

## VEJ Series

### Features

- 4  $\phi$  ~ 18  $\phi$ , 105°C, 2,000 hours assured
- Designed for surface mounting on high density PC board
- RoHS Compliance



Marking color: Black

### Specifications

| Items                                      | Performance   |   |                          |                 |            |        |                    |   |                 |              |   |           |                 |                        |                        |                 |   |   |                          |      |      |      |      |   |   |                  |      |           |                    |      |      |      |      |      |      |      |   |   |              |                 |    |   |   |   |   |   |   |   |   |           |                    |    |   |   |   |   |   |   |   |   |
|--|---|---|--------------------------|-----------------|------------|--------|--------------------|---|-----------------|--------------|---|-----------|-----------------|------------------------|------------------------|-----------------|---|---|--------------------------|------|------|------|------|---|---|------------------|------|-----------|--------------------|------|------|------|------|------|------|------|---|---|--------------|-----------------|----|---|---|---|---|---|---|---|---|-----------|--------------------|----|---|---|---|---|---|---|---|---|
| Category Temperature Range                 | 6.3 ~ 100V  | 160 ~ 400V                                    | 450V                     |                 |            |        |                    |   |                 |              |   |           |                 |                        |                        |                 |   |   |                          |      |      |      |      |   |   |                  |      |           |                    |      |      |      |      |      |      |      |   |   |              |                 |    |   |   |   |   |   |   |   |   |           |                    |    |   |   |   |   |   |   |   |   |
|  | -55°C ~ +105°C  | -40°C ~ +105°C                                | -25°C ~ +105°C           |                 |            |        |                    |   |                 |              |   |           |                 |                        |                        |                 |   |   |                          |      |      |      |      |   |   |                  |      |           |                    |      |      |      |      |      |      |      |   |   |              |                 |    |   |   |   |   |   |   |   |   |           |                    |    |   |   |   |   |   |   |   |   |
| Capacitance Tolerance                      | ±20% (at 120Hz, 20°C)   |   |                          |                 |            |        |                    |   |                 |              |   |           |                 |                        |                        |                 |   |   |                          |      |      |      |      |   |   |                  |      |           |                    |      |      |      |      |      |      |      |   |   |              |                 |    |   |   |   |   |   |   |   |   |           |                    |    |   |   |   |   |   |   |   |   |
| Leakage Current (at 20°C)                  | <table border="1"> <tr> <td>Rated voltage</td> <td colspan="2">6.3 ~ 100V</td> <td>160 ~ 450V</td> </tr> <tr> <td>Time</td> <td colspan="2">after 2 minutes</td> <td>after 5 minutes</td> </tr> <tr> <td>Case size</td> <td>4 ~ 10 <math>\phi</math></td> <td>12.5 ~ 18 <math>\phi</math></td> <td>12.5 ~ 18 <math>\phi</math></td> </tr> <tr> <td>Leakage Current</td> <td>I = 0.01CV or 3<math>\mu</math>A, whichever is greater</td> <td>I = 0.03CV or 4<math>\mu</math>A, whichever is greater</td> <td>I = 0.04CV + 100<math>\mu</math>A</td> </tr> </table> <p>Where, C = rated capacitance in <math>\mu</math>F V = rated DC working voltage in V</p>  |   |                          | Rated voltage   | 6.3 ~ 100V |        | 160 ~ 450V         | Time  | after 2 minutes |              | after 5 minutes   | Case size | 4 ~ 10 $\phi$   | 12.5 ~ 18 $\phi$       | 12.5 ~ 18 $\phi$       | Leakage Current | I = 0.01CV or 3 $\mu$ A, whichever is greater | I = 0.03CV or 4 $\mu$ A, whichever is greater | I = 0.04CV + 100 $\mu$ A |      |      |      |      |   |   |                  |      |           |                    |      |      |      |      |      |      |      |   |   |              |                 |    |   |   |   |   |   |   |   |   |           |                    |    |   |   |   |   |   |   |   |   |
| Rated voltage                              | 6.3 ~ 100V  |   | 160 ~ 450V               |                 |            |        |                    |   |                 |              |   |           |                 |                        |                        |                 |   |   |                          |      |      |      |      |   |   |                  |      |           |                    |      |      |      |      |      |      |      |   |   |              |                 |    |   |   |   |   |   |   |   |   |           |                    |    |   |   |   |   |   |   |   |   |
| Time                                       | after 2 minutes   |   | after 5 minutes          |                 |            |        |                    |   |                 |              |   |           |                 |                        |                        |                 |   |   |                          |      |      |      |      |   |   |                  |      |           |                    |      |      |      |      |      |      |      |   |   |              |                 |    |   |   |   |   |   |   |   |   |           |                    |    |   |   |   |   |   |   |   |   |
| Case size                                  | 4 ~ 10 $\phi$   | 12.5 ~ 18 $\phi$                              | 12.5 ~ 18 $\phi$         |                 |            |        |                    |   |                 |              |   |           |                 |                        |                        |                 |   |   |                          |      |      |      |      |   |   |                  |      |           |                    |      |      |      |      |      |      |      |   |   |              |                 |    |   |   |   |   |   |   |   |   |           |                    |    |   |   |   |   |   |   |   |   |
| Leakage Current                            | I = 0.01CV or 3 $\mu$ A, whichever is greater   | I = 0.03CV or 4 $\mu$ A, whichever is greater | I = 0.04CV + 100 $\mu$ A |                 |            |        |                    |   |                 |              |   |           |                 |                        |                        |                 |   |   |                          |      |      |      |      |   |   |                  |      |           |                    |      |      |      |      |      |      |      |   |   |              |                 |    |   |   |   |   |   |   |   |   |           |                    |    |   |   |   |   |   |   |   |   |
| Tan $\delta$ (at 120Hz, 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 ~ 250</td> <td>400 ~ 450</td> </tr> <tr> <td>4 ~ 10 <math>\phi</math></td> <td>0.45</td> <td>0.35</td> <td>0.28</td> <td>0.18</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.12</td> <td>-</td> <td>-</td> </tr> <tr> <td>12.5 ~ 18 <math>\phi</math></td> <td>0.40</td> <td>0.38</td> <td>0.34</td> <td>0.26</td> <td>0.22</td> <td>0.18</td> <td>0.14</td> <td>0.10</td> <td>0.20</td> <td>0.25</td> </tr> </table> <p>When the capacitance exceeds 1,000<math>\mu</math>F, 0.02 shall be added every 1,000<math>\mu</math>F increase.</p>   |   |                          | Rated Voltage   | 6.3        | 10     | 16                 | 25  | 35              | 50           | 63  | 100       | 160 ~ 250       | 400 ~ 450              | 4 ~ 10 $\phi$          | 0.45            | 0.35  | 0.28  | 0.18                     | 0.16 | 0.14 | 0.12 | 0.12 | - | - | 12.5 ~ 18 $\phi$ | 0.40 | 0.38      | 0.34               | 0.26 | 0.22 | 0.18 | 0.14 | 0.10 | 0.20 | 0.25 |   |   |              |                 |    |   |   |   |   |   |   |   |   |           |                    |    |   |   |   |   |   |   |   |   |
| Rated Voltage                              | 6.3   | 10  | 16                       | 25              | 35         | 50     | 63                 | 100   | 160 ~ 250       | 400 ~ 450    |   |           |                 |                        |                        |                 |   |   |                          |      |      |      |      |   |   |                  |      |           |                    |      |      |      |      |      |      |      |   |   |              |                 |    |   |   |   |   |   |   |   |   |           |                    |    |   |   |   |   |   |   |   |   |
| 4 ~ 10 $\phi$                              | 0.45  | 0.35  | 0.28                     | 0.18            | 0.16       | 0.14   | 0.12               | 0.12  | -               | -            |   |           |                 |                        |                        |                 |   |   |                          |      |      |      |      |   |   |                  |      |           |                    |      |      |      |      |      |      |      |   |   |              |                 |    |   |   |   |   |   |   |   |   |           |                    |    |   |   |   |   |   |   |   |   |
| 12.5 ~ 18 $\phi$                           | 0.40  | 0.38  | 0.34                     | 0.26            | 0.22       | 0.18   | 0.14               | 0.10  | 0.20            | 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 ~ 250</td> <td>400 ~ 450</td> </tr> <tr> <td rowspan="4">Impedance Ratio</td> <td>Z(-25°C)</td> <td><math>\phi D &lt; 12.5</math></td> <td>4</td> <td>4</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>3</td> <td>-</td> </tr> <tr> <td>/Z(+20°C)</td> <td><math>\phi D \geq 12.5</math></td> <td>5</td> <td>4</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>3</td> <td>6</td> </tr> <tr> <td>Z(-55/-40°C)</td> <td><math>\phi D &lt; 12.5</math></td> <td>12</td> <td>8</td> <td>6</td> <td>4</td> <td>3</td> <td>3</td> <td>3</td> <td>4</td> <td>-</td> </tr> <tr> <td>/Z(+20°C)</td> <td><math>\phi D \geq 12.5</math></td> <td>10</td> <td>8</td> <td>6</td> <td>4</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>6</td> </tr> </table> |   |                          | Rated Voltage   |            | 6.3    | 10                 | 16  | 25              | 35           | 50  | 63        | 100             | 160 ~ 250              | 400 ~ 450              | Impedance Ratio | Z(-25°C)                                      | $\phi D < 12.5$                               | 4                        | 4    | 3    | 2    | 2    | 2 | 2 | 3                | -    | /Z(+20°C) | $\phi D \geq 12.5$ | 5    | 4    | 3    | 2    | 2    | 2    | 2    | 3 | 6 | Z(-55/-40°C) | $\phi D < 12.5$ | 12 | 8 | 6 | 4 | 3 | 3 | 3 | 4 | - | /Z(+20°C) | $\phi D \geq 12.5$ | 10 | 8 | 6 | 4 | 3 | 3 | 3 | 3 | 6 |
| Rated Voltage                              |   | 6.3   | 10                       | 16              | 25         | 35     | 50                 | 63  | 100             | 160 ~ 250    | 400 ~ 450   |           |                 |                        |                        |                 |   |   |                          |      |      |      |      |   |   |                  |      |           |                    |      |      |      |      |      |      |      |   |   |              |                 |    |   |   |   |   |   |   |   |   |           |                    |    |   |   |   |   |   |   |   |   |
| Impedance Ratio                            | Z(-25°C)  | $\phi D < 12.5$                               | 4                        | 4               | 3          | 2      | 2                  | 2   | 2               | 3            | -   |           |                 |                        |                        |                 |   |   |                          |      |      |      |      |   |   |                  |      |           |                    |      |      |      |      |      |      |      |   |   |              |                 |    |   |   |   |   |   |   |   |   |           |                    |    |   |   |   |   |   |   |   |   |
|  | /Z(+20°C)   | $\phi D \geq 12.5$                            | 5                        | 4               | 3          | 2      | 2                  | 2   | 2               | 3            | 6   |           |                 |                        |                        |                 |   |   |                          |      |      |      |      |   |   |                  |      |           |                    |      |      |      |      |      |      |      |   |   |              |                 |    |   |   |   |   |   |   |   |   |           |                    |    |   |   |   |   |   |   |   |   |
|  | Z(-55/-40°C)  | $\phi D < 12.5$                               | 12                       | 8               | 6          | 4      | 3                  | 3   | 3               | 4            | -   |           |                 |                        |                        |                 |   |   |                          |      |      |      |      |   |   |                  |      |           |                    |      |      |      |      |      |      |      |   |   |              |                 |    |   |   |   |   |   |   |   |   |           |                    |    |   |   |   |   |   |   |   |   |
|  | /Z(+20°C)   | $\phi D \geq 12.5$                            | 10                       | 8               | 6          | 4      | 3                  | 3   | 3               | 3            | 6   |           |                 |                        |                        |                 |   |   |                          |      |      |      |      |   |   |                  |      |           |                    |      |      |      |      |      |      |      |   |   |              |                 |    |   |   |   |   |   |   |   |   |           |                    |    |   |   |   |   |   |   |   |   |
| Endurance                                  | <table border="1"> <tr> <td>Test Time</td> <td colspan="2">2,000 Hrs</td> </tr> <tr> <td>Capacitance Change</td> <td colspan="2">Within ±25% of initial value for <math>\phi D \leq 6.3</math>mm;<br/>Within ±20% of initial value for <math>\phi D \geq 8</math>mm</td> </tr> <tr> <td>Tan<math>\delta</math></td> <td colspan="2">Less than 300% of specified value for <math>\phi D \leq 6.3</math>mm;<br/>Less than 200% of specified value for <math>\phi D \geq 8</math>mm</td> </tr> <tr> <td>Leakage Current</td> <td colspan="2">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 for 2,000 hours at 105°C.</p>  |   |                          | Test Time       | 2,000 Hrs  |        | Capacitance Change | Within ±25% of initial value for $\phi D \leq 6.3$ mm;<br>Within ±20% of initial value for $\phi D \geq 8$ mm |                 | Tan $\delta$ | Less than 300% of specified value for $\phi D \leq 6.3$ mm;<br>Less than 200% of specified value for $\phi D \geq 8$ mm |           | Leakage Current | Within specified value |                        |                 |   |   |                          |      |      |      |      |   |   |                  |      |           |                    |      |      |      |      |      |      |      |   |   |              |                 |    |   |   |   |   |   |   |   |   |           |                    |    |   |   |   |   |   |   |   |   |
| Test Time                                  | 2,000 Hrs   |   |                          |                 |            |        |                    |   |                 |              |   |           |                 |                        |                        |                 |   |   |                          |      |      |      |      |   |   |                  |      |           |                    |      |      |      |      |      |      |      |   |   |              |                 |    |   |   |   |   |   |   |   |   |           |                    |    |   |   |   |   |   |   |   |   |
| Capacitance Change                         | Within ±25% of initial value for $\phi D \leq 6.3$ mm;<br>Within ±20% of initial value for $\phi D \geq 8$ mm   |   |                          |                 |            |        |                    |   |                 |              |   |           |                 |                        |                        |                 |   |   |                          |      |      |      |      |   |   |                  |      |           |                    |      |      |      |      |      |      |      |   |   |              |                 |    |   |   |   |   |   |   |   |   |           |                    |    |   |   |   |   |   |   |   |   |
| Tan $\delta$                               | Less than 300% of specified value for $\phi D \leq 6.3$ mm;<br>Less than 200% of specified value for $\phi D \geq 8$ mm   |   |                          |                 |            |        |                    |   |                 |              |   |           |                 |                        |                        |                 |   |   |                          |      |      |      |      |   |   |                  |      |           |                    |      |      |      |      |      |      |      |   |   |              |                 |    |   |   |   |   |   |   |   |   |           |                    |    |   |   |   |   |   |   |   |   |
| Leakage Current                            | Within specified value  |   |                          |                 |            |        |                    |   |                 |              |   |           |                 |                        |                        |                 |   |   |                          |      |      |      |      |   |   |                  |      |           |                    |      |      |      |      |      |      |      |   |   |              |                 |    |   |   |   |   |   |   |   |   |           |                    |    |   |   |   |   |   |   |   |   |
| Shelf Life Test                            | Test time: 1,000 hours; other items are the same as those for the Endurance.<br>The rated voltage shall be applied to the capacitors before the measurements for 160 ~ 450V (Refer to JIS C 5101-4 4.1).  |   |                          |                 |            |        |                    |   |                 |              |   |           |                 |                        |                        |                 |   |   |                          |      |      |      |      |   |   |                  |      |           |                    |      |      |      |      |      |      |      |   |   |              |                 |    |   |   |   |   |   |   |   |   |           |                    |    |   |   |   |   |   |   |   |   |
| Ripple Current & Frequency Multipliers     | <table border="1"> <tr> <td rowspan="2">Cap. (<math>\mu</math>F)</td> <td>Freq. (Hz)</td> <td>50</td> <td>120</td> <td>1k</td> <td>10k up</td> </tr> <tr> <td>Under 1,000</td> <td>0.80</td> <td>1.00</td> <td>1.25</td> <td>1.40</td> </tr> <tr> <td>1,000 &lt; C <math>\leq</math> 8,200</td> <td></td> <td>0.85</td> <td>1.00</td> <td>1.15</td> <td>1.25</td> </tr> </table>  |   |                          | Cap. ( $\mu$ F) | Freq. (Hz) | 50     | 120                | 1k  | 10k up          | Under 1,000  | 0.80  | 1.00      | 1.25            | 1.40                   | 1,000 < C $\leq$ 8,200 |                 | 0.85  | 1.00  | 1.15                     | 1.25 |      |      |      |   |   |                  |      |           |                    |      |      |      |      |      |      |      |   |   |              |                 |    |   |   |   |   |   |   |   |   |           |                    |    |   |   |   |   |   |   |   |   |
| Cap. ( $\mu$ F)                            | Freq. (Hz)  | 50  | 120                      |                 | 1k         | 10k up |                    |   |                 |              |   |           |                 |                        |                        |                 |   |   |                          |      |      |      |      |   |   |                  |      |           |                    |      |      |      |      |      |      |      |   |   |              |                 |    |   |   |   |   |   |   |   |   |           |                    |    |   |   |   |   |   |   |   |   |
|  | Under 1,000   | 0.80  | 1.00                     | 1.25            | 1.40       |        |                    |   |                 |              |   |           |                 |                        |                        |                 |   |   |                          |      |      |      |      |   |   |                  |      |           |                    |      |      |      |      |      |      |      |   |   |              |                 |    |   |   |   |   |   |   |   |   |           |                    |    |   |   |   |   |   |   |   |   |
| 1,000 < C $\leq$ 8,200                     |   | 0.85  | 1.00                     | 1.15            | 1.25       |        |                    |   |                 |              |   |           |                 |                        |                        |                 |   |   |                          |      |      |      |      |   |   |                  |      |           |                    |      |      |      |      |      |      |      |   |   |              |                 |    |   |   |   |   |   |   |   |   |           |                    |    |   |   |   |   |   |   |   |   |

### Diagram of Dimensions

Fig. 1



Fig. 2



### Lead Spacing and Diameter

Unit: mm

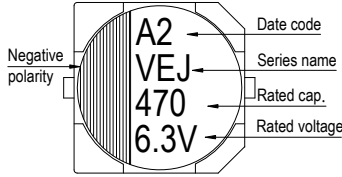
| $\phi D$ | L          | A    | B    | C    | W         | P ± 0.2 | Fig. No. |
|----------|------------|------|------|------|-----------|---------|----------|
| 4        | 5.7 ± 0.3  | 4.3  | 4.3  | 5.1  | 0.5 ~ 0.8 | 1.0     | 1        |
| 5        | 5.7 ± 0.3  | 5.3  | 5.3  | 5.9  | 0.5 ~ 0.8 | 1.5     | 1        |
| 6.3      | 5.7 ± 0.3  | 6.6  | 6.6  | 7.2  | 0.5 ~ 0.8 | 2.0     | 1        |
| 6.3      | 7.7 ± 0.3  | 6.6  | 6.6  | 7.2  | 0.5 ~ 0.8 | 2.0     | 1        |
| 8        | 6.5 ± 0.3  | 8.4  | 8.4  | 9.0  | 0.5 ~ 0.8 | 2.3     | 1        |
| 8        | 10 ± 0.5   | 8.4  | 8.4  | 9.0  | 0.7 ~ 1.1 | 3.1     | 1        |
| 10       | 7.7 ± 0.3  | 10.4 | 10.4 | 11.0 | 0.7 ~ 1.3 | 4.7     | 1        |
| 10       | 10 ± 0.5   | 10.4 | 10.4 | 11.0 | 0.7 ~ 1.3 | 4.7     | 1        |
| 12.5     | 13.5 ± 0.5 | 13.0 | 13.0 | 13.7 | 1.1 ~ 1.4 | 4.4     | 2        |
| 12.5     | 16 ± 0.5   | 13.0 | 13.0 | 13.7 | 1.1 ~ 1.4 | 4.4     | 2        |
| 16       | 16.5 ± 0.5 | 17.0 | 17.0 | 18.0 | 1.1 ~ 1.4 | 6.4     | 2        |
| 16       | 21.5 ± 0.5 | 17.0 | 17.0 | 18.0 | 1.1 ~ 1.4 | 6.4     | 2        |
| 18       | 16.5 ± 0.5 | 19.0 | 19.0 | 20.0 | 1.1 ~ 1.4 | 6.4     | 2        |
| 18       | 21.5 ± 0.5 | 19.0 | 19.0 | 20.0 | 1.1 ~ 1.4 | 6.4     | 2        |

## Marking

$\phi D \leq 6.3 \text{ mm}$



$\phi D = 8 \sim 10 \text{ mm}$



$\phi D \geq 12.5 \text{ mm}$



## Dimension & Permissible Ripple Current

Dimension:  $\phi D \times L$ (mm)

Ripple Current: mA/rms at 120 Hz, 105°C

| V. DC<br>$\mu\text{F}$ | 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         |
| 1                      | 010      |                    |                |                    |                |                    |                |                    |                |                   |          | 4×5.7             | 8        | 4×5.7             | 8        |                    |            |
| 2.2                    | 2R2      |                    |                |                    |                |                    |                |                    |                |                   |          | 4×5.7             | 12       | 4×5.7             | 12       |                    |            |
| 3.3                    | 3R3      |                    |                |                    |                |                    |                |                    |                |                   |          | 4×5.7             | 14       | 5×5.7             | 17       |                    |            |
| 4.7                    | 4R7      |                    |                |                    |                |                    |                | 4×5.7              | 17             | 4×5.7             | 17       | 5×5.7             | 20       | 6.3×5.7           | 22       |                    |            |
| 10                     | 100      |                    |                |                    |                | 4×5.7              | 20             | 4×5.7              | 20             | 5×5.7             | 27       | 6.3×5.7           | 32       | 6.3×5.7<br>8×6.5  | 32<br>51 |                    |            |
| 22                     | 220      | 4×5.7              | 22             | 4×5.7              | 22             | 5×5.7              | 30             | 5×5.7              | 30             | 6.3×5.7           | 44       | 6.3×5.7<br>8×6.5  | 38<br>67 | 6.3×7.7           | 58       | 8×10               | 100        |
| 33                     | 330      | 5×5.7              | 34             | 5×5.7              | 34             | 5×5.7              | 34             | 6.3×5.7            | 46             | 6.3×5.7<br>8×6.5  | 46<br>76 | 6.3×7.7           | 65       | 8×10              | 140      | 10×10              | 150        |
| 47                     | 470      | 5×5.7              | 38             | 5×5.7              | 38             | 6.3×5.7            | 48             | 6.3×5.7<br>8×6.5   | 48<br>79       | 6.3×7.7           | 80       | 6.3×7.7           | 70       | 8×10              | 170      | 12.5×13.5          | 250        |
| 100                    | 101      | 6.3×5.7            | 69             | 6.3×5.7<br>8×6.5   | 69<br>90       | 6.3×5.7            | 69             | 6.3×7.7            | 100            | 8×10              | 240      | 8×10              | 210      | 10×10             | 310      | 12.5×13.5          | 380        |
| 220                    | 221      | 6.3×7.7<br>8×6.5   | 120<br>120     | 6.3×7.7            | 120            | 6.3×7.7            | 120            | 8×10<br>10×7.7     | 270<br>270     | 8×10              | 270      | 10×10             | 330      | 12.5×13.5         | 470      | 16×16.5            | 450        |
| 330                    | 331      | 8×10               | 290            | 8×10<br>10×7.7     | 290<br>320     | 8×10<br>10×7.7     | 290<br>290     | 8×10               | 290            | 10×10             | 370      | 12.5×13.5         | 490      | 16×16.5           | 650      | 18×16.5<br>16×21.5 | 590<br>750 |
| 470                    | 471      | 8×10               | 320            | 8×10<br>10×7.7     | 320<br>320     | 10×10              | 380            | 10×10              | 380            | 12.5×13.5         | 520      | 12.5×16           | 550      | 16×16.5           | 700      | 18×21.5            | 980        |
| 1,000                  | 102      | 10×10              | 410            | 10×10              | 410            | 12.5×13.5          | 550            | 12.5×16            | 550            | 16×16.5           | 800      | 18×16.5           | 990      |                   |          |                    |            |
| 2,200                  | 222      | 12.5×13.5          | 680            | 12.5×13.5          | 680            | 16×16.5            | 900            | 16×16.5            | 900            | 18×16.5           | 1,050    |                   |          |                   |          |                    |            |
| 3,300                  | 332      | 12.5×16            | 850            | 16×16.5            | 950            | 16×16.5            | 950            | 18×16.5<br>16×21.5 | 1,150<br>1,200 |                   |          |                   |          |                   |          |                    |            |
| 4,700                  | 472      | 16×16.5            | 1,000          | 16×16.5            | 1,000          | 18×16.5<br>16×21.5 | 1,225<br>1,275 | 18×21.5            | 1,300          |                   |          |                   |          |                   |          |                    |            |
| 6,800                  | 682      | 18×16.5<br>16×21.5 | 1,290<br>1,350 | 18×16.5<br>16×21.5 | 1,290<br>1,350 |                    |                |                    |                |                   |          |                   |          |                   |          |                    |            |
| 8,200                  | 822      | 18×21.5            | 1,450          | 18×21.5            | 1,450          |                    |                |                    |                |                   |          |                   |          |                   |          |                    |            |

| V. DC<br>$\mu\text{F}$ | Contents | 160V (2C)         |     | 200V (2D)         |     | 250V (2E)         |     | 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  |
| 4.7                    | 4R7      |                   |     |                   |     | 12.5×13.5         | 65  | 12.5×13.5         | 45  | 12.5×13.5         | 45  |
| 10                     | 100      |                   |     | 12.5×13.5         | 80  | 12.5×13.5         | 70  | 12.5×13.5         | 50  | 12.5×16           | 75  |
| 22                     | 220      |                   |     | 12.5×16           | 110 | 12.5×13.5         | 105 | 16×16.5           | 85  | 16×16.5           | 85  |
| 33                     | 330      | 12.5×13.5         | 95  | 12.5×16           | 120 | 16×16.5           | 180 | 18×16.5           | 100 | 18×16.5           | 100 |
| 47                     | 470      | 16×16.5           | 240 | 16×16.5           | 220 | 16×16.5           | 220 | 18×21.5           | 130 |                   |     |
| 100                    | 101      | 16×16.5           | 250 | 18×16.5           | 280 | 18×16.5           | 260 |                   |     |                   |     |

## Part Numbering System

VEJ series    470 $\mu\text{F}$      $\pm 20\%$     6.3V    Carrier Tape    8 $\phi$ ×10L    Pb-free and PET coating case

**VEJ**    **471**    **M**    **OJ**    **TR**    -    **0810**

Series name    Capacitance    Capacitance Tolerance    Rated Voltage    Package Type    Terminal Type    Case size    Lead Wire and Coating Type

Note: For more details, please refer to "Part Numbering System (SMD Type)" on page 12.

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