Surface Mount Type
Series: FK

- **Features**
  - Low impedance (40 to 60% less than FC series)
  - Miniaturization (30 to 50% less than FC series)
  - Life time: 2000 to 5000 hours at 105°C

- **Specifications**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Temp. Range</td>
<td>-55 to +105°C</td>
</tr>
<tr>
<td>Rated W.V. Range</td>
<td>6.3 to 100 V. DC</td>
</tr>
<tr>
<td>Nominal Cap. Range</td>
<td>3.3 to 6800 µF</td>
</tr>
<tr>
<td>Capacitance Tolerance</td>
<td>±20% (120 Hz/+20°C)</td>
</tr>
<tr>
<td>Leakage Current</td>
<td>( I = 0.01 \text{ CV or } 3 \mu\text{A} ) (whichever is greater) after 2 minutes application of rated working voltage at +20°C</td>
</tr>
<tr>
<td>Dissipation Factor (tan ( \delta ))</td>
<td>Add 0.02 per 1000 µF for products of 1000 µF or more (120 Hz/+20°C)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>W.V. (V.)</th>
<th>6.3</th>
<th>10</th>
<th>16</th>
<th>25</th>
<th>35</th>
<th>50</th>
<th>63</th>
<th>80</th>
<th>100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tan ( \delta ) (max)</td>
<td>0.26</td>
<td>0.19</td>
<td>0.16</td>
<td>0.14</td>
<td>0.12</td>
<td>0.10</td>
<td>0.08</td>
<td>0.08</td>
<td>0.07</td>
</tr>
</tbody>
</table>

- **Endurance**
  - Capacitance Change: ±30% of initial measured value
  - D.F. (tan \( \delta \)): ≤200% of initial specified value
  - DC Leakage Current: ≤initial specified value

- **Shelf Life**
  - Capacitance Change: ±10% of initial measured value
  - D.F. (tan \( \delta \)): ≤initial specified value
  - DC Leakage Current: ≤initial specified value

- **Resistance to Soldering Heat**
  - Capacitance Change: ±30% of initial measured value
  - D.F. (tan \( \delta \)): ≤initial specified value
  - DC Leakage Current: ≤initial specified value

- **Marking**

- **Dimensions in mm (not to scale)**

- **Case Size**

<table>
<thead>
<tr>
<th>Case Size</th>
<th>W.V.(V)</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.3 (0J)</td>
<td>(A)</td>
</tr>
<tr>
<td>10 (1A)</td>
<td>(B)</td>
</tr>
<tr>
<td>16 (1B)</td>
<td>(C)</td>
</tr>
<tr>
<td>25 (1C)</td>
<td>(D)</td>
</tr>
<tr>
<td>35 (1D)</td>
<td>(E)</td>
</tr>
<tr>
<td>50 (1E)</td>
<td>(F)</td>
</tr>
<tr>
<td>63 (1F)</td>
<td>(G)</td>
</tr>
<tr>
<td>80 (1G)</td>
<td>(H)</td>
</tr>
<tr>
<td>100 (1H)</td>
<td>(I)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Size Code</th>
<th>φD</th>
<th>L</th>
<th>A</th>
<th>H</th>
<th>*I</th>
<th>W</th>
<th>*P</th>
<th>K</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>4.0</td>
<td>5.8</td>
<td>4.3</td>
<td>5.5</td>
<td>max</td>
<td>1.6</td>
<td>0.65±0.1</td>
<td>1.0</td>
</tr>
<tr>
<td>C</td>
<td>5.0</td>
<td>5.8</td>
<td>5.3</td>
<td>6.5</td>
<td>max</td>
<td>2.2</td>
<td>0.65±0.1</td>
<td>1.5</td>
</tr>
<tr>
<td>D</td>
<td>6.3</td>
<td>5.8</td>
<td>6.6</td>
<td>7.8</td>
<td>max</td>
<td>2.6</td>
<td>0.65±0.1</td>
<td>1.6</td>
</tr>
<tr>
<td>Dp</td>
<td>6.3</td>
<td>7.7</td>
<td>6.6</td>
<td>7.8</td>
<td>max</td>
<td>2.6</td>
<td>0.65±0.1</td>
<td>1.6</td>
</tr>
<tr>
<td>E</td>
<td>8.0</td>
<td>6.2</td>
<td>8.3</td>
<td>9.5</td>
<td>max</td>
<td>3.4</td>
<td>0.65±0.1</td>
<td>2.2</td>
</tr>
<tr>
<td>F</td>
<td>8.0</td>
<td>10.2</td>
<td>8.3</td>
<td>10.0</td>
<td>max</td>
<td>3.4</td>
<td>0.90±0.3</td>
<td>3.1</td>
</tr>
<tr>
<td>G</td>
<td>10.0</td>
<td>10.2</td>
<td>10.3</td>
<td>12.0</td>
<td>max</td>
<td>3.5</td>
<td>0.90±0.3</td>
<td>4.6</td>
</tr>
<tr>
<td>H13</td>
<td>12.5</td>
<td>13.5</td>
<td>15.0</td>
<td>15.9</td>
<td>max</td>
<td>4.7</td>
<td>0.90±0.3</td>
<td>4.4</td>
</tr>
<tr>
<td>J16</td>
<td>16</td>
<td>16.5</td>
<td>17.0</td>
<td>19.0</td>
<td>max</td>
<td>5.5</td>
<td>1.2±0.3</td>
<td>6.7</td>
</tr>
<tr>
<td>K16</td>
<td>18</td>
<td>16.5</td>
<td>19.0</td>
<td>21.0</td>
<td>max</td>
<td>6.7</td>
<td>1.2±0.3</td>
<td>6.7</td>
</tr>
</tbody>
</table>

*Just For Reference
## Aluminum Electrolytic Capacitors/FK Series

### Design and Specifications

**Design and specifications are subject to change without notice. Ask factory for technical specifications before purchase and/or use.**

Whenever a doubt about safety arises from this product, please contact us immediately for technical consultation.

---

### Capacitor Table

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>6.3</td>
<td>0.19</td>
<td>EEVFK122CR</td>
<td>90</td>
<td>1.35</td>
<td>4</td>
<td>5.8</td>
</tr>
<tr>
<td>10</td>
<td>0.19</td>
<td>EEVFK1220R</td>
<td>90</td>
<td>1.35</td>
<td>4</td>
<td>5.8</td>
</tr>
<tr>
<td>16</td>
<td>0.19</td>
<td>EEVFK1220R</td>
<td>90</td>
<td>1.35</td>
<td>4</td>
<td>5.8</td>
</tr>
<tr>
<td>25</td>
<td>0.19</td>
<td>EEVFK1220R</td>
<td>90</td>
<td>1.35</td>
<td>4</td>
<td>5.8</td>
</tr>
</tbody>
</table>

### Capacitance and Ripple Current

**Cap.**

- 22 EEVFK2A221M 0.07 917 0.153 18 16.5
- 100 EEVFK2A101P 0.07 793 0.17 16 16.5

**Ripple current = at 100kHz/+105°C**

### Impedance/ESR

- 10 EEVFK1K100XP 0.08 60 2.40 6.3 7.7
- 10 EEVFK1K100UR 0.08 60 2.40 6.3 7.7

### Impedance/ESR at 100kHz/20°C

- 10 EEVFK1K100UR 0.08 60 2.40 6.3 7.7

### Impedance/ESR at 100kHz/105°C

- 10 EEVFK1K100UR 0.08 60 2.40 6.3 7.7

### Impedance/ESR at 100kHz/105°C

- 10 EEVFK1K100UR 0.08 60 2.40 6.3 7.7

---

### Technical Specifications

- 2200 EEVFK2A221M 0.07 280 0.34 6.3 7.7
- 1500 EEVFK1V152M 0.12 1800 0.035 16 16.5

---

### Tan δ = at 120Hz/+20°C

### Ripple current = at 100kHz/+105°C

### Impedance/ESR = at 100kHz/20°C

---

**Panasonic**
Panasonic
Aluminum Electrolytic Capacitors/FK Series

- Frequency Characteristics (Impedance)

- **16WV**
  - EEVK1C100R (16V10µF, ø4x5.8)
  - EEVK1C220R (16V22µF, ø5x5.8)
  - EEVK1C470P (16V47µF, ø6.3x5.8)
  - EEVK1C221P (16V220µF, ø8x10.2)
  - EEVK1C681P (16V680µF, ø10x10.2)
  - EEVK1C152Q (16V1500µF, ø12.5x13.5)

- **35WV**
  - EEVK1V4R7R (35V4.7µF, ø4x5.8)
  - EEVK1V470P (35V47µF, ø6.3x5.8)
  - EEVK1V221P (35V220µF, ø8x10.2)
  - EEVK1V331P (35V330µF, ø10x10.2)

- **63WV**
  - EEVK1J4R7R (63V4.7µF, ø5x5.8)
  - EEVK1J100P (63V10µF, ø6.3x5.8)
  - EEVK1J330P (63V33µF, ø8x10.2)
  - EEVK1J470P (63V47µF, ø10x10.2)
  - EEVK1J331P (63V330µF, ø16x16.5)

- **80WV**
  - EEVK1K3R3R (80V3.3µF, ø5x5.8)
  - EEVK1K4R7P (80V4.7µF, ø6.3x5.8)
  - EEVK1K330P (80V33µF, ø8x10.2)
  - EEVK1K470P (80V47µF, ø10x10.2)
  - EEVK1K331P (80V330µF, ø16x16.5)

Design and specifications are subject to change without notice. Ask factory for technical specifications before purchase and/or use. Whenever a doubt about safety arises from this product, please contact us immediately for technical consultation.
Panasonic
Aluminum Electrolytic Capacitors/FK Series

- Frequency Characteristics (ESR)
  - 16WV
  - 35WV
  - 63WV
  - 80WV

Design and specifications are subject to change without notice. Ask factory for technical specifications before purchase and/or use. Whenever a doubt about safety arises from this product, please contact us immediately for technical consultation.
Temperature Characteristics

- **ø6.3 x 5.8**
  - EEVK0J101R (6.3V100μF, ø6.3x5.8)
  - EEVK1C470P (16V47μF, ø6.3x5.8)
  - EEVK1J100P (63V10μF, ø6.3x5.8)
  - EEVK1K4R7P (80V4.7μF, ø6.3x5.8) at 120Hz

- **ø8 x 10.2**
  - EEVK0J102P (6.3V1000μF, ø8x10.2)
  - EEVK1V221P (35V220μF, ø8x10.2)
  - EEVK1J470P (63V33μF, ø8x10.2)
  - EEVK1K330P (80V33μF, ø8x10.2) at 120Hz

Design and specifications are subject to change without notice. Ask factory for technical specifications before purchase and/or use. Whenever a doubt about safety arises from this product, please contact us immediately for technical consultation.
Load Life

- EEVF0J220R (6.3V22µF, ø4x5.8)
- EEVF0J101P (6.3V100µF, ø6.3x5.8)
- EEVF0J152P (6.3V1500µF, ø10x10.2) at 105ºC