 × 35     | 1.33                                    | 0.15                    | 0.905                   | 0.91                  | LS-221M2P--A2535 |
|                                    | 330                              | 25 × 50     | 1.90                                    | 0.15                    | 0.603                   | 1.12                  | LS-331M2P--A2550 |
|                                    | 330                              | 30 × 40     | 1.99                                    | 0.15                    | 0.603                   | 1.12                  | LS-331M2P--A3040 |
|                                    | 470                              | 35 × 35     | 2.37                                    | 0.15                    | 0.423                   | 1.33                  | LS-471M2P--A3535 |
|                                    | 560                              | 30 × 50     | 2.73                                    | 0.15                    | 0.355                   | 1.45                  | LS-561M2P--A3050 |
|                                    | 560                              | 35 × 40     | 2.73                                    | 0.15                    | 0.355                   | 1.45                  | LS-561M2P--A3540 |
|                                    | 680                              | 35 × 45     | 3.16                                    | 0.15                    | 0.293                   | 1.50                  | LS-681M2P--A3545 |
|                                    | 680                              | 40 × 50     | 3.70                                    | 0.15                    | 0.293                   | 1.50                  | LS-681M2P--A4050 |
|                                    | 820                              | 35 × 55     | 3.69                                    | 0.15                    | 0.243                   | 1.50                  | LS-821M2P--A3555 |
|                                    | 820                              | 40 × 45     | 3.66                                    | 0.15                    | 0.243                   | 1.50                  | LS-821M2P--A4045 |
|                                    | 1,000                            | 35 × 65     | 4.48                                    | 0.15                    | 0.199                   | 1.50                  | LS-102M2P--A3565 |
|                                    | 1,000                            | 40 × 50     | 4.27                                    | 0.15                    | 0.199                   | 1.50                  | LS-102M2P--A4050 |
|                                    | 1,200                            | 35 × 70     | 4.90                                    | 0.15                    | 0.166                   | 1.50                  | LS-122M2P--A3570 |
|                                    | 1,200                            | 40 × 55     | 4.76                                    | 0.15                    | 0.166                   | 1.50                  | LS-122M2P--A4055 |
|                                    | 1,500                            | 40 × 70     | 5.90                                    | 0.15                    | 0.133                   | 1.50                  | LS-152M2P--A4070 |
|                                    | 1,800                            | 40 × 80     | 6.86                                    | 0.15                    | 0.111                   | 1.50                  | LS-182M2P--A4080 |
| <b>450</b>                         | 56                               | 20 × 25     | 0.57                                    | 0.15                    | 3.554                   | 0.48                  | LS-560M2W--A2025 |
|                                    | 56                               | 22 × 25     | 0.68                                    | 0.15                    | 3.554                   | 0.48                  | LS-560M2W--A2225 |
|                                    | 68                               | 20 × 25     | 0.62                                    | 0.15                    | 2.927                   | 0.52                  | LS-680M2W--A2025 |
|                                    | 68                               | 22 × 20     | 0.58                                    | 0.15                    | 2.927                   | 0.52                  | LS-680M2W--A2220 |
|                                    | 82                               | 20 × 30     | 0.74                                    | 0.15                    | 2.427                   | 0.58                  | LS-820M2W--A2030 |
|                                    | 82                               | 22 × 25     | 0.69                                    | 0.15                    | 2.427                   | 0.58                  | LS-820M2W--A2225 |
|                                    | 82                               | 25 × 25     | 0.75                                    | 0.15                    | 2.427                   | 0.58                  | LS-820M2W--A2525 |
|                                    | 100                              | 20 × 30     | 0.78                                    | 0.15                    | 1.990                   | 0.64                  | LS-101M2W--A2030 |
|                                    | 100                              | 22 × 25     | 0.77                                    | 0.15                    | 1.990                   | 0.64                  | LS-101M2W--A2225 |
|                                    | 100                              | 25 × 25     | 0.83                                    | 0.15                    | 1.990                   | 0.64                  | LS-101M2W--A2525 |
|                                    | 120                              | 20 × 35     | 0.92                                    | 0.15                    | 1.659                   | 0.70                  | LS-121M2W--A2035 |
|                                    | 120                              | 22 × 35     | 0.97                                    | 0.15                    | 1.659                   | 0.70                  | LS-121M2W--A2235 |
|                                    | 120                              | 25 × 25     | 0.91                                    | 0.15                    | 1.659                   | 0.70                  | LS-121M2W--A2525 |
|                                    | 120                              | 30 × 25     | 1.10                                    | 0.15                    | 1.659                   | 0.70                  | LS-121M2W--A3025 |
|                                    | 150                              | 20 × 40     | 1.06                                    | 0.15                    | 1.327                   | 0.78                  | LS-151M2W--A2040 |
|                                    | 150                              | 22 × 35     | 1.20                                    | 0.15                    | 1.327                   | 0.78                  | LS-151M2W--A2235 |
|                                    | 150                              | 25 × 30     | 1.16                                    | 0.15                    | 1.327                   | 0.78                  | LS-151M2W--A2530 |
|                                    | 150                              | 30 × 25     | 1.16                                    | 0.15                    | 1.327                   | 0.78                  | LS-151M2W--A3025 |
|                                    | 180                              | 20 × 45     | 1.21                                    | 0.15                    | 1.106                   | 0.85                  | LS-181M2W--A2045 |
|                                    | 180                              | 22 × 40     | 1.21                                    | 0.15                    | 1.106                   | 0.85                  | LS-181M2W--A2240 |
|                                    | 180                              | 25 × 35     | 1.31                                    | 0.15                    | 1.106                   | 0.85                  | LS-181M2W--A2535 |
|                                    | 180                              | 30 × 25     | 1.19                                    | 0.15                    | 1.106                   | 0.85                  | LS-181M2W--A3025 |
| 180                                | 35 × 25                          | 1.35        | 0.15                                    | 1.106                   | 0.85                    | LS-181M2W--A3525      |                  |
| 220                                | 22 × 50                          | 1.48        | 0.15                                    | 0.905                   | 0.94                    | LS-221M2W--A2250      |                  |
| 220                                | 25 × 40                          | 1.47        | 0.15                                    | 0.905                   | 0.94                    | LS-221M2W--A2540      |                  |





## Dimension & Permissible Ripple Current

| Working Voltage<br>V <sub>DC</sub> | Capacitance<br>120Hz, 20°C<br>μF | φD×L<br>mm | Ripple Current<br>120 Hz, 85°C<br>A/rms | Tan δ<br>at 120Hz, 20°C | ESR<br>120Hz, 20°C<br>Ω | LC<br>5 minutes<br>mA | Part Number      |
|------------------------------------|----------------------------------|------------|---|-------------------------|-------------------------|-----------------------|------------------|
| <b>450</b>                         | 220                              | 30 × 30    | 1.42                                    | 0.15                    | 0.905                   | 0.94                  | LS-221M2W--A3030 |
|                                    | 220                              | 35 × 25    | 1.45                                    | 0.15                    | 0.905                   | 0.94                  | LS-221M2W--A3525 |
|                                    | 270                              | 22 × 55    | 1.71                                    | 0.15                    | 0.737                   | 1.05                  | LS-271M2W--A2255 |
|                                    | 270                              | 25 × 45    | 1.59                                    | 0.15                    | 0.737                   | 1.05                  | LS-271M2W--A2545 |
|                                    | 270                              | 30 × 35    | 1.65                                    | 0.15                    | 0.737                   | 1.05                  | LS-271M2W--A3035 |
|                                    | 270                              | 35 × 25    | 1.61                                    | 0.15                    | 0.737                   | 1.05                  | LS-271M2W--A3525 |
|                                    | 330                              | 25 × 50    | 1.76                                    | 0.15                    | 0.603                   | 1.16                  | LS-331M2W--A2550 |
|                                    | 330                              | 30 × 40    | 1.93                                    | 0.15                    | 0.603                   | 1.16                  | LS-331M2W--A3040 |
|                                    | 330                              | 35 × 30    | 1.88                                    | 0.15                    | 0.603                   | 1.16                  | LS-331M2W--A3530 |
|                                    | 390                              | 25 × 55    | 2.08                                    | 0.15                    | 0.510                   | 1.26                  | LS-391M2W--A2555 |
|                                    | 390                              | 30 × 40    | 2.00                                    | 0.15                    | 0.510                   | 1.26                  | LS-391M2W--A3040 |
|                                    | 390                              | 35 × 30    | 1.95                                    | 0.15                    | 0.510                   | 1.26                  | LS-391M2W--A3530 |
|                                    | 470                              | 30 × 45    | 2.35                                    | 0.15                    | 0.423                   | 1.38                  | LS-471M2W--A3045 |
|                                    | 470                              | 35 × 40    | 2.45                                    | 0.15                    | 0.423                   | 1.38                  | LS-471M2W--A3540 |
|                                    | 560                              | 30 × 55    | 2.76                                    | 0.15                    | 0.355                   | 1.50                  | LS-561M2W--A3055 |
|                                    | 560                              | 35 × 40    | 2.63                                    | 0.15                    | 0.355                   | 1.50                  | LS-561M2W--A3540 |
|                                    | 680                              | 35 × 50    | 2.91                                    | 0.15                    | 0.293                   | 1.50                  | LS-681M2W--A3550 |
|                                    | 680                              | 40 × 40    | 2.98                                    | 0.15                    | 0.293                   | 1.50                  | LS-681M2W--A4040 |
|                                    | 820                              | 35 × 55    | 3.86                                    | 0.15                    | 0.243                   | 1.50                  | LS-821M2W--A3555 |
|                                    | 820                              | 40 × 50    | 4.00                                    | 0.15                    | 0.243                   | 1.50                  | LS-821M2W--A4050 |
|                                    | 1,000                            | 35 × 70    | 4.74                                    | 0.15                    | 0.199                   | 1.50                  | LS-102M2W--A3570 |
|                                    | 1,000                            | 40 × 55    | 4.60                                    | 0.15                    | 0.199                   | 1.50                  | LS-102M2W--A4055 |
| 1,200                              | 35 × 80                          | 5.51       | 0.15                                    | 0.166                   | 1.50                    | LS-122M2W--A3580      |                  |
| 1,200                              | 40 × 65                          | 5.42       | 0.15                                    | 0.166                   | 1.50                    | LS-122M2W--A4065      |                  |
| 1,500                              | 35 × 100                         | 5.99       | 0.15                                    | 0.133                   | 1.50                    | LS-152M2W--A35A0      |                  |
| 2,200                              | 45 × 90                          | 8.48       | 0.15                                    | 0.090                   | 1.50                    | LS-222M2W--A4590      |                  |
| <b>500</b>                         | 56                               | 20 × 25    | 0.54                                    | 0.15                    | 3.554                   | 0.50                  | LS-560M2H--A2025 |
|                                    | 56                               | 22 × 25    | 0.57                                    | 0.15                    | 3.554                   | 0.50                  | LS-560M2H--A2225 |
|                                    | 68                               | 20 × 30    | 0.65                                    | 0.15                    | 2.927                   | 0.55                  | LS-680M2H--A2030 |
|                                    | 68                               | 22 × 25    | 0.63                                    | 0.15                    | 2.927                   | 0.55                  | LS-680M2H--A2225 |
|                                    | 68                               | 25 × 20    | 0.62                                    | 0.15                    | 2.927                   | 0.55                  | LS-680M2H--A2520 |
|                                    | 82                               | 20 × 30    | 0.71                                    | 0.15                    | 2.427                   | 0.61                  | LS-820M2H--A2030 |
|                                    | 82                               | 22 × 30    | 0.75                                    | 0.15                    | 2.427                   | 0.61                  | LS-820M2H--A2230 |
|                                    | 82                               | 25 × 25    | 0.75                                    | 0.15                    | 2.427                   | 0.61                  | LS-820M2H--A2525 |
|                                    | 100                              | 22 × 35    | 0.85                                    | 0.15                    | 1.990                   | 0.67                  | LS-101M2H--A2235 |
|                                    | 100                              | 25 × 30    | 0.86                                    | 0.15                    | 1.990                   | 0.67                  | LS-101M2H--A2530 |
|                                    | 100                              | 30 × 20    | 0.82                                    | 0.15                    | 1.990                   | 0.67                  | LS-101M2H--A3020 |
|                                    | 120                              | 22 × 40    | 0.98                                    | 0.15                    | 1.659                   | 0.73                  | LS-121M2H--A2240 |
|                                    | 120                              | 25 × 30    | 0.94                                    | 0.15                    | 1.659                   | 0.73                  | LS-121M2H--A2530 |
|                                    | 120                              | 30 × 30    | 1.04                                    | 0.15                    | 1.659                   | 0.73                  | LS-121M2H--A3030 |
|                                    | 120                              | 35 × 25    | 1.07                                    | 0.15                    | 1.659                   | 0.73                  | LS-121M2H--A3525 |
|                                    | 150                              | 22 × 45    | 1.16                                    | 0.15                    | 1.327                   | 0.73                  | LS-151M2H--A2245 |
|                                    | 150                              | 25 × 35    | 1.12                                    | 0.15                    | 1.327                   | 0.82                  | LS-151M2H--A2535 |
|                                    | 150                              | 30 × 30    | 1.17                                    | 0.15                    | 1.327                   | 0.82                  | LS-151M2H--A3030 |
|                                    | 150                              | 35 × 25    | 1.20                                    | 0.15                    | 1.327                   | 0.82                  | LS-151M2H--A3525 |
|                                    | 180                              | 22 × 50    | 1.33                                    | 0.15                    | 1.106                   | 0.90                  | LS-181M2H--A2250 |
|                                    | 180                              | 25 × 40    | 1.30                                    | 0.15                    | 1.106                   | 0.90                  | LS-181M2H--A2540 |
|                                    | 180                              | 30 × 30    | 1.28                                    | 0.15                    | 1.106                   | 0.90                  | LS-181M2H--A3030 |
|                                    | 180                              | 35 × 20    | 1.21                                    | 0.15                    | 1.106                   | 0.90                  | LS-181M2H--A3520 |
|                                    | 220                              | 30 × 35    | 1.51                                    | 0.15                    | 0.905                   | 0.99                  | LS-221M2H--A3035 |
|                                    | 220                              | 35 × 30    | 1.55                                    | 0.15                    | 0.905                   | 0.99                  | LS-221M2H--A3530 |
|                                    | 270                              | 30 × 40    | 1.77                                    | 0.15                    | 0.737                   | 1.10                  | LS-271M2H--A3040 |
|                                    | 270                              | 35 × 35    | 1.83                                    | 0.15                    | 0.737                   | 1.10                  | LS-271M2H--A3530 |
|                                    | 330                              | 30 × 50    | 2.15                                    | 0.15                    | 0.603                   | 1.22                  | LS-331M2H--A3050 |
|                                    | 330                              | 35 × 35    | 2.03                                    | 0.15                    | 0.603                   | 1.22                  | LS-331M2H--A3535 |
|                                    | 390                              | 35 × 45    | 2.44                                    | 0.15                    | 0.510                   | 1.32                  | LS-391M2H--A3545 |
|                                    | 470                              | 35 × 50    | 2.80                                    | 0.15                    | 0.423                   | 1.45                  | LS-471M2H--A3550 |
|                                    | 560                              | 35 × 60    | 3.37                                    | 0.15                    | 0.355                   | 1.50                  | LS-561M2H--A3560 |
|                                    | 560                              | 40 × 50    | 3.31                                    | 0.15                    | 0.355                   | 1.50                  | LS-561M2H--A4050 |
|                                    | 680                              | 35 × 70    | 3.91                                    | 0.15                    | 0.293                   | 1.50                  | LS-681M2H--A3570 |
|                                    | 680                              | 40 × 55    | 3.79                                    | 0.15                    | 0.293                   | 1.50                  | LS-681M2H--A4055 |
|                                    | 820                              | 35 × 80    | 4.56                                    | 0.15                    | 0.243                   | 1.50                  | LS-821M2H--A3580 |
| 820                                | 40 × 60                          | 4.33       | 0.15                                    | 0.243                   | 1.50                    | LS-821M2H--A4060      |                  |
| 1,000                              | 35 × 90                          | 5.31       | 0.15                                    | 0.199                   | 1.50                    | LS-102M2H--A3590      |                  |
| 1,000                              | 40 × 80                          | 5.42       | 0.15                                    | 0.199                   | 1.50                    | LS-102M2H--A4080      |                  |
| 1,500                              | 40 × 100                         | 6.56       | 0.15                                    | 0.133                   | 1.50                    | LS-152M2H--A40A0      |                  |



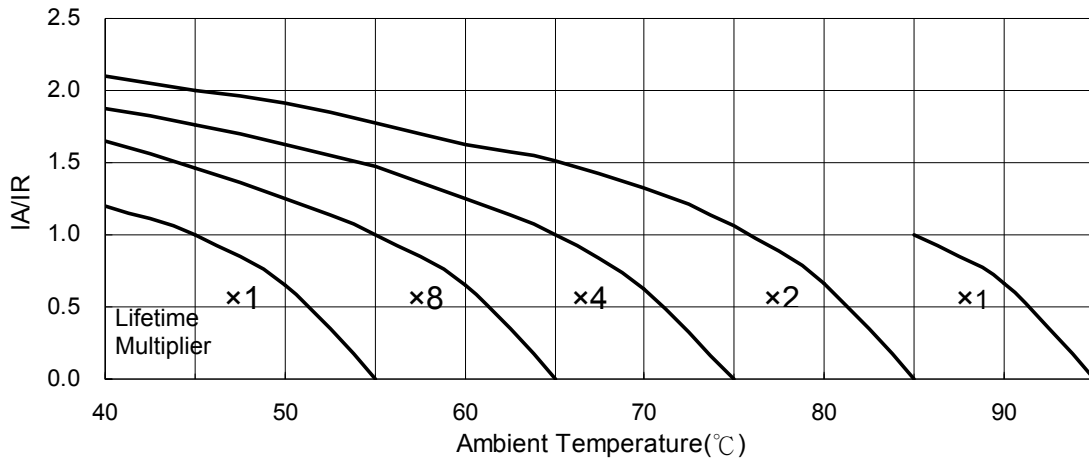
## Part Numbering System

| LS series  | 100 $\mu$ F | $\pm 20\%$                       | 400V          | 4.0 $\pm 0.5$ mm | 22 $\phi$ $\times$ 30L | Pb-free Terminal<br>+ PET Sleeve |                          |     |     |  |   |    |        |     |    |     |    |   |      |        |        |    |        |    |   |                  |  |                     |      |                |      |                |      |                |      |  |
|--|-------------|----------------------------------|---------------|------------------|------------------------|----------------------------------|--------------------------|-----|-----|--|---|----|--------|-----|----|-----|----|---|------|--------|--------|----|--------|----|---|------------------|--|---------------------|------|----------------|------|----------------|------|----------------|------|--|
| <b>LS-</b>   | <b>101</b>  | <b>M</b>                         | <b>2G</b>     | <b>--</b>        | <b>A</b>               | <b>2230</b>                      |                          |     |     |  |   |    |        |     |    |     |    |   |      |        |        |    |        |    |   |                  |  |                     |      |                |      |                |      |                |      |  |
| Series name  | Capacitance | Capacitance tolerance            | Rated voltage | Terminal type    | Terminal length        | Case size                        | Terminal and Sleeve Type |     |     |  |   |    |        |     |    |     |    |   |      |        |        |    |        |    |   |                  |  |                     |      |                |      |                |      |                |      |  |
| Example:   |             | M = $\pm 20\%$<br>K = $\pm 10\%$ | Example:      | Example:         | Example:               | Example:                         |                          |     |     |  |   |    |        |     |    |     |    |   |      |        |        |    |        |    |   |                  |  |                     |      |                |      |                |      |                |      |  |
| <table border="1" style="font-size: small;"> <thead> <tr><th>Cap.</th><th>Symbol</th></tr> </thead> <tbody> <tr><td>56</td><td>560</td></tr> <tr><td>220</td><td>221</td></tr> <tr><td>470</td><td>471</td></tr> </tbody> </table> |             | Cap.                             | Symbol        | 56               | 560                    | 220                              | 221                      | 470 | 471 |  | <table border="1" style="font-size: small;"> <thead> <tr><th>WV</th><th>Symbol</th></tr> </thead> <tbody> <tr><td>400</td><td>2G</td></tr> <tr><td>450</td><td>2W</td></tr> </tbody> </table> | WV | Symbol | 400 | 2G | 450 | 2W | <table border="1" style="font-size: small;"> <thead> <tr><th>Type</th><th>Symbol</th></tr> </thead> <tbody> <tr><td>2 pins</td><td>--</td></tr> <tr><td>5 pins</td><td>L5</td></tr> </tbody> </table> | Type | Symbol | 2 pins | -- | 5 pins | L5 | <table border="1" style="font-size: small;"> <tbody> <tr><td colspan="2">6.3<math>\pm 1.0</math> mm</td></tr> <tr><td><math>\phi</math> D<math>\times</math>L</td><td>Code</td></tr> <tr><td>22<math>\times</math>30</td><td>2230</td></tr> <tr><td>25<math>\times</math>25</td><td>2525</td></tr> <tr><td>30<math>\times</math>40</td><td>3040</td></tr> </tbody> </table> | 6.3 $\pm 1.0$ mm |  | $\phi$ D $\times$ L | Code | 22 $\times$ 30 | 2230 | 25 $\times$ 25 | 2525 | 30 $\times$ 40 | 3040 |  |
| Cap.   | Symbol      |                                  |               |                  |                        |                                  |                          |     |     |  |   |    |        |     |    |     |    |   |      |        |        |    |        |    |   |                  |  |                     |      |                |      |                |      |                |      |  |
| 56   | 560         |                                  |               |                  |                        |                                  |                          |     |     |  |   |    |        |     |    |     |    |   |      |        |        |    |        |    |   |                  |  |                     |      |                |      |                |      |                |      |  |
| 220  | 221         |                                  |               |                  |                        |                                  |                          |     |     |  |   |    |        |     |    |     |    |   |      |        |        |    |        |    |   |                  |  |                     |      |                |      |                |      |                |      |  |
| 470  | 471         |                                  |               |                  |                        |                                  |                          |     |     |  |   |    |        |     |    |     |    |   |      |        |        |    |        |    |   |                  |  |                     |      |                |      |                |      |                |      |  |
| WV   | Symbol      |                                  |               |                  |                        |                                  |                          |     |     |  |   |    |        |     |    |     |    |   |      |        |        |    |        |    |   |                  |  |                     |      |                |      |                |      |                |      |  |
| 400  | 2G          |                                  |               |                  |                        |                                  |                          |     |     |  |   |    |        |     |    |     |    |   |      |        |        |    |        |    |   |                  |  |                     |      |                |      |                |      |                |      |  |
| 450  | 2W          |                                  |               |                  |                        |                                  |                          |     |     |  |   |    |        |     |    |     |    |   |      |        |        |    |        |    |   |                  |  |                     |      |                |      |                |      |                |      |  |
| Type   | Symbol      |                                  |               |                  |                        |                                  |                          |     |     |  |   |    |        |     |    |     |    |   |      |        |        |    |        |    |   |                  |  |                     |      |                |      |                |      |                |      |  |
| 2 pins   | --          |                                  |               |                  |                        |                                  |                          |     |     |  |   |    |        |     |    |     |    |   |      |        |        |    |        |    |   |                  |  |                     |      |                |      |                |      |                |      |  |
| 5 pins   | L5          |                                  |               |                  |                        |                                  |                          |     |     |  |   |    |        |     |    |     |    |   |      |        |        |    |        |    |   |                  |  |                     |      |                |      |                |      |                |      |  |
| 6.3 $\pm 1.0$ mm   |             |                                  |               |                  |                        |                                  |                          |     |     |  |   |    |        |     |    |     |    |   |      |        |        |    |        |    |   |                  |  |                     |      |                |      |                |      |                |      |  |
| $\phi$ D $\times$ L  | Code        |                                  |               |                  |                        |                                  |                          |     |     |  |   |    |        |     |    |     |    |   |      |        |        |    |        |    |   |                  |  |                     |      |                |      |                |      |                |      |  |
| 22 $\times$ 30   | 2230        |                                  |               |                  |                        |                                  |                          |     |     |  |   |    |        |     |    |     |    |   |      |        |        |    |        |    |   |                  |  |                     |      |                |      |                |      |                |      |  |
| 25 $\times$ 25   | 2525        |                                  |               |                  |                        |                                  |                          |     |     |  |   |    |        |     |    |     |    |   |      |        |        |    |        |    |   |                  |  |                     |      |                |      |                |      |                |      |  |
| 30 $\times$ 40   | 3040        |                                  |               |                  |                        |                                  |                          |     |     |  |   |    |        |     |    |     |    |   |      |        |        |    |        |    |   |                  |  |                     |      |                |      |                |      |                |      |  |

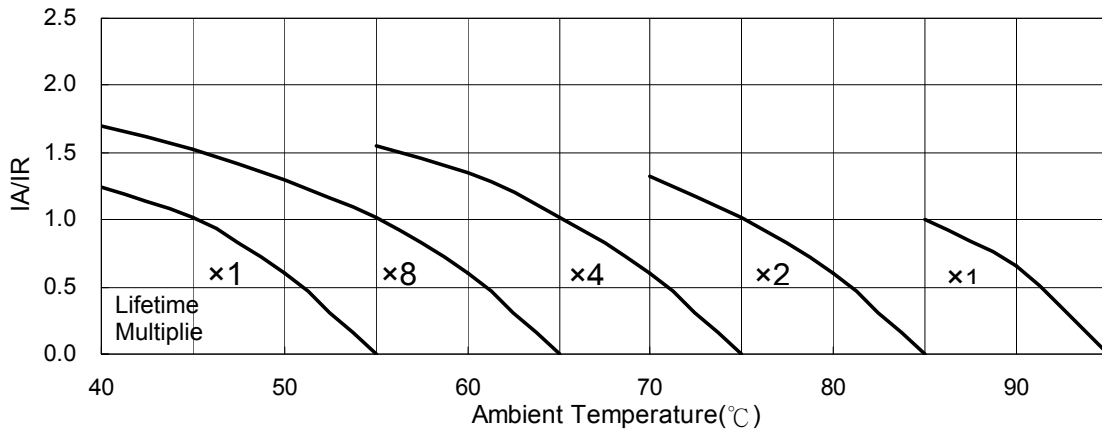
Note: For more details, please refer to "Part Numbering System (Snap-in Type)" on page 13.

## Useful Life Chart

Rated Voltage  $\leq 100V$

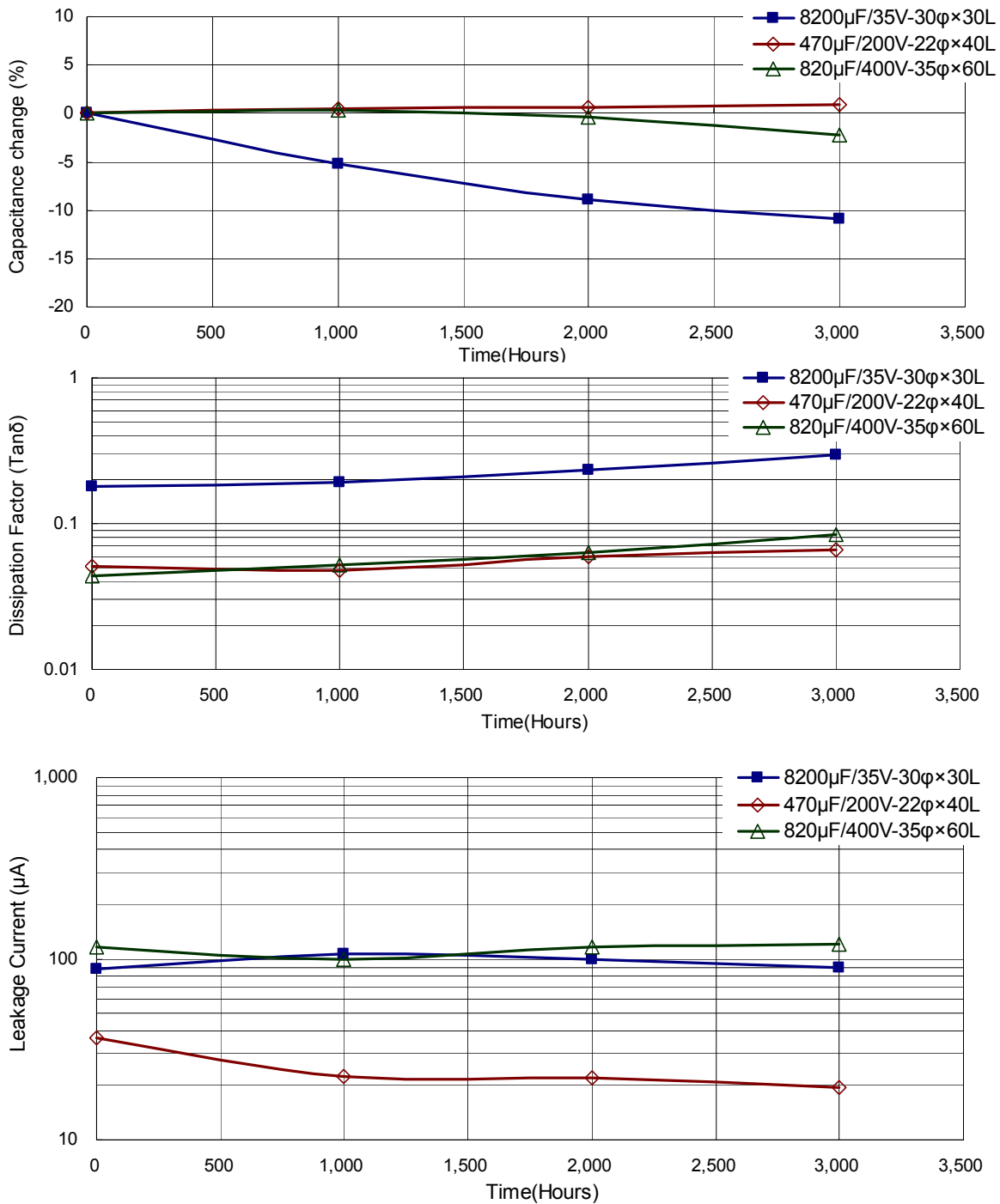


Rated Voltage  $\geq 160V$



IA: Actual ripple current      IR: Rated ripple current

## Typical Endurance Curves



Компания «Океан Электроники» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Поставка оригинальных импортных электронных компонентов напрямую с производств Америки, Европы и Азии, а так же с крупнейших складов мира;
- Широкая линейка поставок активных и пассивных импортных электронных компонентов (более 30 млн. наименований);
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Помощь Конструкторского Отдела и консультации квалифицированных инженеров;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Поставка электронных компонентов под контролем ВП;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- При необходимости вся продукция военного и аэрокосмического назначения проходит испытания и сертификацию в лаборатории (по согласованию с заказчиком);
- Поставка специализированных компонентов военного и аэрокосмического уровня качества (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Actel, Aeroflex, Peregrine, VPT, Syfer, Eurofarad, Texas Instruments, MS Kennedy, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Компания «Океан Электроники» является официальным дистрибьютором и эксклюзивным представителем в России одного из крупнейших производителей разъемов военного и аэрокосмического назначения «JONHON», а так же официальным дистрибьютором и эксклюзивным представителем в России производителя высокотехнологичных и надежных решений для передачи СВЧ сигналов «FORSTAR».



## JONHON

«JONHON» (основан в 1970 г.)

Разъемы специального, военного и аэрокосмического назначения:

(Применяются в военной, авиационной, аэрокосмической, морской, железнодорожной, горно- и нефтедобывающей отраслях промышленности)

«FORSTAR» (основан в 1998 г.)

ВЧ соединители, коаксиальные кабели, кабельные сборки и микроволновые компоненты:

(Применяются в телекоммуникациях гражданского и специального назначения, в средствах связи, РЛС, а так же военной, авиационной и аэрокосмической отраслях промышленности).



Телефон: 8 (812) 309-75-97 (многоканальный)

Факс: 8 (812) 320-03-32

Электронная почта: [ocean@oceanchips.ru](mailto:ocean@oceanchips.ru)

Web: <http://oceanchips.ru/>

Адрес: 198099, г. Санкт-Петербург, ул. Калинина, д. 2, корп. 4, лит. А