

## LSK Series

### Features

- Snap-in terminal type
- 105°C, 5,000 hours assured
- Suitable for medium to high voltage circuits
- RoHS Compliance



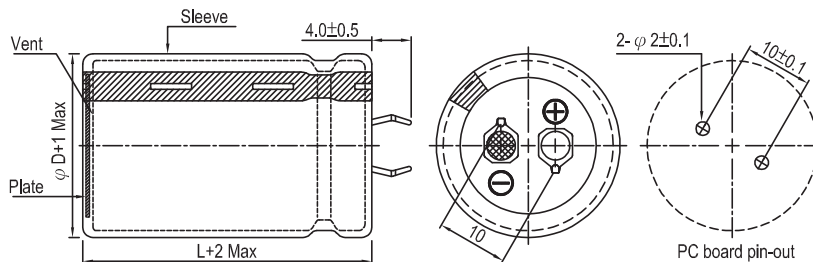
Sleeve & Marking Color: Black & White

### Specifications

| Items                                      | Performance   |                |           |                    |                              |      |                                   |                 |                        |     |     |            |                 |                   |      |      |      |      |      |      |      |   |   |
|--|---|----------------|-----------|--------------------|------------------------------|------|-----------------------------------|-----------------|------------------------|-----|-----|------------|-----------------|-------------------|------|------|------|------|------|------|------|---|---|
| Category Temperature Range                 | -25°C ~ +105°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)                      | <table border="1"> <thead> <tr> <th>Rated Voltage</th> <th>160</th> <th>200</th> <th>250</th> <th>315</th> <th>350</th> <th>400</th> <th>420</th> <th>450</th> <th>500</th> </tr> </thead> <tbody> <tr> <td>Tanδ (max)</td> <td>0.15</td> <td>0.15</td> <td>0.15</td> <td>0.15</td> <td>0.15</td> <td>0.15</td> <td>0.15</td> <td>0.15</td> <td>0.15</td> </tr> </tbody> </table>   | Rated Voltage  | 160       | 200                | 250                          | 315  | 350                               | 400             | 420                    | 450 | 500 | Tanδ (max) | 0.15            | 0.15              | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 |   |   |
| Rated Voltage                              | 160   | 200            | 250       | 315                | 350                          | 400  | 420                               | 450             | 500                    |     |     |            |                 |                   |      |      |      |      |      |      |      |   |   |
| Tanδ (max)                                 | 0.15  | 0.15           | 0.15      | 0.15               | 0.15                         | 0.15 | 0.15                              | 0.15            | 0.15                   |     |     |            |                 |                   |      |      |      |      |      |      |      |   |   |
| Low Temperature Characteristics (at 120Hz) | <p>Impedance ratio shall not exceed the values given in the table below.</p> <table border="1"> <thead> <tr> <th colspan="2">Rated Voltage</th> <th>160</th> <th>200</th> <th>250</th> <th>315</th> <th>350</th> <th>400</th> <th>420</th> <th>450</th> <th>500</th> </tr> </thead> <tbody> <tr> <td>Impedance Ratio</td> <td>Z(-25°C)/Z(+20°C)</td> <td>4</td> <td>4</td> <td>4</td> <td>4</td> <td>4</td> <td>8</td> <td>8</td> <td>8</td> <td>8</td> </tr> </tbody> </table>   | Rated Voltage  |           | 160                | 200                          | 250  | 315                               | 350             | 400                    | 420 | 450 | 500        | Impedance Ratio | Z(-25°C)/Z(+20°C) | 4    | 4    | 4    | 4    | 4    | 8    | 8    | 8 | 8 |
| Rated Voltage                              |   | 160            | 200       | 250                | 315                          | 350  | 400                               | 420             | 450                    | 500 |     |            |                 |                   |      |      |      |      |      |      |      |   |   |
| Impedance Ratio                            | Z(-25°C)/Z(+20°C)   | 4              | 4         | 4                  | 4                            | 4    | 8                                 | 8               | 8                      | 8   |     |            |                 |                   |      |      |      |      |      |      |      |   |   |
| Endurance                                  | <table border="1"> <thead> <tr> <th>Test Time</th> <th>5,000 Hrs</th> </tr> </thead> <tbody> <tr> <td>Capacitance Change</td> <td>Within ±25% of initial value</td> </tr> <tr> <td>Tanδ</td> <td>Less than 250% of specified value</td> </tr> <tr> <td>Leakage Current</td> <td>Within specified value</td> </tr> </tbody> </table> <p>* The above specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage applied with rated ripple current for 5,000 hours at 105°C.</p>   | Test Time      | 5,000 Hrs | Capacitance Change | Within ±25% of initial value | Tanδ | Less than 250% of specified value | Leakage Current | Within specified value |     |     |            |                 |                   |      |      |      |      |      |      |      |   |   |
| Test Time                                  | 5,000 Hrs   |                |           |                    |                              |      |                                   |                 |                        |     |     |            |                 |                   |      |      |      |      |      |      |      |   |   |
| Capacitance Change                         | Within ±25% of initial value  |                |           |                    |                              |      |                                   |                 |                        |     |     |            |                 |                   |      |      |      |      |      |      |      |   |   |
| Tanδ                                       | Less than 250% of specified value   |                |           |                    |                              |      |                                   |                 |                        |     |     |            |                 |                   |      |      |      |      |      |      |      |   |   |
| Leakage Current                            | Within specified value  |                |           |                    |                              |      |                                   |                 |                        |     |     |            |                 |                   |      |      |      |      |      |      |      |   |   |
| Shelf Life Test                            | <table border="1"> <thead> <tr> <th>Test Time</th> <th>1,000 Hrs</th> </tr> </thead> <tbody> <tr> <td>Capacitance Change</td> <td>Within ±20% of initial value</td> </tr> <tr> <td>Tanδ</td> <td>Less than 150% of specified value</td> </tr> <tr> <td>Leakage Current</td> <td>Within specified value</td> </tr> </tbody> </table> <p>* The above specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1,000 hours at 105°C without voltage applied. The rated voltage shall be applied to the capacitors before the measurements (Refer to JIS C 5101-4 4.1).</p> | Test Time      | 1,000 Hrs | Capacitance Change | Within ±20% of initial value | Tanδ | Less than 150% of specified value | Leakage Current | Within specified value |     |     |            |                 |                   |      |      |      |      |      |      |      |   |   |
| Test Time                                  | 1,000 Hrs   |                |           |                    |                              |      |                                   |                 |                        |     |     |            |                 |                   |      |      |      |      |      |      |      |   |   |
| Capacitance Change                         | Within ±20% of initial value  |                |           |                    |                              |      |                                   |                 |                        |     |     |            |                 |                   |      |      |      |      |      |      |      |   |   |
| Tanδ                                       | Less than 150% of specified value   |                |           |                    |                              |      |                                   |                 |                        |     |     |            |                 |                   |      |      |      |      |      |      |      |   |   |
| Leakage Current                            | Within specified value  |                |           |                    |                              |      |                                   |                 |                        |     |     |            |                 |                   |      |      |      |      |      |      |      |   |   |
| Ripple Current and Frequency Multipliers   | <table border="1"> <thead> <tr> <th>Frequency (Hz)</th> <th>50 / 60</th> <th>100 / 120</th> <th>300</th> <th>1k</th> <th>10k up</th> </tr> </thead> <tbody> <tr> <td>Multiplier</td> <td>0.8</td> <td>1.0</td> <td>1.1</td> <td>1.3</td> <td>1.4</td> </tr> </tbody> </table>   | Frequency (Hz) | 50 / 60   | 100 / 120          | 300                          | 1k   | 10k up                            | Multiplier      | 0.8                    | 1.0 | 1.1 | 1.3        | 1.4             |                   |      |      |      |      |      |      |      |   |   |
| Frequency (Hz)                             | 50 / 60   | 100 / 120      | 300       | 1k                 | 10k up                       |      |                                   |                 |                        |     |     |            |                 |                   |      |      |      |      |      |      |      |   |   |
| Multiplier                                 | 0.8   | 1.0            | 1.1       | 1.3                | 1.4                          |      |                                   |                 |                        |     |     |            |                 |                   |      |      |      |      |      |      |      |   |   |
| Failure percentage                         | ≤ 3 % (During useful life)  |                |           |                    |                              |      |                                   |                 |                        |     |     |            |                 |                   |      |      |      |      |      |      |      |   |   |
| Failure rate                               | ≤ 70 fit (70×10 <sup>-9</sup> /h)   |                |           |                    |                              |      |                                   |                 |                        |     |     |            |                 |                   |      |      |      |      |      |      |      |   |   |

### Diagram of Dimensions

Unit: mm



## Dimension and Permissible Ripple Current

| Working Voltage<br>V. DC | Capacitance<br>120Hz, 20°C<br>μF | φ D×L<br>mm | Ripple Current<br>120 Hz, 105°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>160</b>               | 390                              | 22 × 35     | 1.05                                     | 0.15                    | 0.510                   | 0.75                  | LSK391M2C--A2235 |
|                          | 470                              | 20 × 40     | 1.16                                     | 0.15                    | 0.423                   | 0.82                  | LSK471M2C--A2040 |
|                          | 470                              | 22 × 40     | 1.23                                     | 0.15                    | 0.423                   | 0.82                  | LSK471M2C--A2240 |
|                          | 470                              | 25 × 30     | 1.17                                     | 0.15                    | 0.423                   | 0.82                  | LSK471M2C--A2530 |
|                          | 560                              | 22 × 45     | 1.41                                     | 0.15                    | 0.355                   | 0.90                  | LSK561M2C--A2245 |
|                          | 560                              | 25 × 35     | 1.36                                     | 0.15                    | 0.355                   | 0.90                  | LSK561M2C--A2535 |
|                          | 560                              | 30 × 25     | 1.32                                     | 0.15                    | 0.355                   | 0.90                  | LSK561M2C--A3025 |
|                          | 680                              | 22 × 50     | 1.63                                     | 0.15                    | 0.293                   | 0.99                  | LSK681M2C--A2250 |
|                          | 680                              | 25 × 40     | 1.59                                     | 0.15                    | 0.293                   | 0.99                  | LSK681M2C--A2540 |
|                          | 680                              | 30 × 30     | 1.56                                     | 0.15                    | 0.293                   | 0.99                  | LSK681M2C--A3030 |
|                          | 820                              | 25 × 45     | 1.83                                     | 0.15                    | 0.243                   | 1.09                  | LSK821M2C--A2545 |
|                          | 820                              | 30 × 35     | 1.83                                     | 0.15                    | 0.243                   | 1.09                  | LSK821M2C--A3035 |
|                          | 820                              | 35 × 30     | 1.89                                     | 0.15                    | 0.243                   | 1.09                  | LSK821M2C--A3530 |
|                          | 1,000                            | 25 × 50     | 2.12                                     | 0.15                    | 0.199                   | 1.20                  | LSK102M2C--A2550 |
|                          | 1,000                            | 30 × 40     | 2.13                                     | 0.15                    | 0.199                   | 1.20                  | LSK102M2C--A3040 |
|                          | 1,000                            | 35 × 30     | 2.08                                     | 0.15                    | 0.199                   | 1.20                  | LSK102M2C--A3530 |
|                          | 1,200                            | 30 × 45     | 2.46                                     | 0.15                    | 0.166                   | 1.31                  | LSK122M2C--A3045 |
|                          | 1,200                            | 35 × 35     | 2.42                                     | 0.15                    | 0.166                   | 1.31                  | LSK122M2C--A3535 |
|                          | 1,500                            | 30 × 50     | 2.88                                     | 0.15                    | 0.133                   | 1.47                  | LSK152M2C--A3050 |
|                          | 1,500                            | 35 × 40     | 2.86                                     | 0.15                    | 0.133                   | 1.47                  | LSK152M2C--A3540 |
| 1,800                    | 35 × 45                          | 3.29        | 0.15                                     | 0.111                   | 1.50                    | LSK182M2C--A3545      |                  |
| <b>200</b>               | 180                              | 22 × 20     | 0.59                                     | 0.15                    | 1.106                   | 0.57                  | LSK181M2D--A2220 |
|                          | 220                              | 22 × 25     | 0.72                                     | 0.15                    | 0.905                   | 0.63                  | LSK221M2D--A2225 |
|                          | 220                              | 25 × 20     | 0.71                                     | 0.15                    | 0.905                   | 0.63                  | LSK221M2D--A2520 |
|                          | 270                              | 22 × 30     | 0.81                                     | 0.15                    | 0.737                   | 0.70                  | LSK271M2D--A2230 |
|                          | 270                              | 25 × 25     | 0.81                                     | 0.15                    | 0.737                   | 0.70                  | LSK271M2D--A2525 |
|                          | 330                              | 22 × 35     | 0.92                                     | 0.15                    | 0.603                   | 0.77                  | LSK331M2D--A2235 |
|                          | 330                              | 30 × 20     | 0.87                                     | 0.15                    | 0.603                   | 0.77                  | LSK331M2D--A3020 |
|                          | 390                              | 22 × 40     | 1.02                                     | 0.15                    | 0.510                   | 0.84                  | LSK391M2D--A2240 |
|                          | 390                              | 25 × 30     | 1.01                                     | 0.15                    | 0.510                   | 0.84                  | LSK391M2D--A2530 |
|                          | 390                              | 30 × 25     | 1.01                                     | 0.15                    | 0.510                   | 0.84                  | LSK391M2D--A3025 |
|                          | 390                              | 35 × 20     | 1.02                                     | 0.15                    | 0.510                   | 0.84                  | LSK391M2D--A3520 |
|                          | 470                              | 22 × 45     | 1.10                                     | 0.15                    | 0.423                   | 0.92                  | LSK471M2D--A2245 |
|                          | 470                              | 25 × 35     | 1.15                                     | 0.15                    | 0.423                   | 0.92                  | LSK471M2D--A2535 |
|                          | 470                              | 35 × 20     | 1.12                                     | 0.15                    | 0.423                   | 0.92                  | LSK471M2D--A3520 |
|                          | 560                              | 22 × 50     | 1.22                                     | 0.15                    | 0.355                   | 1.00                  | LSK561M2D--A2250 |
|                          | 560                              | 25 × 40     | 1.19                                     | 0.15                    | 0.355                   | 1.00                  | LSK561M2D--A2540 |
|                          | 560                              | 30 × 30     | 1.17                                     | 0.15                    | 0.355                   | 1.00                  | LSK561M2D--A3030 |
|                          | 560                              | 35 × 25     | 1.31                                     | 0.15                    | 0.355                   | 1.00                  | LSK561M2D--A3525 |
|                          | 680                              | 25 × 45     | 1.38                                     | 0.15                    | 0.293                   | 1.11                  | LSK681M2D--A2545 |
|                          | 680                              | 30 × 35     | 1.37                                     | 0.15                    | 0.293                   | 1.11                  | LSK681M2D--A3035 |
|                          | 820                              | 30 × 40     | 1.50                                     | 0.15                    | 0.243                   | 1.21                  | LSK821M2D--A3040 |
|                          | 820                              | 35 × 30     | 1.46                                     | 0.15                    | 0.243                   | 1.21                  | LSK821M2D--A3530 |
|                          | 1,000                            | 30 × 50     | 1.91                                     | 0.15                    | 0.199                   | 1.34                  | LSK102M2D--A3050 |
|                          | 1,000                            | 35 × 35     | 1.72                                     | 0.15                    | 0.199                   | 1.34                  | LSK102M2D--A3535 |
|                          | 1,200                            | 35 × 40     | 1.93                                     | 0.15                    | 0.166                   | 1.47                  | LSK122M2D--A3540 |
|                          | 1,500                            | 35 × 50     | 2.37                                     | 0.15                    | 0.133                   | 1.50                  | LSK152M2D--A3550 |
|                          | 1,800                            | 35 × 55     | 2.70                                     | 0.15                    | 0.111                   | 1.50                  | LSK182M2D--A3555 |
|                          | <b>250</b>                       | 150         | 22 × 25                                  | 0.57                    | 0.15                    | 1.327                 | 0.58             |
| 180                      |                                  | 25 × 20     | 0.61                                     | 0.15                    | 1.106                   | 0.64                  | LSK181M2E--A2520 |
| 220                      |                                  | 22 × 30     | 0.68                                     | 0.15                    | 0.905                   | 0.70                  | LSK221M2E--A2230 |
| 220                      |                                  | 25 × 25     | 0.75                                     | 0.15                    | 0.905                   | 0.70                  | LSK221M2E--A2525 |
| 220                      |                                  | 30 × 20     | 0.77                                     | 0.15                    | 0.905                   | 0.70                  | LSK221M2E--A3020 |
| 270                      |                                  | 22 × 35     | 0.78                                     | 0.15                    | 0.737                   | 0.78                  | LSK271M2E--A2235 |
| 270                      |                                  | 25 × 30     | 0.83                                     | 0.15                    | 0.737                   | 0.78                  | LSK271M2E--A2530 |
| 270                      |                                  | 30 × 20     | 0.79                                     | 0.15                    | 0.737                   | 0.78                  | LSK271M2E--A3020 |
| 270                      |                                  | 35 × 20     | 0.86                                     | 0.15                    | 0.737                   | 0.78                  | LSK271M2E--A3520 |
| 330                      |                                  | 22 × 40     | 0.91                                     | 0.15                    | 0.603                   | 0.86                  | LSK331M2E--A2240 |
| 330                      |                                  | 25 × 35     | 0.96                                     | 0.15                    | 0.603                   | 0.86                  | LSK331M2E--A2535 |
| 390                      |                                  | 22 × 50     | 1.08                                     | 0.15                    | 0.510                   | 0.94                  | LSK391M2E--A2250 |
| 390                      |                                  | 25 × 40     | 1.07                                     | 0.15                    | 0.510                   | 0.94                  | LSK391M2E--A2540 |
| 390                      |                                  | 30 × 30     | 1.07                                     | 0.15                    | 0.510                   | 0.94                  | LSK391M2E--A3030 |
| 470                      |                                  | 22 × 50     | 1.12                                     | 0.15                    | 0.423                   | 1.03                  | LSK471M2E--A2250 |
| 470                      |                                  | 25 × 45     | 1.15                                     | 0.15                    | 0.423                   | 1.03                  | LSK471M2E--A2545 |
| 470                      |                                  | 30 × 35     | 1.19                                     | 0.15                    | 0.423                   | 1.03                  | LSK471M2E--A3035 |

## Dimension and Permissible Ripple Current

| Working Voltage<br>V. DC | Capacitance<br>120Hz, 20°C<br>μF | φ D×L<br>mm | Ripple Current<br>120 Hz, 105°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>250</b>               | 470                              | 35 × 25     | 1.10                                     | 0.15                    | 0.423                   | 1.03                  | LSK471M2E--A3525 |
|                          | 560                              | 25 × 50     | 1.31                                     | 0.15                    | 0.355                   | 1.12                  | LSK561M2E--A2550 |
|                          | 560                              | 30 × 35     | 1.25                                     | 0.15                    | 0.355                   | 1.12                  | LSK561M2E--A3035 |
|                          | 560                              | 35 × 30     | 1.29                                     | 0.15                    | 0.355                   | 1.12                  | LSK561M2E--A3530 |
|                          | 680                              | 30 × 40     | 1.36                                     | 0.15                    | 0.293                   | 1.24                  | LSK681M2E--A3040 |
|                          | 680                              | 35 × 40     | 1.57                                     | 0.15                    | 0.293                   | 1.24                  | LSK681M2E--A3540 |
|                          | 820                              | 30 × 50     | 1.65                                     | 0.15                    | 0.243                   | 1.36                  | LSK821M2E--A3050 |
|                          | 1,000                            | 35 × 40     | 1.76                                     | 0.15                    | 0.199                   | 1.50                  | LSK102M2E--A3540 |
| <b>315</b>               | 120                              | 22 × 25     | 0.51                                     | 0.15                    | 1.659                   | 0.58                  | LSK121M2F--A2225 |
|                          | 150                              | 22 × 30     | 0.62                                     | 0.15                    | 1.327                   | 0.65                  | LSK151M2F--A2230 |
|                          | 180                              | 22 × 35     | 0.72                                     | 0.15                    | 1.106                   | 0.71                  | LSK181M2F--A2235 |
|                          | 180                              | 25 × 30     | 0.73                                     | 0.15                    | 1.106                   | 0.71                  | LSK181M2F--A2530 |
|                          | 220                              | 22 × 40     | 0.85                                     | 0.15                    | 0.905                   | 0.79                  | LSK221M2F--A2240 |
|                          | 220                              | 25 × 35     | 0.86                                     | 0.15                    | 0.905                   | 0.79                  | LSK221M2F--A2535 |
|                          | 220                              | 30 × 25     | 0.84                                     | 0.15                    | 0.905                   | 0.79                  | LSK221M2F--A3025 |
|                          | 270                              | 22 × 45     | 0.99                                     | 0.15                    | 0.737                   | 0.87                  | LSK271M2F--A2245 |
|                          | 270                              | 25 × 40     | 1.01                                     | 0.15                    | 0.737                   | 0.87                  | LSK271M2F--A2540 |
|                          | 270                              | 30 × 30     | 1.00                                     | 0.15                    | 0.737                   | 0.87                  | LSK271M2F--A3030 |
|                          | 330                              | 22 × 55     | 1.20                                     | 0.15                    | 0.603                   | 0.97                  | LSK331M2F--A2255 |
|                          | 330                              | 25 × 45     | 1.18                                     | 0.15                    | 0.603                   | 0.97                  | LSK331M2F--A2545 |
|                          | 330                              | 30 × 35     | 1.17                                     | 0.15                    | 0.603                   | 0.97                  | LSK331M2F--A3035 |
|                          | 330                              | 35 × 25     | 1.13                                     | 0.15                    | 0.603                   | 0.97                  | LSK331M2F--A3525 |
|                          | 390                              | 25 × 50     | 1.34                                     | 0.15                    | 0.510                   | 1.05                  | LSK391M2F--A2550 |
|                          | 390                              | 30 × 40     | 1.35                                     | 0.15                    | 0.510                   | 1.05                  | LSK391M2F--A3040 |
|                          | 390                              | 35 × 30     | 1.31                                     | 0.15                    | 0.510                   | 1.05                  | LSK391M2F--A3530 |
|                          | 470                              | 30 × 45     | 1.56                                     | 0.15                    | 0.423                   | 1.15                  | LSK471M2F--A3045 |
|                          | 470                              | 35 × 35     | 1.53                                     | 0.15                    | 0.423                   | 1.15                  | LSK471M2F--A3535 |
|                          | 560                              | 30 × 50     | 1.78                                     | 0.15                    | 0.355                   | 1.26                  | LSK561M2F--A3050 |
| 560                      | 35 × 40                          | 1.77        | 0.15                                     | 0.355                   | 1.26                    | LSK561M2F--A3540      |                  |
| 680                      | 35 × 45                          | 2.04        | 0.15                                     | 0.293                   | 1.39                    | LSK681M2F--A3545      |                  |
| 820                      | 35 × 50                          | 2.35        | 0.15                                     | 0.243                   | 1.50                    | LSK821M2F--A3550      |                  |
| <b>350</b>               | 56                               | 22 × 20     | 0.32                                     | 0.15                    | 3.554                   | 0.42                  | LSK560M2V--A2220 |
|                          | 68                               | 22 × 25     | 0.39                                     | 0.15                    | 2.927                   | 0.46                  | LSK680M2V--A2225 |
|                          | 82                               | 22 × 30     | 0.49                                     | 0.15                    | 2.427                   | 0.51                  | LSK820M2V--A2230 |
|                          | 82                               | 25 × 20     | 0.44                                     | 0.15                    | 2.427                   | 0.51                  | LSK820M2V--A2520 |
|                          | 100                              | 22 × 25     | 0.45                                     | 0.15                    | 1.990                   | 0.56                  | LSK101M2V--A2225 |
|                          | 100                              | 25 × 25     | 0.49                                     | 0.15                    | 1.990                   | 0.56                  | LSK101M2V--A2525 |
|                          | 120                              | 22 × 30     | 0.53                                     | 0.15                    | 1.659                   | 0.61                  | LSK121M2V--A2230 |
|                          | 120                              | 25 × 30     | 0.55                                     | 0.15                    | 1.659                   | 0.61                  | LSK121M2V--A2530 |
|                          | 120                              | 30 × 20     | 0.52                                     | 0.15                    | 1.659                   | 0.61                  | LSK121M2V--A3020 |
|                          | 150                              | 22 × 35     | 0.58                                     | 0.15                    | 1.327                   | 0.69                  | LSK151M2V--A2235 |
|                          | 150                              | 25 × 25     | 0.54                                     | 0.15                    | 1.327                   | 0.69                  | LSK151M2V--A2525 |
|                          | 150                              | 30 × 25     | 0.63                                     | 0.15                    | 1.327                   | 0.69                  | LSK151M2V--A3025 |
|                          | 150                              | 35 × 20     | 0.64                                     | 0.15                    | 1.327                   | 0.69                  | LSK151M2V--A3520 |
|                          | 180                              | 22 × 40     | 0.67                                     | 0.15                    | 1.106                   | 0.75                  | LSK181M2V--A2240 |
|                          | 180                              | 25 × 30     | 0.64                                     | 0.15                    | 1.106                   | 0.75                  | LSK181M2V--A2530 |
|                          | 220                              | 22 × 45     | 0.78                                     | 0.15                    | 0.905                   | 0.83                  | LSK221M2V--A2245 |
|                          | 220                              | 25 × 35     | 0.76                                     | 0.15                    | 0.905                   | 0.83                  | LSK221M2V--A2535 |
|                          | 220                              | 30 × 25     | 0.73                                     | 0.15                    | 0.905                   | 0.83                  | LSK221M2V--A3025 |
|                          | 220                              | 35 × 30     | 0.87                                     | 0.15                    | 0.905                   | 0.83                  | LSK221M2V--A3530 |
|                          | 270                              | 22 × 50     | 0.88                                     | 0.15                    | 0.737                   | 0.92                  | LSK271M2V--A2250 |
|                          | 270                              | 25 × 40     | 0.85                                     | 0.15                    | 0.737                   | 0.92                  | LSK271M2V--A2540 |
|                          | 270                              | 30 × 30     | 0.84                                     | 0.15                    | 0.737                   | 0.92                  | LSK271M2V--A3030 |
|                          | 270                              | 35 × 25     | 0.86                                     | 0.15                    | 0.737                   | 0.92                  | LSK271M2V--A3525 |
|                          | 330                              | 25 × 45     | 0.99                                     | 0.15                    | 0.603                   | 1.02                  | LSK331M2V--A2545 |
|                          | 330                              | 30 × 35     | 0.99                                     | 0.15                    | 0.603                   | 1.02                  | LSK331M2V--A3035 |
|                          | 390                              | 30 × 40     | 1.14                                     | 0.15                    | 0.510                   | 1.11                  | LSK391M2V--A3040 |
|                          | 390                              | 35 × 30     | 1.11                                     | 0.15                    | 0.510                   | 1.11                  | LSK391M2V--A3530 |
|                          | 470                              | 30 × 45     | 1.19                                     | 0.15                    | 0.423                   | 1.22                  | LSK471M2V--A3045 |
|                          | 470                              | 35 × 35     | 1.18                                     | 0.15                    | 0.423                   | 1.22                  | LSK471M2V--A3535 |
|                          | 560                              | 30 × 50     | 1.32                                     | 0.15                    | 0.355                   | 1.33                  | LSK561M2V--A3050 |
|                          | 560                              | 35 × 40     | 1.32                                     | 0.15                    | 0.355                   | 1.33                  | LSK561M2V--A3540 |
|                          | 680                              | 35 × 45     | 1.52                                     | 0.15                    | 0.293                   | 1.46                  | LSK681M2V--A3545 |
| 820                      | 35 × 50                          | 1.75        | 0.15                                     | 0.243                   | 1.50                    | LSK821M2V--A3550      |                  |

## Dimension and Permissible Ripple Current

| Working Voltage<br>V. DC | Capacitance<br>120Hz, 20°C<br>μF | φ D×L<br>mm | Ripple Current<br>120 Hz, 105°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>               | 56                               | 22 × 25     | 0.34                                     | 0.15                    | 3.554                   | 0.45                  | LSK560M2G--A2225 |
|                          | 68                               | 25 × 20     | 0.37                                     | 0.15                    | 2.927                   | 0.49                  | LSK680M2G--A2520 |
|                          | 82                               | 22 × 35     | 0.50                                     | 0.15                    | 2.427                   | 0.54                  | LSK820M2G--A2235 |
|                          | 82                               | 30 × 20     | 0.50                                     | 0.15                    | 2.427                   | 0.54                  | LSK820M2G--A3020 |
|                          | 100                              | 22 × 30     | 0.51                                     | 0.15                    | 1.990                   | 0.60                  | LSK101M2G--A2230 |
|                          | 100                              | 25 × 25     | 0.51                                     | 0.15                    | 1.990                   | 0.60                  | LSK101M2G--A2525 |
|                          | 100                              | 30 × 25     | 0.58                                     | 0.15                    | 1.990                   | 0.60                  | LSK101M2G--A3025 |
|                          | 120                              | 22 × 35     | 0.59                                     | 0.15                    | 1.659                   | 0.66                  | LSK121M2G--A2235 |
|                          | 120                              | 25 × 25     | 0.55                                     | 0.15                    | 1.659                   | 0.66                  | LSK121M2G--A2525 |
|                          | 120                              | 35 × 20     | 0.65                                     | 0.15                    | 1.659                   | 0.66                  | LSK121M2G--A3520 |
|                          | 150                              | 22 × 40     | 0.70                                     | 0.15                    | 1.327                   | 0.73                  | LSK151M2G--A2240 |
|                          | 150                              | 25 × 30     | 0.67                                     | 0.15                    | 1.327                   | 0.73                  | LSK151M2G--A2530 |
|                          | 180                              | 22 × 45     | 0.81                                     | 0.15                    | 1.106                   | 0.80                  | LSK181M2G--A2245 |
|                          | 180                              | 25 × 35     | 0.78                                     | 0.15                    | 1.106                   | 0.80                  | LSK181M2G--A2535 |
|                          | 180                              | 30 × 25     | 0.76                                     | 0.15                    | 1.106                   | 0.80                  | LSK181M2G--A3025 |
|                          | 220                              | 22 × 50     | 0.94                                     | 0.15                    | 0.905                   | 0.89                  | LSK221M2G--A2250 |
|                          | 220                              | 25 × 40     | 0.91                                     | 0.15                    | 0.905                   | 0.89                  | LSK221M2G--A2540 |
|                          | 220                              | 30 × 30     | 0.90                                     | 0.15                    | 0.905                   | 0.89                  | LSK221M2G--A3030 |
|                          | 270                              | 25 × 45     | 1.06                                     | 0.15                    | 0.737                   | 0.99                  | LSK271M2G--A2545 |
|                          | 270                              | 30 × 35     | 1.06                                     | 0.15                    | 0.737                   | 0.99                  | LSK271M2G--A3035 |
|                          | 270                              | 35 × 25     | 1.02                                     | 0.15                    | 0.737                   | 0.99                  | LSK271M2G--A3525 |
|                          | 330                              | 25 × 50     | 1.23                                     | 0.15                    | 0.603                   | 1.09                  | LSK331M2G--A2550 |
|                          | 330                              | 30 × 40     | 1.24                                     | 0.15                    | 0.603                   | 1.09                  | LSK331M2G--A3040 |
|                          | 330                              | 35 × 30     | 1.21                                     | 0.15                    | 0.603                   | 1.09                  | LSK331M2G--A3530 |
|                          | 390                              | 30 × 45     | 1.42                                     | 0.15                    | 0.510                   | 1.18                  | LSK391M2G--A3045 |
|                          | 390                              | 35 × 35     | 1.40                                     | 0.15                    | 0.510                   | 1.18                  | LSK391M2G--A3535 |
|                          | 470                              | 30 × 50     | 1.63                                     | 0.15                    | 0.423                   | 1.30                  | LSK471M2G--A3050 |
| 470                      | 35 × 40                          | 1.62        | 0.15                                     | 0.423                   | 1.30                    | LSK471M2G--A3540      |                  |
| 560                      | 35 × 45                          | 1.86        | 0.15                                     | 0.355                   | 1.42                    | LSK561M2G--A3545      |                  |
| <b>420</b>               | 39                               | 22 × 25     | 0.25                                     | 0.15                    | 5.104                   | 0.38                  | LSK390M2P--A2225 |
|                          | 68                               | 25 × 25     | 0.36                                     | 0.15                    | 2.927                   | 0.51                  | LSK680M2P--A2525 |
|                          | 100                              | 22 × 30     | 0.43                                     | 0.15                    | 1.990                   | 0.61                  | LSK101M2P--A2230 |
|                          | 100                              | 25 × 25     | 0.43                                     | 0.15                    | 1.990                   | 0.61                  | LSK101M2P--A2525 |
|                          | 120                              | 22 × 35     | 0.50                                     | 0.15                    | 1.659                   | 0.67                  | LSK121M2P--A2235 |
|                          | 120                              | 35 × 25     | 0.59                                     | 0.15                    | 1.659                   | 0.67                  | LSK121M2P--A3525 |
|                          | 150                              | 22 × 40     | 0.61                                     | 0.15                    | 1.327                   | 0.75                  | LSK151M2P--A2240 |
|                          | 150                              | 25 × 30     | 0.58                                     | 0.15                    | 1.327                   | 0.75                  | LSK151M2P--A2530 |
|                          | 150                              | 30 × 25     | 0.58                                     | 0.15                    | 1.327                   | 0.75                  | LSK151M2P--A3025 |
|                          | 180                              | 22 × 45     | 0.70                                     | 0.15                    | 1.106                   | 0.82                  | LSK181M2P--A2245 |
|                          | 180                              | 25 × 35     | 0.68                                     | 0.15                    | 1.106                   | 0.82                  | LSK181M2P--A2535 |
|                          | 180                              | 30 × 30     | 0.71                                     | 0.15                    | 1.106                   | 0.82                  | LSK181M2P--A3030 |
|                          | 220                              | 22 × 50     | 0.82                                     | 0.15                    | 0.905                   | 0.91                  | LSK221M2P--A2250 |
|                          | 220                              | 25 × 40     | 0.80                                     | 0.15                    | 0.905                   | 0.91                  | LSK221M2P--A2540 |
|                          | 220                              | 30 × 35     | 0.84                                     | 0.15                    | 0.905                   | 0.91                  | LSK221M2P--A3035 |
|                          | 220                              | 35 × 25     | 0.78                                     | 0.15                    | 0.905                   | 0.91                  | LSK221M2P--A3525 |
|                          | 270                              | 25 × 45     | 0.93                                     | 0.15                    | 0.737                   | 1.01                  | LSK271M2P--A2545 |
|                          | 270                              | 30 × 40     | 0.98                                     | 0.15                    | 0.737                   | 1.01                  | LSK271M2P--A3040 |
|                          | 270                              | 35 × 30     | 0.92                                     | 0.15                    | 0.737                   | 1.01                  | LSK271M2P--A3530 |
|                          | 330                              | 25 × 55     | 1.12                                     | 0.15                    | 0.603                   | 1.12                  | LSK331M2P--A2555 |
|                          | 330                              | 30 × 45     | 1.14                                     | 0.15                    | 0.603                   | 1.12                  | LSK331M2P--A3045 |
|                          | 330                              | 35 × 35     | 1.09                                     | 0.15                    | 0.603                   | 1.12                  | LSK331M2P--A3535 |
|                          | 390                              | 30 × 50     | 1.25                                     | 0.15                    | 0.510                   | 1.21                  | LSK391M2P--A3050 |
|                          | 390                              | 35 × 40     | 1.25                                     | 0.15                    | 0.510                   | 1.21                  | LSK391M2P--A3540 |
|                          | 470                              | 35 × 45     | 1.44                                     | 0.15                    | 0.423                   | 1.33                  | LSK471M2P--A3545 |
|                          | 560                              | 35 × 50     | 1.64                                     | 0.15                    | 0.355                   | 1.45                  | LSK561M2P--A3550 |
|                          | <b>450</b>                       | 39          | 22 × 25                                  | 0.37                    | 0.15                    | 5.104                 | 0.40             |
| 68                       |                                  | 25 × 25     | 0.47                                     | 0.15                    | 2.927                   | 0.52                  | LSK680M2W--A2525 |
| 82                       |                                  | 22 × 30     | 0.61                                     | 0.15                    | 2.427                   | 0.58                  | LSK820M2W--A2230 |
| 100                      |                                  | 22 × 45     | 0.64                                     | 0.15                    | 1.990                   | 0.64                  | LSK101M2W--A2245 |
| 100                      |                                  | 25 × 25     | 0.67                                     | 0.15                    | 1.990                   | 0.64                  | LSK101M2W--A2525 |
| 100                      |                                  | 30 × 25     | 0.57                                     | 0.15                    | 1.990                   | 0.64                  | LSK101M2W--A3025 |
| 120                      |                                  | 22 × 35     | 0.72                                     | 0.15                    | 1.659                   | 0.70                  | LSK121M2W--A2235 |
| 120                      |                                  | 25 × 30     | 0.73                                     | 0.15                    | 1.659                   | 0.70                  | LSK121M2W--A2530 |
| 150                      |                                  | 25 × 35     | 0.87                                     | 0.15                    | 1.327                   | 0.78                  | LSK151M2W--A2535 |
| 150                      |                                  | 30 × 30     | 0.71                                     | 0.15                    | 1.327                   | 0.78                  | LSK151M2W--A3030 |

## Dimension and Permissible Ripple Current

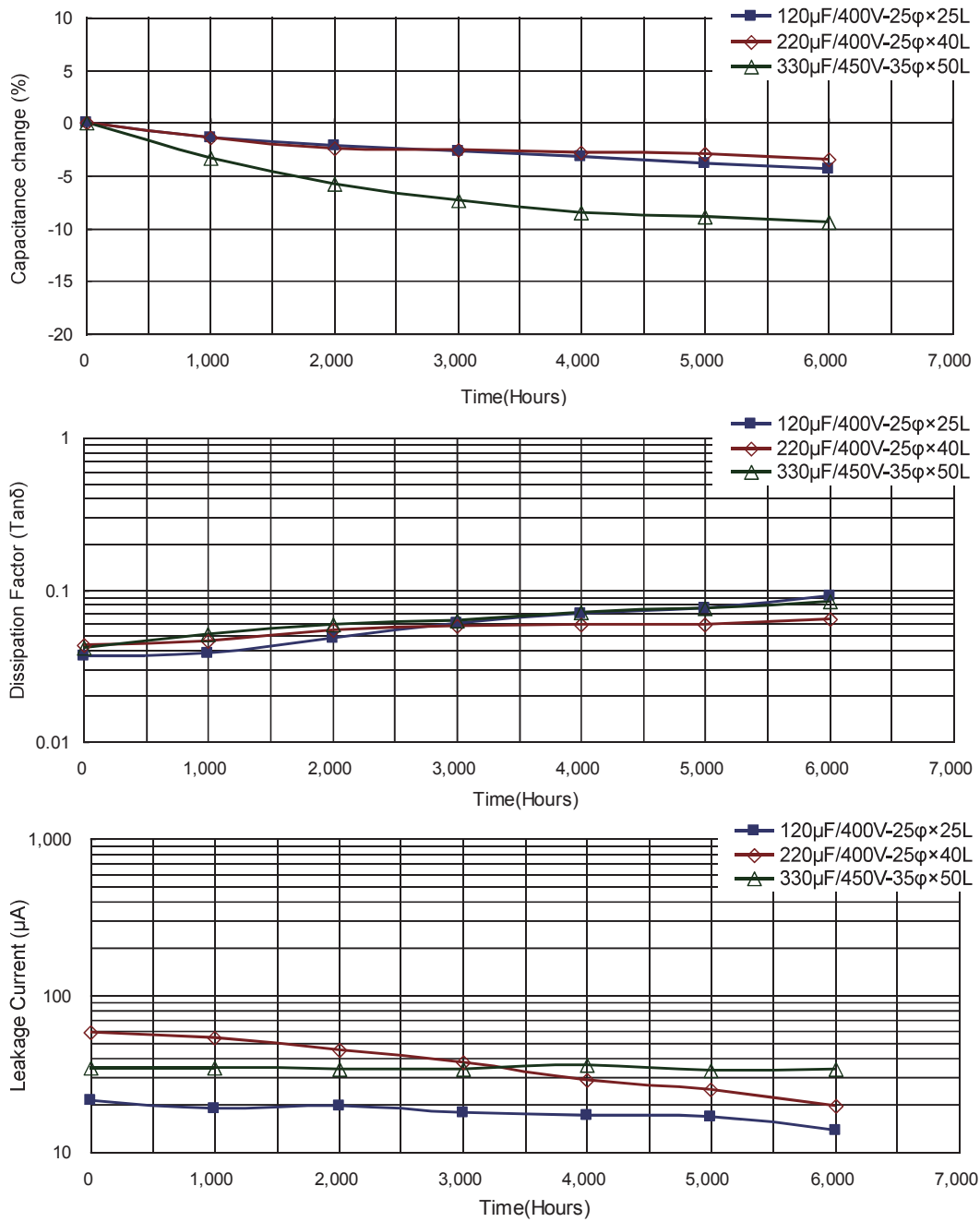
| Working Voltage<br>V. DC | Capacitance<br>120Hz, 20°C<br>μF | φ D×L<br>mm | Ripple Current<br>120 Hz, 105°C<br>A/rms | Tan δ<br>at 120Hz, 20°C | ESR<br>120Hz, 20°C<br>Ω | LC<br>5 minutes<br>mA | Part Number      |
|--------------------------|----------------------------------|-------------|--|-------------------------|-------------------------|-----------------------|------------------|
| <b>450</b>               | 180                              | 22 × 50     | 0.98                                     | 0.15                    | 1.106                   | 0.85                  | LSK181M2W--A2250 |
|                          | 180                              | 25 × 40     | 1.01                                     | 0.15                    | 1.106                   | 0.85                  | LSK181M2W--A2540 |
|                          | 180                              | 30 × 30     | 1.00                                     | 0.15                    | 1.106                   | 0.85                  | LSK181M2W--A3030 |
|                          | 220                              | 25 × 45     | 1.07                                     | 0.15                    | 0.905                   | 0.94                  | LSK221M2W--A2545 |
|                          | 220                              | 30 × 35     | 1.07                                     | 0.15                    | 0.905                   | 0.94                  | LSK221M2W--A3035 |
|                          | 220                              | 35 × 25     | 1.03                                     | 0.15                    | 0.905                   | 0.94                  | LSK221M2W--A3525 |
|                          | 270                              | 30 × 40     | 1.25                                     | 0.15                    | 0.737                   | 1.05                  | LSK271M2W--A3040 |
|                          | 270                              | 35 × 30     | 1.30                                     | 0.15                    | 0.737                   | 1.05                  | LSK271M2W--A3530 |
|                          | 330                              | 30 × 45     | 1.46                                     | 0.15                    | 0.603                   | 1.16                  | LSK331M2W--A3045 |
|                          | 330                              | 35 × 35     | 1.44                                     | 0.15                    | 0.603                   | 1.16                  | LSK331M2W--A3535 |
|                          | 390                              | 35 × 45     | 1.69                                     | 0.15                    | 0.510                   | 1.26                  | LSK391M2W--A3545 |
|                          | 470                              | 35 × 50     | 1.87                                     | 0.15                    | 0.423                   | 1.38                  | LSK471M2W--A3550 |
| <b>500</b>               | 47                               | 22 × 25     | 0.30                                     | 0.15                    | 4.235                   | 0.46                  | LSK470M2H--A2225 |
|                          | 56                               | 22 × 30     | 0.35                                     | 0.15                    | 3.554                   | 0.50                  | LSK560M2H--A2230 |
|                          | 56                               | 25 × 25     | 0.35                                     | 0.15                    | 3.554                   | 0.50                  | LSK560M2H--A2525 |
|                          | 68                               | 22 × 30     | 0.39                                     | 0.15                    | 2.927                   | 0.55                  | LSK680M2H--A2230 |
|                          | 68                               | 25 × 30     | 0.42                                     | 0.15                    | 2.927                   | 0.55                  | LSK680M2H--A2530 |
|                          | 82                               | 22 × 35     | 0.46                                     | 0.15                    | 2.427                   | 0.61                  | LSK820M2H--A2235 |
|                          | 82                               | 25 × 30     | 0.46                                     | 0.15                    | 2.427                   | 0.61                  | LSK820M2H--A2530 |
|                          | 100                              | 22 × 40     | 0.54                                     | 0.15                    | 1.990                   | 0.67                  | LSK101M2H--A2240 |
|                          | 100                              | 25 × 35     | 0.54                                     | 0.15                    | 1.990                   | 0.67                  | LSK101M2H--A2535 |
|                          | 120                              | 22 × 45     | 0.62                                     | 0.15                    | 1.659                   | 0.73                  | LSK121M2H--A2245 |
|                          | 120                              | 25 × 40     | 0.63                                     | 0.15                    | 1.659                   | 0.73                  | LSK121M2H--A2540 |
|                          | 150                              | 22 × 50     | 0.73                                     | 0.15                    | 1.327                   | 0.82                  | LSK151M2H--A2250 |
|                          | 150                              | 25 × 45     | 0.75                                     | 0.15                    | 1.327                   | 0.82                  | LSK151M2H--A2545 |
|                          | 150                              | 30 × 30     | 0.70                                     | 0.15                    | 1.327                   | 0.82                  | LSK151M2H--A3030 |
|                          | 180                              | 25 × 50     | 0.86                                     | 0.15                    | 1.106                   | 0.90                  | LSK181M2H--A2550 |
|                          | 180                              | 30 × 35     | 0.81                                     | 0.15                    | 1.106                   | 0.90                  | LSK181M2H--A3035 |
|                          | 220                              | 25 × 50     | 0.95                                     | 0.15                    | 0.905                   | 0.99                  | LSK221M2H--A2550 |
|                          | 220                              | 30 × 45     | 1.00                                     | 0.15                    | 0.905                   | 0.99                  | LSK221M2H--A3045 |
|                          | 220                              | 35 × 30     | 0.93                                     | 0.15                    | 0.905                   | 0.99                  | LSK221M2H--A3530 |
|                          | 270                              | 35 × 35     | 1.09                                     | 0.15                    | 0.737                   | 1.10                  | LSK271M2H--A3535 |
| 330                      | 35 × 40                          | 1.28        | 0.15                                     | 0.603                   | 1.22                    | LSK331M2H--A3540      |                  |

## Part Numbering System

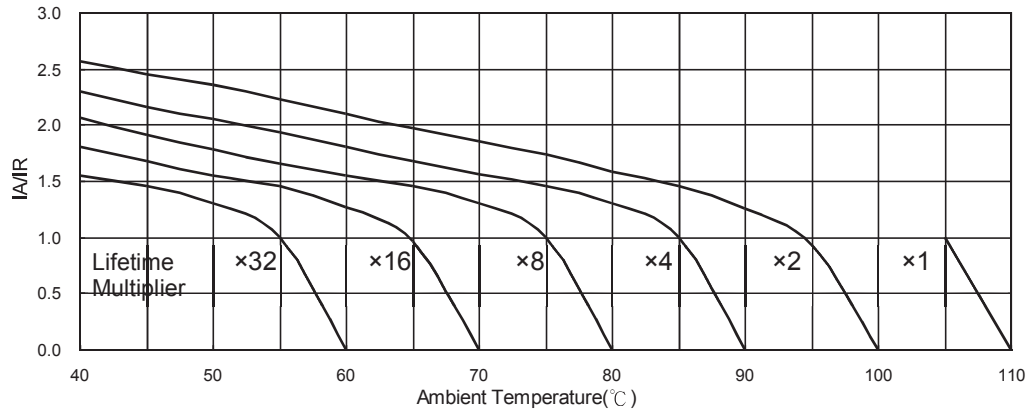
|             |             |                       |               |               |                 |             |                                  |      |
|-------------|-------------|-----------------------|---------------|---------------|-----------------|-------------|----------------------------------|------|
| LSK Series  | 100μF       | ±20%                  | 400V          |               | 4.0±0.5mm       | 22 φ × 30L  | Pb-free Terminal<br>+ PET Sleeve |      |
| <b>LSK</b>  | <b>101</b>  | <b>M</b>              | <b>2G</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 = ±20%<br>K = ±10%  | Example:      | Example:      | Example:        | Example:    |                                  |      |
| Cap.        | Symbol      |                       | WV            | Symbol        | Type            | Symbol      | φ D×L                            | Code |
| 56          | 560         |                       | 400           | 2G            | 2 pins          | --          | 22×30                            | 2230 |
| 220         | 221         |                       | 450           | 2W            | 5 pins          | L5          | 25×25                            | 2525 |
| 470         | 471         |                       |               |               |                 |             | 30×40                            | 3040 |

Note: For more details, please refer to "Part Numbering System (Snap-in Type)" on page 16.

## Typical Endurance Curves



## Useful Life Chart



IA: Actual Ripple Current IR: Rated Ripple Current

All product specifications in the catalog are subject to change without notice. (CAT. 2017E1)

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[LKMD1401H221MF](#) [B41888G6108M000](#) [EKMA160ETD470MF07D](#) [UHW1J102MHD6](#) [EKMG500ETD221MJC5S](#) [LKMK2502W101MF](#)  
[LKMD1401H181MF](#) [LKMI2502G820MF](#) [LKMJ2001J122MF](#) [LKML2501C472MF](#) [LKMJ4002C681MF](#) [450MXH330MEFCSN25X45](#)  
[450MXK330MA2RFC22X50](#) [63ZLH560MEFCG412.5X30](#) [ELH2DM331O25KT](#) [ELH2DM471P30KT](#)