

## REA Series

### Features

- 85°C, 2,000 ~ 3,000 hours assured
- Standard series for general purposes
- RoHS Compliance

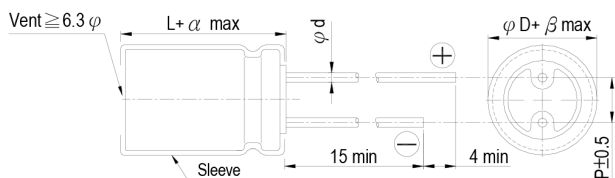


Sleeve & Marking Color: Blue & Black

### Specifications

| Items                                      | Performance  |  |   |                    |                               |                 |                                   |                 |   |  |      |      |      |      |                 |      |            |                 |          |          |                |      |      |      |      |      |      |      |      |      |      |    |    |           |          |   |   |   |   |   |   |   |          |          |    |   |   |   |   |   |   |   |   |    |    |    |    |           |          |    |    |    |    |   |   |   |   |
|--|--|--|---|--------------------|-------------------------------|-----------------|-----------------------------------|-----------------|---|--|------|------|------|------|-----------------|------|------------|-----------------|----------|----------|----------------|------|------|------|------|------|------|------|------|------|------|----|----|-----------|----------|---|---|---|---|---|---|---|----------|----------|----|---|---|---|---|---|---|---|---|----|----|----|----|-----------|----------|----|----|----|----|---|---|---|---|
| Category Temperature Range                 | -40°C ~ +85°C  |  |   |                    |                               |                 |                                   |                 |   |  |      |      |      |      |                 |      |            |                 |          |          |                |      |      |      |      |      |      |      |      |      |      |    |    |           |          |   |   |   |   |   |   |   |          |          |    |   |   |   |   |   |   |   |   |    |    |    |    |           |          |    |    |    |    |   |   |   |   |
| Capacitance Tolerance                      | ±20% (at 120Hz, 20°C)  |  |   |                    |                               |                 |                                   |                 |   |  |      |      |      |      |                 |      |            |                 |          |          |                |      |      |      |      |      |      |      |      |      |      |    |    |           |          |   |   |   |   |   |   |   |          |          |    |   |   |   |   |   |   |   |   |    |    |    |    |           |          |    |    |    |    |   |   |   |   |
| Leakage Current (at 20°C)                  | <table border="1"> <tr> <td>Rated voltage</td> <td>≤ 100V</td> <td>&gt; 100V</td> </tr> <tr> <td>Time</td> <td>after 2 minutes</td> <td>after 5 minutes</td> </tr> <tr> <td>Leakage Current</td> <td>I = 0.01CV or 3 (μA) whichever is greater</td> <td>CV ≤ 1,000<br/>I = 0.03CV + 15(μA)<br/>CV &gt; 1,000<br/>I = 0.02CV + 25(μA)</td> </tr> </table> <p>Where, C = rated capacitance in μF V = rated DC working voltage in V</p>   | Rated voltage  | ≤ 100V  | > 100V             | Time                          | after 2 minutes | after 5 minutes                   | Leakage Current | I = 0.01CV or 3 (μA) whichever is greater | CV ≤ 1,000<br>I = 0.03CV + 15(μA)<br>CV > 1,000<br>I = 0.02CV + 25(μA) |      |      |      |      |                 |      |            |                 |          |          |                |      |      |      |      |      |      |      |      |      |      |    |    |           |          |   |   |   |   |   |   |   |          |          |    |   |   |   |   |   |   |   |   |    |    |    |    |           |          |    |    |    |    |   |   |   |   |
| Rated voltage                              | ≤ 100V   | > 100V   |   |                    |                               |                 |                                   |                 |   |  |      |      |      |      |                 |      |            |                 |          |          |                |      |      |      |      |      |      |      |      |      |      |    |    |           |          |   |   |   |   |   |   |   |          |          |    |   |   |   |   |   |   |   |   |    |    |    |    |           |          |    |    |    |    |   |   |   |   |
| Time                                       | after 2 minutes  | after 5 minutes  |   |                    |                               |                 |                                   |                 |   |  |      |      |      |      |                 |      |            |                 |          |          |                |      |      |      |      |      |      |      |      |      |      |    |    |           |          |   |   |   |   |   |   |   |          |          |    |   |   |   |   |   |   |   |   |    |    |    |    |           |          |    |    |    |    |   |   |   |   |
| Leakage Current                            | I = 0.01CV or 3 (μA) whichever is greater  | CV ≤ 1,000<br>I = 0.03CV + 15(μA)<br>CV > 1,000<br>I = 0.02CV + 25(μA) |   |                    |                               |                 |                                   |                 |   |  |      |      |      |      |                 |      |            |                 |          |          |                |      |      |      |      |      |      |      |      |      |      |    |    |           |          |   |   |   |   |   |   |   |          |          |    |   |   |   |   |   |   |   |   |    |    |    |    |           |          |    |    |    |    |   |   |   |   |
| Tanδ (at 120 Hz, 20°C)                     | <table border="1"> <tr> <td>Rated Voltage</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> <td>63</td> <td>100</td> <td>160</td> <td>200</td> <td>250</td> <td>350</td> <td>400</td> <td>450</td> </tr> <tr> <td>Tanδ (max)</td> <td>0.23</td> <td>0.20</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.10</td> <td>0.09</td> <td>0.08</td> <td>0.12</td> <td>0.14</td> <td>0.17</td> <td>0.20</td> <td>0.25</td> <td>0.25</td> </tr> </table> <p>When the capacitance exceeds 1,000μF, 0.02 shall be added every 1,000μF increase.</p>  | Rated Voltage  | 6.3   | 10                 | 16                            | 25              | 35                                | 50              | 63  | 100  | 160  | 200  | 250  | 350  | 400             | 450  | Tanδ (max) | 0.23            | 0.20     | 0.16     | 0.14           | 0.12 | 0.10 | 0.09 | 0.08 | 0.12 | 0.14 | 0.17 | 0.20 | 0.25 | 0.25 |    |    |           |          |   |   |   |   |   |   |   |          |          |    |   |   |   |   |   |   |   |   |    |    |    |    |           |          |    |    |    |    |   |   |   |   |
| Rated Voltage                              | 6.3  | 10   | 16  | 25                 | 35                            | 50              | 63                                | 100             | 160                                       | 200  | 250  | 350  | 400  | 450  |                 |      |            |                 |          |          |                |      |      |      |      |      |      |      |      |      |      |    |    |           |          |   |   |   |   |   |   |   |          |          |    |   |   |   |   |   |   |   |   |    |    |    |    |           |          |    |    |    |    |   |   |   |   |
| Tanδ (max)                                 | 0.23   | 0.20   | 0.16  | 0.14               | 0.12                          | 0.10            | 0.09                              | 0.08            | 0.12                                      | 0.14   | 0.17 | 0.20 | 0.25 | 0.25 |                 |      |            |                 |          |          |                |      |      |      |      |      |      |      |      |      |      |    |    |           |          |   |   |   |   |   |   |   |          |          |    |   |   |   |   |   |   |   |   |    |    |    |    |           |          |    |    |    |    |   |   |   |   |
| Low Temperature Characteristics (at 120Hz) | <p>Impedance ratio shall not exceed the values given in the table below.</p> <table border="1"> <tr> <td colspan="2">Rated Voltage</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> <td>63</td> <td>100</td> <td>160</td> <td>200</td> <td>250</td> <td>350</td> <td>400</td> <td>450</td> </tr> <tr> <td rowspan="4">Impedance Ratio</td> <td>Z(-25°C)</td> <td>φ D &lt; 16</td> <td>6</td> <td>4</td> <td>3</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> <td rowspan="2">3</td> <td rowspan="2">6</td> <td rowspan="2">8</td> <td rowspan="2">12</td> <td rowspan="2">14</td> <td rowspan="2">16</td> </tr> <tr> <td>/Z(+20°C)</td> <td>φ D ≥ 16</td> <td>8</td> <td>6</td> <td>4</td> <td>4</td> <td>3</td> <td>3</td> <td>3</td> </tr> <tr> <td>Z(-40°C)</td> <td>φ D &lt; 16</td> <td>10</td> <td>8</td> <td>6</td> <td>6</td> <td>4</td> <td>3</td> <td>3</td> <td rowspan="2">4</td> <td rowspan="2">8</td> <td rowspan="2">10</td> <td rowspan="2">16</td> <td rowspan="2">18</td> <td rowspan="2">20</td> </tr> <tr> <td>/Z(+20°C)</td> <td>φ D ≥ 16</td> <td>18</td> <td>16</td> <td>12</td> <td>10</td> <td>8</td> <td>8</td> <td>6</td> <td>6</td> </tr> </table> | Rated Voltage  |   | 6.3                | 10                            | 16              | 25                                | 35              | 50  | 63   | 100  | 160  | 200  | 250  | 350             | 400  | 450        | Impedance Ratio | Z(-25°C) | φ D < 16 | 6              | 4    | 3    | 3    | 2    | 2    | 2    | 3    | 6    | 8    | 12   | 14 | 16 | /Z(+20°C) | φ D ≥ 16 | 8 | 6 | 4 | 4 | 3 | 3 | 3 | Z(-40°C) | φ D < 16 | 10 | 8 | 6 | 6 | 4 | 3 | 3 | 4 | 8 | 10 | 16 | 18 | 20 | /Z(+20°C) | φ D ≥ 16 | 18 | 16 | 12 | 10 | 8 | 8 | 6 | 6 |
| Rated Voltage                              |  | 6.3  | 10  | 16                 | 25                            | 35              | 50                                | 63              | 100                                       | 160  | 200  | 250  | 350  | 400  | 450             |      |            |                 |          |          |                |      |      |      |      |      |      |      |      |      |      |    |    |           |          |   |   |   |   |   |   |   |          |          |    |   |   |   |   |   |   |   |   |    |    |    |    |           |          |    |    |    |    |   |   |   |   |
| Impedance Ratio                            | Z(-25°C)   | φ D < 16   | 6   | 4                  | 3                             | 3               | 2                                 | 2               | 2   | 3  | 6    | 8    | 12   | 14   | 16              |      |            |                 |          |          |                |      |      |      |      |      |      |      |      |      |      |    |    |           |          |   |   |   |   |   |   |   |          |          |    |   |   |   |   |   |   |   |   |    |    |    |    |           |          |    |    |    |    |   |   |   |   |
|  | /Z(+20°C)  | φ D ≥ 16   | 8   | 6                  | 4                             | 4               | 3                                 | 3               | 3   |  |      |      |      |      |                 |      |            |                 |          |          |                |      |      |      |      |      |      |      |      |      |      |    |    |           |          |   |   |   |   |   |   |   |          |          |    |   |   |   |   |   |   |   |   |    |    |    |    |           |          |    |    |    |    |   |   |   |   |
|  | Z(-40°C)   | φ D < 16   | 10  | 8                  | 6                             | 6               | 4                                 | 3               | 3   | 4  | 8    | 10   | 16   | 18   | 20              |      |            |                 |          |          |                |      |      |      |      |      |      |      |      |      |      |    |    |           |          |   |   |   |   |   |   |   |          |          |    |   |   |   |   |   |   |   |   |    |    |    |    |           |          |    |    |    |    |   |   |   |   |
|  | /Z(+20°C)  | φ D ≥ 16   | 18  | 16                 | 12                            | 10              | 8                                 | 8               | 6   |  |      |      |      |      |                 | 6    |            |                 |          |          |                |      |      |      |      |      |      |      |      |      |      |    |    |           |          |   |   |   |   |   |   |   |          |          |    |   |   |   |   |   |   |   |   |    |    |    |    |           |          |    |    |    |    |   |   |   |   |
| Endurance                                  | <table border="1"> <tr> <td>Test Time</td> <td>2,000 Hrs for φD ≤ 8mm<br/>3,000 Hrs for φD ≥ 10mm</td> </tr> <tr> <td>Capacitance Change</td> <td>With in ±20% of initial value</td> </tr> <tr> <td>Tanδ</td> <td>Less than 200% of specified value</td> </tr> <tr> <td>Leakage Current</td> <td>Within specified value</td> </tr> </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 2,000 / 3,000 hours at 85°C.</p>   | Test Time  | 2,000 Hrs for φD ≤ 8mm<br>3,000 Hrs for φD ≥ 10mm | Capacitance Change | With in ±20% of initial value | Tanδ            | Less than 200% of specified value | Leakage Current | Within specified value                    |  |      |      |      |      |                 |      |            |                 |          |          |                |      |      |      |      |      |      |      |      |      |      |    |    |           |          |   |   |   |   |   |   |   |          |          |    |   |   |   |   |   |   |   |   |    |    |    |    |           |          |    |    |    |    |   |   |   |   |
| Test Time                                  | 2,000 Hrs for φD ≤ 8mm<br>3,000 Hrs for φD ≥ 10mm  |  |   |                    |                               |                 |                                   |                 |   |  |      |      |      |      |                 |      |            |                 |          |          |                |      |      |      |      |      |      |      |      |      |      |    |    |           |          |   |   |   |   |   |   |   |          |          |    |   |   |   |   |   |   |   |   |    |    |    |    |           |          |    |    |    |    |   |   |   |   |
| Capacitance Change                         | With in ±20% of initial value  |  |   |                    |                               |                 |                                   |                 |   |  |      |      |      |      |                 |      |            |                 |          |          |                |      |      |      |      |      |      |      |      |      |      |    |    |           |          |   |   |   |   |   |   |   |          |          |    |   |   |   |   |   |   |   |   |    |    |    |    |           |          |    |    |    |    |   |   |   |   |
| Tanδ                                       | Less than 200% of specified value  |  |   |                    |                               |                 |                                   |                 |   |  |      |      |      |      |                 |      |            |                 |          |          |                |      |      |      |      |      |      |      |      |      |      |    |    |           |          |   |   |   |   |   |   |   |          |          |    |   |   |   |   |   |   |   |   |    |    |    |    |           |          |    |    |    |    |   |   |   |   |
| Leakage Current                            | Within specified value   |  |   |                    |                               |                 |                                   |                 |   |  |      |      |      |      |                 |      |            |                 |          |          |                |      |      |      |      |      |      |      |      |      |      |    |    |           |          |   |   |   |   |   |   |   |          |          |    |   |   |   |   |   |   |   |   |    |    |    |    |           |          |    |    |    |    |   |   |   |   |
| Shelf Life Test                            | <table border="1"> <tr> <td>Test Time</td> <td>1,000 Hrs</td> </tr> <tr> <td>Capacitance Change</td> <td>With in ±20% of initial value</td> </tr> <tr> <td>Tanδ</td> <td>Less than 200% of specified value</td> </tr> <tr> <td>Leakage Current</td> <td>Within specified value</td> </tr> </table> <p>* 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 for 160 ~ 450V (Refer to JIS C 5101-4 4.1).</p>   | Test Time  | 1,000 Hrs   | Capacitance Change | With in ±20% of initial value | Tanδ            | Less than 200% of specified value | Leakage Current | Within specified value                    |  |      |      |      |      |                 |      |            |                 |          |          |                |      |      |      |      |      |      |      |      |      |      |    |    |           |          |   |   |   |   |   |   |   |          |          |    |   |   |   |   |   |   |   |   |    |    |    |    |           |          |    |    |    |    |   |   |   |   |
| Test Time                                  | 1,000 Hrs  |  |   |                    |                               |                 |                                   |                 |   |  |      |      |      |      |                 |      |            |                 |          |          |                |      |      |      |      |      |      |      |      |      |      |    |    |           |          |   |   |   |   |   |   |   |          |          |    |   |   |   |   |   |   |   |   |    |    |    |    |           |          |    |    |    |    |   |   |   |   |
| Capacitance Change                         | With in ±20% of initial value  |  |   |                    |                               |                 |                                   |                 |   |  |      |      |      |      |                 |      |            |                 |          |          |                |      |      |      |      |      |      |      |      |      |      |    |    |           |          |   |   |   |   |   |   |   |          |          |    |   |   |   |   |   |   |   |   |    |    |    |    |           |          |    |    |    |    |   |   |   |   |
| Tanδ                                       | Less than 200% of specified value  |  |   |                    |                               |                 |                                   |                 |   |  |      |      |      |      |                 |      |            |                 |          |          |                |      |      |      |      |      |      |      |      |      |      |    |    |           |          |   |   |   |   |   |   |   |          |          |    |   |   |   |   |   |   |   |   |    |    |    |    |           |          |    |    |    |    |   |   |   |   |
| Leakage Current                            | Within specified value   |  |   |                    |                               |                 |                                   |                 |   |  |      |      |      |      |                 |      |            |                 |          |          |                |      |      |      |      |      |      |      |      |      |      |    |    |           |          |   |   |   |   |   |   |   |          |          |    |   |   |   |   |   |   |   |   |    |    |    |    |           |          |    |    |    |    |   |   |   |   |
| Ripple Current & Frequency Multipliers     | <table border="1"> <tr> <td rowspan="4">Cap. (μF)</td> <td>Freq. (Hz)</td> <td>60 (50)</td> <td>120</td> <td>500</td> <td>1k</td> <td>10k up</td> </tr> <tr> <td>Under 100</td> <td>0.70</td> <td>1.00</td> <td>1.30</td> <td>1.40</td> <td>1.50</td> </tr> <tr> <td>100 &lt; C ≤ 1,000</td> <td>0.75</td> <td>1.00</td> <td>1.20</td> <td>1.30</td> <td>1.35</td> </tr> <tr> <td>1,000 up above</td> <td>0.80</td> <td>1.00</td> <td>1.10</td> <td>1.12</td> <td>1.15</td> </tr> </table>   | Cap. (μF)  | Freq. (Hz)  | 60 (50)            | 120                           | 500             | 1k                                | 10k up          | Under 100                                 | 0.70   | 1.00 | 1.30 | 1.40 | 1.50 | 100 < C ≤ 1,000 | 0.75 | 1.00       | 1.20            | 1.30     | 1.35     | 1,000 up above | 0.80 | 1.00 | 1.10 | 1.12 | 1.15 |      |      |      |      |      |    |    |           |          |   |   |   |   |   |   |   |          |          |    |   |   |   |   |   |   |   |   |    |    |    |    |           |          |    |    |    |    |   |   |   |   |
| Cap. (μF)                                  | Freq. (Hz)   |  | 60 (50)   | 120                | 500                           | 1k              | 10k up                            |                 |   |  |      |      |      |      |                 |      |            |                 |          |          |                |      |      |      |      |      |      |      |      |      |      |    |    |           |          |   |   |   |   |   |   |   |          |          |    |   |   |   |   |   |   |   |   |    |    |    |    |           |          |    |    |    |    |   |   |   |   |
|  | Under 100  |  | 0.70  | 1.00               | 1.30                          | 1.40            | 1.50                              |                 |   |  |      |      |      |      |                 |      |            |                 |          |          |                |      |      |      |      |      |      |      |      |      |      |    |    |           |          |   |   |   |   |   |   |   |          |          |    |   |   |   |   |   |   |   |   |    |    |    |    |           |          |    |    |    |    |   |   |   |   |
|  | 100 < C ≤ 1,000  |  | 0.75  | 1.00               | 1.20                          | 1.30            | 1.35                              |                 |   |  |      |      |      |      |                 |      |            |                 |          |          |                |      |      |      |      |      |      |      |      |      |      |    |    |           |          |   |   |   |   |   |   |   |          |          |    |   |   |   |   |   |   |   |   |    |    |    |    |           |          |    |    |    |    |   |   |   |   |
|  | 1,000 up above   | 0.80   | 1.00  | 1.10               | 1.12                          | 1.15            |                                   |                 |   |  |      |      |      |      |                 |      |            |                 |          |          |                |      |      |      |      |      |      |      |      |      |      |    |    |           |          |   |   |   |   |   |   |   |          |          |    |   |   |   |   |   |   |   |   |    |    |    |    |           |          |    |    |    |    |   |   |   |   |

### Diagram of Dimensions

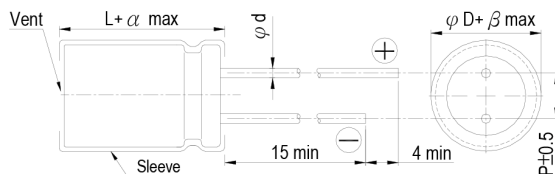


#### Lead Spacing and Diameter

Unit: mm

|     |                          |     |     |     |      |     |     |     |      |
|-----|--------------------------|-----|-----|-----|------|-----|-----|-----|------|
| φ D | 5                        | 6.3 | 8   | 10  | 12.5 | 16  | 18  | 22  | 25   |
| P   | 2.0                      | 2.5 | 3.5 | 5.0 | 5.0  | 7.5 | 7.5 | 10  | 12.5 |
| φ d | 0.5                      |     | 0.6 |     |      | 0.8 |     | 1.0 |      |
| α   | L < 20: 1.5, L ≥ 20: 2.0 |     |     |     |      |     |     |     | 2.0  |
| β   | 0.5                      |     |     |     |      |     |     |     |      |

The case size of 12.5×16, 16×16, 16×20, 18×16, 18×20 and 18×25 are suitable for below diagram:



Dimension & Permissible Ripple Current Dimension:  $\phi D \times L$ (mm)  
Ripple Current: mA/rms at 120 Hz, 85°C

| $\mu F$ | V. DC<br>Contents | 6.3V (0J)         |                | 10V (1A)          |                | 16V (1C)           |                | 25V (1E)           |                | 35V (1V)          |                | 50V (1H)          |                | 63V (1J)          |            | 100V (2A)         |            |
|---------|-------------------|-------------------|----------------|-------------------|----------------|--------------------|----------------|--------------------|----------------|-------------------|----------------|-------------------|----------------|-------------------|------------|-------------------|------------|
|         |                   | $\phi D \times L$ | mA             | $\phi D \times L$ | mA             | $\phi D \times L$  | mA             | $\phi D \times L$  | mA             | $\phi D \times L$ | mA             | $\phi D \times L$ | mA             | $\phi D \times L$ | mA         | $\phi D \times L$ | mA         |
| 2.2     | 2R2               |                   |                |                   |                |                    |                |                    |                |                   |                | 5×11              | 29             |                   |            | 5×11              | 33         |
| 3.3     | 3R3               |                   |                |                   |                |                    |                |                    |                |                   |                | 5×11              | 35             |                   |            | 5×11              | 40         |
| 4.7     | 4R7               |                   |                |                   |                |                    |                |                    |                |                   |                | 5×11              | 42             |                   |            | 5×11              | 48         |
| 10      | 100               |                   |                |                   |                |                    |                |                    |                |                   |                | 5×11              | 65             | 5×11              | 70         | 5×11              | 59         |
| 22      | 220               |                   |                |                   |                |                    |                |                    |                |                   |                | 5×11              | 95             | 6.3×11            | 115        | 6.3×11            | 115        |
| 33      | 330               |                   |                |                   |                |                    |                |                    |                | 5×11              | 108            | 6.3×11<br>5×11    | 136<br>125     | 6.3×11            | 140        | 8×11.5            | 145        |
| 47      | 470               |                   |                |                   |                |                    |                | 5×11               | 115            | 5×11              | 130            | 6.3×11            | 165            | 6.3×11            | 170        | 10×12.5           | 235        |
| 100     | 101               |                   |                |                   |                | 5×11               | 160            | 6.3×11             | 190            | 6.3×11            | 210            | 8×11.5            | 260            | 8×11.5<br>10×12.5 | 245<br>320 | 10×16             | 325        |
| 220     | 221               |                   |                | 5×11              | 220            | 6.3×11             | 260            | 8×11.5             | 320            | 8×11.5            | 385            | 10×12.5           | 455            | 10×16             | 490        | 12.5×20<br>16×16  | 640<br>625 |
| 330     | 331               |                   |                | 6.3×11            | 290            | 6.3×11             | 290            | 8×11.5             | 440            | 10×12.5           | 490            | 10×16             | 585            | 10×20<br>12.5×16  | 710<br>675 | 16×20<br>18×16    | 695<br>685 |
| 470     | 471               |                   |                | 6.3×11            | 350            | 8×11.5             | 440            | 10×12.5            | 545            | 10×16             | 740            | 10×20<br>12.5×16  | 755<br>610     | 16×16<br>12.5×20  | 910<br>900 | 16×25             | 910        |
| 1,000   | 102               | 8×11.5            | 540            | 10×12.5<br>8×11.5 | 650<br>550     | 10×12.5            | 635            | 10×20<br>12.5×16   | 955<br>830     | 12.5×20<br>16×16  | 1,145<br>1,010 | 12.5×25<br>16×20  | 1,340<br>1,160 | 16×20             | 1,260      | 18×40             | 1,820      |
| 2,200   | 222               | 10×16             | 845            | 10×20<br>12.5×16  | 1,070<br>970   | 12.5×16<br>16×16   | 930<br>1,160   | 12.5×25<br>16×16   | 1,540<br>1,150 | 16×20             | 1,390          | 16×35.5           | 1,960          | 18×31.5           | 2,040      |                   |            |
| 3,300   | 332               | 10×20<br>12.5×16  | 1,185<br>960   | 12.5×20           | 1,420          | 12.5×20<br>16×16   | 1,450<br>1,240 | 16×20              | 1,490          | 16×31.5<br>18×25  | 2,070<br>1,970 | 18×35.5           | 2,500          | 18×40             | 2,575      |                   |            |
| 4,700   | 472               | 12.5×20           | 1,545          | 12.5×25<br>16×16  | 1,780<br>1,420 | 16×20<br>18×16     | 1,600<br>1,820 | 16×25<br>18×25     | 2,100<br>2,170 | 18×35.5           | 2,700          | 22×40             | 3,040          |                   |            |                   |            |
| 6,800   | 682               | 12.5×25           | 1,880          | 16×20<br>18×20    | 1,700<br>1,870 | 16×25<br>18×20     | 2,280<br>1,890 | 16×35.5<br>18×31.5 | 2,475<br>2,550 | 22×40             | 2,900          | 22×45             | 3,185          |                   |            |                   |            |
| 10,000  | 103               | 16×20<br>18×20    | 2,000<br>2,020 | 16×25<br>18×25    | 2,150<br>2,370 | 18×31.5<br>16×35.5 | 2,590<br>2,450 | 18×40              | 3,080          | 22×45             | 3,400          |                   |                |                   |            |                   |            |
| 15,000  | 153               | 16×31.5<br>18×25  | 2,460<br>2,375 | 16×40<br>18×31.5  | 2,730<br>2,620 | 18×40              | 3,100          | 22×45<br>25×40     | 3,780<br>3,850 |                   |                |                   |                |                   |            |                   |            |
| 22,000  | 223               | 18×31.5           | 2,780          | 18×40             | 3,370          | 22×40              | 3,900          | 25×45              | 4,290          |                   |                |                   |                |                   |            |                   |            |
| 33,000  | 333               | 22×40             | 3,700          |                   |                |                    |                |                    |                |                   |                |                   |                |                   |            |                   |            |

| $\mu F$ | V. DC<br>Contents | 160V (2C)         |            | 200V (2D)         |            | 250V (2E)         |            | 350V (2V)         |            | 400V (2G)         |            | 450V (2W)         |          |
|---------|-------------------|-------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|-------------------|----------|
|         |                   | $\phi D \times L$ | mA         | $\phi D \times L$ | mA         | $\phi D \times L$ | mA         | $\phi D \times L$ | mA         | $\phi D \times L$ | mA         | $\phi D \times L$ | mA       |
| 1       | 010               |                   |            |                   |            | 5×11              | 18         | 5×11              | 18         | 5×11              | 22         | 6.3×11            | 25       |
| 2.2     | 2R2               |                   |            | 5×11              | 29         | 6.3×11            | 33         | 6.3×11            | 33         | 6.3×11            | 33         | 8×11.5            | 45       |
| 3.3     | 3R3               |                   |            | 6.3×11            | 46         | 6.3×11            | 46         | 8×11.5            | 50         | 8×11.5            | 50         | 10×12.5           | 65       |
| 4.7     | 4R7               |                   |            | 6.3×11            | 50         | 8×11.5            | 55         | 8×11.5            | 60         | 8×11.5<br>10×12.5 | 80         | 8×11.5<br>10×12.5 | 55<br>80 |
| 10      | 100               | 8×11.5            | 75         | 8×11.5            | 81         | 10×12.5           | 100        | 10×16             | 110        | 10×16             | 110        | 10×20             | 140      |
| 22      | 220               | 10×12.5           | 130        | 10×12.5           | 135        | 10×16             | 150        | 12.5×16           | 185        | 12.5×20           | 200        | 12.5×25           | 300      |
| 33      | 330               | 10×16             | 175        | 10×16             | 180        | 10×20<br>12.5×16  | 215<br>220 | 12.5×20<br>16×16  | 245<br>260 | 16×16             | 260        | 16×20             | 270      |
| 47      | 470               | 10×20<br>12.5×16  | 230<br>250 | 10×20<br>12.5×16  | 240<br>250 | 12.5×20           | 290        | 16×20<br>18×16    | 340<br>310 | 16×20             | 340        | 16×31.5           | 390      |
| 68      | 680               | 12.5×20           | 330        | 12.5×20<br>16×16  | 330<br>370 | 12.5×25           | 370        | 16×25<br>18×20    | 420<br>410 | 16×31.5           | 435        | 16×35.5           | 460      |
| 100     | 101               | 12.5×25           | 440        | 16×20<br>18×16    | 460<br>450 | 16×25             | 510        | 16×31.5<br>18×25  | 540<br>520 | 16×40<br>18×35.5  | 560<br>570 | 18×35.5           | 570      |
| 150     | 151               | 16×25             | 620        | 16×25<br>18×20    | 620<br>605 | 16×31.5<br>18×25  | 625<br>630 | 18×35.5           | 640        | 18×40             | 670        | 22×45             | 800      |
| 220     | 221               | 16×31.5<br>18×25  | 790<br>760 | 16×35.5           | 830        | 16×40<br>18×35.5  | 840<br>890 | 22×40             | 920        | 22×45<br>25×40    | 960<br>980 | 25×45             | 1,030    |
| 330     | 331               | 18×35.5           | 985        | 18×40             | 1,150      | 22×40             | 1,200      | 25×45             | 1,270      |                   |            |                   |          |
| 470     | 471               | 18×40             | 1,150      | 22×40             | 1,400      | 22×45             | 1,470      |                   |            |                   |            |                   |          |

### Part Numbering System

REA series    470 $\mu F$      $\pm 20\%$     16V    Bulk Package    Gas Type    8  $\phi \times 11.5L$     Pb-free and PET coating case

**REA**    **471**    **M**    **1C**    **BK**    -    **0811**

Series    Capacitance    Capacitance Tolerance    Rated Voltage    Lead Configuration & Package    Rubber Type    Case Size    Lead Wire and Coating Type

Note: For more details, please refer to "Part Numbering System (Radial Type)" on page 10.

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[LSG271M2G3030](#) [CMPPAC310V684K15C6](#) [TEA331M1H-1025](#) [C242A103J20C400](#) [GBPC1506](#) [HBV151M1VTR-0810S](#)  
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