**CONDUCTIVE POLYMER ALUMINUM SOLID ELECTROLYTIC CAPACITORS**

**RPS / RPA**

- High voltage (to 63V), Low ESR, High ripple current.
- Load life of 2000 hours at 105°C.
- SMD type : Lead free reflow soldering condition at 260°C peak correspondence.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).

### Specifications

<table>
<thead>
<tr>
<th>Item</th>
<th>Performance Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category Temperature Range</td>
<td>–55 to +105°C</td>
</tr>
<tr>
<td>Rated Voltage Range</td>
<td>2.5 to 63V</td>
</tr>
<tr>
<td>Rated Capacitance Range</td>
<td>8.2 to 1500µF</td>
</tr>
<tr>
<td>Capacitance Tolerance</td>
<td>±20% at 120°C, 20°C</td>
</tr>
<tr>
<td>Tangent of loss angle (tan δ)</td>
<td>Less than or equal to the specified value at 120Hz, 20°C</td>
</tr>
<tr>
<td>ESR (≥1)</td>
<td>150% or less than the initial specified value</td>
</tr>
<tr>
<td>Leakage Current (≥2)</td>
<td>Less than or equal to the specified value. After 2 minutes’ application of rated voltage at 20°C</td>
</tr>
</tbody>
</table>

1. ESR should be measured at both of the terminal ends closest where the terminals protrude through the plastic platform.
2. Conditioning : If any doubt arises, measure the leakage current after the voltage treatment of applying DC rated voltage continuously to the capacitor for 120 minutes at 105°C.

### Dimensions

**Type numbering system** (Example : 63V 56µF)

- **Nichicon part number**
- **FPCAP part number**

### Frequency coefficient of rated ripple current

<table>
<thead>
<tr>
<th>Frequency</th>
<th>120Hz</th>
<th>1 kHz</th>
<th>10 kHz</th>
<th>100 kHz</th>
<th>300 kHz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coefficient</td>
<td>0.10</td>
<td>0.45</td>
<td>0.50</td>
<td>1.00</td>
<td>1.00</td>
</tr>
</tbody>
</table>

- **Dimension table in next page.**

---

**Remarks**

- Standard: (±0.3, ±0.4) 10%
- For SMD: High Ripple Current, Low ESR, High Frequency, Ample Volt Feature
- RPS: Lower ESR
- RPA: Lower ESR

---

**FPCAP**

- High Ripple Current, Low ESR, High Frequency, Ample Volt Feature
- RPS: Lower ESR
- RPA: Lower ESR
### RPS / RPA

#### Dimensions

<table>
<thead>
<tr>
<th>Rated Voltage (V)</th>
<th>Surge Voltage (V)</th>
<th>Rated Capacitance (µF)</th>
<th>Case Size (ØxL, mm)</th>
<th>tan δ</th>
<th>Leakage Current (mA, 20°C/100Hz)</th>
<th>ESR (mΩ)</th>
<th>Rated Ripple Current (mArms)</th>
<th>NICHICON</th>
<th>FPCAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.5 (0E)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>680</td>
<td>8.5x11.7</td>
<td>0.12</td>
<td>425</td>
<td>13</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1500</td>
<td>10x12.4</td>
<td>0.12</td>
<td>938</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100</td>
<td>6.3x5.7</td>
<td>0.12</td>
<td>80</td>
<td>35</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>220</td>
<td>8.5x6.7</td>
<td>0.12</td>
<td>176</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>330</td>
<td>8.5x6.7</td>
<td>0.12</td>
<td>264</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>470</td>
<td>10x7.7</td>
<td>0.12</td>
<td>376</td>
<td>22</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>560</td>
<td>8x11.7</td>
<td>0.12</td>
<td>448</td>
<td>13</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>560</td>
<td>8x11.7</td>
<td>0.12</td>
<td>448</td>
<td>9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>680</td>
<td>10x7.7</td>
<td>0.12</td>
<td>544</td>
<td>22</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1200</td>
<td>10x12.4</td>
<td>0.12</td>
<td>960</td>
<td>12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100</td>
<td>6.3x5.7</td>
<td>0.12</td>
<td>103</td>
<td>35</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>150</td>
<td>8x6.7</td>
<td>0.12</td>
<td>189</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>180</td>
<td>8x6.7</td>
<td>0.12</td>
<td>227</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>330</td>
<td>10x7.7</td>
<td>0.12</td>
<td>416</td>
<td>22</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>470</td>
<td>8x11.7</td>
<td>0.15</td>
<td>592</td>
<td>15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>470</td>
<td>10x7.7</td>
<td>0.12</td>
<td>592</td>
<td>18</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>560</td>
<td>8x11.7</td>
<td>0.15</td>
<td>706</td>
<td>14</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>680</td>
<td>10x12.4</td>
<td>0.15</td>
<td>643</td>
<td>13</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>820</td>
<td>10x12.4</td>
<td>0.15</td>
<td>775</td>
<td>12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1000</td>
<td>10x12.4</td>
<td>0.15</td>
<td>945</td>
<td>12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>47</td>
<td>6.3x5.7</td>
<td>0.12</td>
<td>94</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>56</td>
<td>6.3x5.7</td>
<td>0.12</td>
<td>112</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>120</td>
<td>8x6.7</td>
<td>0.12</td>
<td>240</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>270</td>
<td>10x7.7</td>
<td>0.12</td>
<td>540</td>
<td>25</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>330</td>
<td>8x11.7</td>
<td>0.15</td>
<td>660</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>330</td>
<td>10x7.7</td>
<td>0.15</td>
<td>660</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>560</td>
<td>10x12.4</td>
<td>0.15</td>
<td>840</td>
<td>13</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>33</td>
<td>6.3x5.7</td>
<td>0.10</td>
<td>211</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>39</td>
<td>6.3x5.7</td>
<td>0.10</td>
<td>125</td>
<td>45</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>39</td>
<td>6.3x5.7</td>
<td>0.10</td>
<td>125</td>
<td>24</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>56</td>
<td>8x6.7</td>
<td>0.10</td>
<td>179</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>82</td>
<td>8x6.7</td>
<td>0.10</td>
<td>262</td>
<td>12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100</td>
<td>10x7.7</td>
<td>0.10</td>
<td>320</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>150</td>
<td>10x7.7</td>
<td>0.10</td>
<td>480</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>180</td>
<td>8x11.7</td>
<td>0.12</td>
<td>576</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>180</td>
<td>10x7.7</td>
<td>0.12</td>
<td>576</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>220</td>
<td>8x11.7</td>
<td>0.12</td>
<td>704</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>220</td>
<td>10x7.7</td>
<td>0.12</td>
<td>704</td>
<td>22</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>220</td>
<td>8x11.7</td>
<td>0.12</td>
<td>864</td>
<td>14</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>330</td>
<td>10x12.4</td>
<td>0.12</td>
<td>792</td>
<td>16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>470</td>
<td>10x12.4</td>
<td>0.12</td>
<td>1504</td>
<td>9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>820</td>
<td>10x12.4</td>
<td>0.12</td>
<td>2640</td>
<td>18</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1000</td>
<td>10x12.4</td>
<td>0.12</td>
<td>3200</td>
<td>12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>10x12.4</td>
<td>0.10</td>
<td>2240</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>8x6.7</td>
<td>0.12</td>
<td>275</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100</td>
<td>8x11.7</td>
<td>0.10</td>
<td>500</td>
<td>24</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>220</td>
<td>8x11.7</td>
<td>0.12</td>
<td>1100</td>
<td>18</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>330</td>
<td>10x12.4</td>
<td>0.08</td>
<td>1650</td>
<td>14</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>390</td>
<td>10x12.4</td>
<td>0.12</td>
<td>1950</td>
<td>16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>35</td>
<td>10x12.4</td>
<td>0.12</td>
<td>1050</td>
<td>28</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50</td>
<td>10x12.4</td>
<td>0.12</td>
<td>1200</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>6.3x5.7</td>
<td>0.12</td>
<td>220</td>
<td>37</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>8x6.7</td>
<td>0.12</td>
<td>330</td>
<td>32</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>33</td>
<td>10x7.7</td>
<td>0.12</td>
<td>390</td>
<td>26</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>47</td>
<td>8x11.7</td>
<td>0.15</td>
<td>470</td>
<td>26</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>82</td>
<td>10x12.4</td>
<td>0.15</td>
<td>820</td>
<td>23</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.2</td>
<td>6.3x5.7</td>
<td>0.12</td>
<td>103</td>
<td>41</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>8x6.7</td>
<td>0.12</td>
<td>151</td>
<td>38</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>33</td>
<td>8x11.7</td>
<td>0.15</td>
<td>277</td>
<td>33</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>56</td>
<td>10x12.4</td>
<td>0.12</td>
<td>706</td>
<td>24</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Taping specifications are given on page 28.
- Recommended land size, soldering by reflow are given in page 25.
- Please refer to page 3 for the minimum order quantity.
- * : Load life 5000hours.
CONDUCTIVE POLYMER ALUMINUM SOLID ELECTROLYTIC CAPACITORS

RHS / RHA

- Low ESR, High Capacitance, High ripple current.
- Load life of 2000 hours at 105°C.
- SMD type: Lead free reflow soldering condition at 260°C peak correspondence.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).

Specifications

<table>
<thead>
<tr>
<th>Item</th>
<th>Performance Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category Temperature Range</td>
<td>–55 to +105°C</td>
</tr>
<tr>
<td>Rated Voltage Range</td>
<td>2.5 to 35V</td>
</tr>
<tr>
<td>Rated Capacitance Range</td>
<td>56 to 1500µF</td>
</tr>
<tr>
<td>Capacitance Tolerance</td>
<td>±20% at 120Hz, 20°C</td>
</tr>
<tr>
<td>Tangent of loss angle (tan δ)</td>
<td>Less than or equal to the specified value at 120Hz, 20°C</td>
</tr>
<tr>
<td>ESR (†1)</td>
<td>Less than or equal to the specified value at 100kHz, 20°C</td>
</tr>
<tr>
<td>Leakage Current (†2)</td>
<td>Less than or equal to the specified value. After 2 minutes' application of rated voltage at 20°C</td>
</tr>
</tbody>
</table>

Endurance

- Test condition: 105°C, rated voltage 2000Hrs.
- Capacitance change: Within ±20% of initial value before test
- tan δ: 150% or less than the initial specified value
- ESR (†1): 150% or less than the initial specified value
- Leakage current (†2): Less than or equal to the initial specified value

*** ESR should be measured at both of the terminal ends closest where the terminals protrude through the plastic platform.

*** Conditioning: If any doubt arises, measure the leakage current after the voltage treatment of applying DC rated voltage continuously to the capacitor for 120 minutes at 105°C.

Dimensions

Type numbering system (Example: 6.3V 390µF)

Nichicon part number

FPCAP part number

- Frequency coefficient of rated ripple current

<table>
<thead>
<tr>
<th>Frequency</th>
<th>120Hz</th>
<th>1kHz</th>
<th>10kHz</th>
<th>100kHz</th>
<th>300kHz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coefficient</td>
<td>0.10</td>
<td>0.45</td>
<td>0.50</td>
<td>1.00</td>
<td>1.00</td>
</tr>
</tbody>
</table>

Dimension table in next page.
## RHS / RHA

### Dimensions

<table>
<thead>
<tr>
<th>Rated Voltage (V)</th>
<th>Surge Voltage (V)</th>
<th>Rated Capacitance (µF)</th>
<th>Case Size 4D x L (mm)</th>
<th>tan δ</th>
<th>Leakage Current (µA, 2min)</th>
<th>ESR (mΩ)</th>
<th>Rated Ripple Current (mArms)</th>
<th>NICHICON</th>
<th>FPCAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>25 (0E)</td>
<td>2.8</td>
<td>680</td>
<td>8 x 6.7</td>
<td>0.12</td>
<td>700</td>
<td>8</td>
<td>5000</td>
<td>RHA0E681MCN1GS</td>
<td>FP-2R5ME681M-HAR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>820</td>
<td>8 x 11.7</td>
<td>0.12</td>
<td>700</td>
<td>9</td>
<td>5400</td>
<td>RHA0E821MCN1GS</td>
<td>FP-2R5ME821M-HSR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>820</td>
<td>8 x 6.7</td>
<td>0.12</td>
<td>700</td>
<td>8</td>
<td>5000</td>
<td>RHA0E821MCN1GS</td>
<td>FP-2R5ME821M-HAR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1000</td>
<td>8 x 7.7</td>
<td>0.12</td>
<td>750</td>
<td>8</td>
<td>5000</td>
<td>RHA0E102MCN1GS</td>
<td>FP-2R5ME102M-HAR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1500</td>
<td>8 x 11.7</td>
<td>0.12</td>
<td>1125</td>
<td>9</td>
<td>5400</td>
<td>RHS0E152MCN1GS</td>
<td>FP-2R5ME152M-HSR</td>
</tr>
<tr>
<td>4.0 (0G)</td>
<td>4.6</td>
<td>560</td>
<td>8 x 6.7</td>
<td>0.12</td>
<td>700</td>
<td>16</td>
<td>3200</td>
<td>RHA0G681MCN1GS</td>
<td>FP-4R0ME681M-HAR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>560</td>
<td>8 x 6.7</td>
<td>0.12</td>
<td>700</td>
<td>8</td>
<td>5000</td>
<td>RHA0G681MCN1GS</td>
<td>FP-4R0ME681M-HAR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>680</td>
<td>8 x 7.7</td>
<td>0.12</td>
<td>816</td>
<td>8</td>
<td>5000</td>
<td>RHA0G681MCN1GS</td>
<td>FP-4R0ME681M-HAR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1200</td>
<td>8 x 11.7</td>
<td>0.12</td>
<td>1440</td>
<td>9</td>
<td>5400</td>
<td>RHA0G122MCN1GS</td>
<td>FP-4R0ME122M-HSR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1500</td>
<td>8 x 11.7</td>
<td>0.12</td>
<td>1800</td>
<td>12</td>
<td>4700</td>
<td>RHA0G152MCN1GS</td>
<td>FP-4R0ME152M-HAR</td>
</tr>
<tr>
<td>6.3 (0J)</td>
<td>7.2</td>
<td>330</td>
<td>8 x 6.7</td>
<td>0.12</td>
<td>700</td>
<td>9</td>
<td>4500</td>
<td>RHA0J331MCN1GS</td>
<td>FP-6R3ME331M-HAR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>390</td>
<td>8 x 6.7</td>
<td>0.12</td>
<td>737</td>
<td>18</td>
<td>3200</td>
<td>RHA0J391MCN1GS</td>
<td>FP-6R3ME391M-HAR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>390</td>
<td>8 x 6.7</td>
<td>0.12</td>
<td>737</td>
<td>9</td>
<td>4500</td>
<td>RHA0J391MCN1GS</td>
<td>FP-6R3ME391M-HAR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>470</td>
<td>8 x 6.7</td>
<td>0.12</td>
<td>888</td>
<td>9</td>
<td>4500</td>
<td>RHA0J471MCN1GS</td>
<td>FP-6R3ME471M-HAR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>560</td>
<td>8 x 7.7</td>
<td>0.12</td>
<td>1058</td>
<td>9</td>
<td>4500</td>
<td>RHA0J561MCN1GS</td>
<td>FP-6R3ME561M-HAR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>820</td>
<td>8 x 11.7</td>
<td>0.12</td>
<td>1550</td>
<td>10</td>
<td>5150</td>
<td>RHA0J821MCN1GS</td>
<td>FP-6R3ME821M-HAR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1000</td>
<td>8 x 11.7</td>
<td>0.12</td>
<td>1890</td>
<td>10</td>
<td>5150</td>
<td>RHS0J102MCN1GS</td>
<td>FP-6R3ME102M-HAR</td>
</tr>
<tr>
<td>10 (1A)</td>
<td>11.5</td>
<td>150</td>
<td>8 x 6.7</td>
<td>0.12</td>
<td>700</td>
<td>25</td>
<td>3000</td>
<td>RHA1A151MCN1GS</td>
<td>FP-010ME151M-HSR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>330</td>
<td>8 x 7.7</td>
<td>0.12</td>
<td>660</td>
<td>19</td>
<td>3390</td>
<td>RHA1A331MCN1GS</td>
<td>FP-010ME331M-HSR</td>
</tr>
<tr>
<td>16 (1C)</td>
<td>18.4</td>
<td>150</td>
<td>8 x 6.7</td>
<td>0.12</td>
<td>700</td>
<td>22</td>
<td>3220</td>
<td>RHA1C151MCN1GS</td>
<td>FP-016ME151M-HAR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>270</td>
<td>8 x 6.7</td>
<td>0.12</td>
<td>864</td>
<td>22</td>
<td>3300</td>
<td>RHA1C271MCN1GS</td>
<td>FP-016ME271M-HAR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>560</td>
<td>8 x 11.7</td>
<td>0.12</td>
<td>1792</td>
<td>14</td>
<td>4950</td>
<td>RHA1C561MCN1GS</td>
<td>FP-016ME561M-HSR</td>
</tr>
<tr>
<td>20 (1D)</td>
<td>23.0</td>
<td>390</td>
<td>8 x 11.7</td>
<td>0.12</td>
<td>1560</td>
<td>14</td>
<td>4950</td>
<td>RHS1D391MCN1GS</td>
<td>FP-020ME391M-HSR</td>
</tr>
<tr>
<td>25 (1E)</td>
<td>28.7</td>
<td>100</td>
<td>8 x 8.7</td>
<td>0.12</td>
<td>700</td>
<td>18</td>
<td>4000</td>
<td>RHS1E101MCN1GS</td>
<td>FP-025ME101M-HSR</td>
</tr>
<tr>
<td>35 (1V)</td>
<td>40.2</td>
<td>56</td>
<td>8 x 8.7</td>
<td>0.12</td>
<td>392</td>
<td>25</td>
<td>3000</td>
<td>RHS1V560MCN1GS</td>
<td>FP-035ME560M-HSR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>100</td>
<td>8 x 8.7</td>
<td>0.12</td>
<td>700</td>
<td>25</td>
<td>3000</td>
<td>RHS1V101MCN1GS</td>
<td>FP-035ME101M-HSR</td>
</tr>
</tbody>
</table>

### Frequency Characteristics

(The frequency characteristics are typical and not a guaranteed value.)

![Impedance vs Frequency](image)

- Taping specifications are given in page 28.
- Recommended land size, soldering by reflow are given in page 25.
- Please refer to page 3 for the minimum order quantity.
CONDUCTIVE POLYMER ALUMINUM SOLID ELECTROLYTIC CAPACITORS

RSS/RSA/RSB

High Capacitance

- Low ESR, High Capacitance, High ripple current.
- Load life of 2000 hours at 105°C.
- SMD type: Lead free reflow soldering condition at 260°C peak correspondence.

Low ESR, High Capacitance, High ripple current.
Load life of 2000 hours at 105°C.
SMD type: Lead free reflow soldering condition at 260°C peak correspondence.

Specifications

<table>
<thead>
<tr>
<th>Item</th>
<th>Performance Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category Temperature Range</td>
<td>–55 to +105°C</td>
</tr>
<tr>
<td>Rated Voltage Range</td>
<td>2.5 to 35V</td>
</tr>
<tr>
<td>Rated Capacitance Range</td>
<td>10 to 820μF</td>
</tr>
<tr>
<td>Capacitance Tolerance</td>
<td>±20% at 120Hz, 20°C</td>
</tr>
<tr>
<td>Tangent of loss angle (tan δ)</td>
<td>Less than or equal to the specified value at 120Hz, 20°C</td>
</tr>
<tr>
<td>ESR (±1)</td>
<td>Less than or equal to the specified value at 100kHz, 20°C</td>
</tr>
<tr>
<td>Leakage Current (±2)</td>
<td>Less than or equal to the specified value. After 2 minutes' application of rated voltage at 20°C</td>
</tr>
</tbody>
</table>

Endurance

- Test condition: 105°C, rated voltage 2000Hrs.
- Capacitance change: Within ±20% of initial value before test
- tan δ: 150% or less than the initial specified value
- ESR (±1): 150% or less than the initial specified value
- Leakage current (±2): Less than or equal to the initial specified value

Notes:

1. ESR should be measured at both of the terminal ends closest where the terminals protrude through the plastic platform.
2. Conditioning: If any doubt arises, measure the leakage current after the voltage treatment of applying DC rated voltage continuously to the capacitor for 120 minutes at 105°C.

Dimensions

<table>
<thead>
<tr>
<th>D × L</th>
<th>W</th>
<th>H</th>
<th>C</th>
<th>R</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.3 × 5.7</td>
<td>6.5</td>
<td>6.5</td>
<td>7.2</td>
<td>0.5 to 0.9</td>
<td>2.1</td>
</tr>
<tr>
<td>6.3 × 7.7</td>
<td>6.5</td>
<td>6.5</td>
<td>7.2</td>
<td>0.5 to 0.9</td>
<td>2.1</td>
</tr>
</tbody>
</table>

Frequency coefficient of rated ripple current

<table>
<thead>
<tr>
<th>Frequency</th>
<th>120Hz</th>
<th>1kHz</th>
<th>10kHz</th>
<th>100kHz</th>
<th>1000kHz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coefficient</td>
<td>0.10</td>
<td>0.45</td>
<td>0.50</td>
<td>1.00</td>
<td>1.00</td>
</tr>
</tbody>
</table>

Type numbering system (Example: 25V 47μF) Nichicon part number

- Taping code
- Control code
- Configuration
- Capacitance tolerance (±20%)
- Rated capacitance (47μF)
- Rated voltage (25V)
- Series name
- Type

FP CAP part number

<table>
<thead>
<tr>
<th>Taping code</th>
<th>Control code</th>
<th>Configuration</th>
<th>Capacitance tolerance (±20%)</th>
<th>Rated capacitance (47μF)</th>
<th>Rated voltage (25V)</th>
<th>Series name</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Series name</td>
<td>Type</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FPCAP part number</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Dimensions

<table>
<thead>
<tr>
<th>Rated Voltage (V)</th>
<th>Surge Voltage (V)</th>
<th>Rated Capacitance (μF)</th>
<th>Case Size (D x L (mm))</th>
<th>tan δ</th>
<th>Leakage Current (μA, 2min.)</th>
<th>ESR (mΩ)</th>
<th>Rated Ripple Current (mAmps)</th>
<th>NICHICON</th>
<th>FPCAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.5 (0E)</td>
<td>2.8</td>
<td>330</td>
<td>6.3 x 5.7</td>
<td>0.12</td>
<td>700</td>
<td>14</td>
<td>3160</td>
<td>RSA0E331MCN1GS</td>
<td>FP-2R5ME331M-SAR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>390</td>
<td>6.3 x 5.7</td>
<td>0.12</td>
<td>700</td>
<td>14</td>
<td>3160</td>
<td>RSA0E391MCN1GS</td>
<td>FP-2R5ME391M-SAR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>390</td>
<td>6.3 x 5.7</td>
<td>0.12</td>
<td>700</td>
<td>10</td>
<td>3650</td>
<td>RSB0E391MCN1GS</td>
<td>FP-2R5ME391M-SBR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>470</td>
<td>6.3 x 5.7</td>
<td>0.12</td>
<td>700</td>
<td>13</td>
<td>3600</td>
<td>RSA0E471MCN1GS</td>
<td>FP-2R5ME471M-SAR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>560</td>
<td>6.3 x 5.7</td>
<td>0.12</td>
<td>700</td>
<td>25</td>
<td>2500</td>
<td>RSB0E561MCN1GS</td>
<td>FP-2R5ME561M-SSR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>560</td>
<td>6.3 x 5.7</td>
<td>0.12</td>
<td>700</td>
<td>13</td>
<td>3600</td>
<td>RSA0E561MCN1GS</td>
<td>FP-2R5ME561M-SAR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>620</td>
<td>6.3 x 7.7</td>
<td>0.12</td>
<td>700</td>
<td>10</td>
<td>3800</td>
<td>RSB0E561MCN1GS</td>
<td>FP-2R5ME561M-SBR</td>
</tr>
<tr>
<td>4.0 (0G)</td>
<td>4.6</td>
<td>330</td>
<td>6.3 x 5.7</td>
<td>0.12</td>
<td>700</td>
<td>14</td>
<td>4300</td>
<td>RSA0E821MCN1GS</td>
<td>FP-2R5ME821M-SAR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>330</td>
<td>6.3 x 5.7</td>
<td>0.12</td>
<td>700</td>
<td>11</td>
<td>3700</td>
<td>RSA0G331MCN1GS</td>
<td>FP-4R0ME331M-SAR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>390</td>
<td>6.3 x 5.7</td>
<td>0.12</td>
<td>700</td>
<td>14</td>
<td>3160</td>
<td>RSA0G391MCN1GS</td>
<td>FP-4R0ME391M-SAR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>100</td>
<td>6.3 x 5.7</td>
<td>0.12</td>
<td>700</td>
<td>25</td>
<td>2500</td>
<td>RSS0J101MCN1GS</td>
<td>FP-6R3ME101M-SSR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>220</td>
<td>6.3 x 5.7</td>
<td>0.12</td>
<td>700</td>
<td>25</td>
<td>2500</td>
<td>RSS0J221MCN1GS</td>
<td>FP-6R3ME221M-SSR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>220</td>
<td>6.3 x 5.7</td>
<td>0.12</td>
<td>700</td>
<td>15</td>
<td>3160</td>
<td>RSA0J221MCN1GS</td>
<td>FP-6R3ME221M-SAR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>220</td>
<td>6.3 x 5.7</td>
<td>0.12</td>
<td>700</td>
<td>12</td>
<td>3500</td>
<td>RSA0J221MCN1GS</td>
<td>FP-6R3ME221M-SBR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>270</td>
<td>6.3 x 5.7</td>
<td>0.12</td>
<td>700</td>
<td>14</td>
<td>3160</td>
<td>RSA0J271MCN1GS</td>
<td>FP-6R3ME271M-SAR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>330</td>
<td>6.3 x 5.7</td>
<td>0.12</td>
<td>700</td>
<td>25</td>
<td>2500</td>
<td>RSS0J331MCN1GS</td>
<td>FP-6R3ME331M-SSR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>330</td>
<td>6.3 x 5.7</td>
<td>0.12</td>
<td>700</td>
<td>14</td>
<td>3160</td>
<td>RSA0J331MCN1GS</td>
<td>FP-6R3ME331M-SSR</td>
</tr>
<tr>
<td>10 (1A)</td>
<td>11.5</td>
<td>120</td>
<td>6.3 x 5.7</td>
<td>0.12</td>
<td>700</td>
<td>18</td>
<td>2900</td>
<td>RSA1A121MCN1GS</td>
<td>FP-010ME121M-SAR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>220</td>
<td>6.3 x 5.7</td>
<td>0.12</td>
<td>700</td>
<td>20</td>
<td>3000</td>
<td>RSA12A221MCN1GS</td>
<td>FP-010ME221M-SAR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>220</td>
<td>6.3 x 5.7</td>
<td>0.12</td>
<td>700</td>
<td>24</td>
<td>2490</td>
<td>RSS1C101MCN1GS</td>
<td>FP-016ME101M-SSR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>220</td>
<td>6.3 x 7.7</td>
<td>0.12</td>
<td>700</td>
<td>24</td>
<td>2700</td>
<td>RSA1C101MCN1GS</td>
<td>FP-016ME101M-SAR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>270</td>
<td>6.3 x 7.7</td>
<td>0.12</td>
<td>704</td>
<td>20</td>
<td>3500</td>
<td>RSA1C221MCN1GS</td>
<td>FP-016ME221M-SAR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>270</td>
<td>6.3 x 7.7</td>
<td>0.12</td>
<td>864</td>
<td>15</td>
<td>3800</td>
<td>RSA1C271MCN1GS</td>
<td>FP-016ME271M-SAR</td>
</tr>
<tr>
<td>16 (1C)</td>
<td>18.4</td>
<td>150</td>
<td>6.3 x 7.7</td>
<td>0.12</td>
<td>600</td>
<td>25</td>
<td>3200</td>
<td>RSA1D151MCN1GS</td>
<td>FP-020ME151M-SAR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10</td>
<td>6.3 x 5.7</td>
<td>0.12</td>
<td>100</td>
<td>60</td>
<td>1700</td>
<td>RSS1E100MCN1GS</td>
<td>FP-025ME100M-SSR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>22</td>
<td>6.3 x 5.7</td>
<td>0.12</td>
<td>110</td>
<td>40</td>
<td>2100</td>
<td>RSS1E220MCN1GS</td>
<td>FP-025ME220M-SSR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>27</td>
<td>6.3 x 5.7</td>
<td>0.12</td>
<td>135</td>
<td>40</td>
<td>2600</td>
<td>RSS1E270MCN1GS</td>
<td>FP-025ME270M-SSR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>47</td>
<td>6.3 x 5.7</td>
<td>0.12</td>
<td>235</td>
<td>30</td>
<td>2800</td>
<td>RSS1E470MCN1GS</td>
<td>FP-025ME470M-SSR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>56</td>
<td>6.3 x 5.7</td>
<td>0.12</td>
<td>280</td>
<td>30</td>
<td>2800</td>
<td>RSS1E560MCN1GS</td>
<td>FP-025ME560M-SSR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>68</td>
<td>6.3 x 5.7</td>
<td>0.12</td>
<td>340</td>
<td>30</td>
<td>2800</td>
<td>RSS1E680MCN1GS</td>
<td>FP-025ME680M-SSR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>100</td>
<td>6.3 x 7.7</td>
<td>0.12</td>
<td>500</td>
<td>22</td>
<td>3100</td>
<td>RSA1E101MCN1GS</td>
<td>FP-025ME101M-SAR</td>
</tr>
<tr>
<td>25 (1E)</td>
<td>28.7</td>
<td>10</td>
<td>6.3 x 5.7</td>
<td>0.12</td>
<td>100</td>
<td>60</td>
<td>1700</td>
<td>RSS1V100MCN1GS</td>
<td>FP-035ME100M-SSR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>27</td>
<td>6.3 x 5.7</td>
<td>0.12</td>
<td>110</td>
<td>40</td>
<td>2100</td>
<td>RSS1V220MCN1GS</td>
<td>FP-035ME220M-SSR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>27</td>
<td>6.3 x 5.7</td>
<td>0.12</td>
<td>135</td>
<td>40</td>
<td>2600</td>
<td>RSS1V270MCN1GS</td>
<td>FP-035ME270M-SSR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>47</td>
<td>6.3 x 5.7</td>
<td>0.12</td>
<td>235</td>
<td>30</td>
<td>2800</td>
<td>RSS1V470MCN1GS</td>
<td>FP-035ME470M-SSR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>56</td>
<td>6.3 x 5.7</td>
<td>0.12</td>
<td>280</td>
<td>30</td>
<td>2800</td>
<td>RSS1V560MCN1GS</td>
<td>FP-035ME560M-SSR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>68</td>
<td>6.3 x 5.7</td>
<td>0.12</td>
<td>340</td>
<td>30</td>
<td>2800</td>
<td>RSS1V680MCN1GS</td>
<td>FP-035ME680M-SSR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>100</td>
<td>6.3 x 7.7</td>
<td>0.12</td>
<td>500</td>
<td>22</td>
<td>3100</td>
<td>RSA1V101MCN1GS</td>
<td>FP-035ME101M-SAR</td>
</tr>
</tbody>
</table>

### Frequency Characteristics

The frequency characteristics are typical and not guaranteed. Taping specifications are given in page 28. Recommended land size, soldering by reflow, and please refer to page 3 for the minimum order quantity.
**RFS/RFA**

- Low ESR, High Capacitance, High ripple current.
- Load life of 2000 hours at 105°C.
- SMD type: Lead free reflow soldering condition at 260°C peak correspondence.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).

### Specifications

<table>
<thead>
<tr>
<th>Item</th>
<th>Performance Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category Temperature Range</td>
<td>–55 to +105°C</td>
</tr>
<tr>
<td>Rated Voltage Range</td>
<td>2.5 to 25V</td>
</tr>
<tr>
<td>Rated Capacitance Range</td>
<td>10 to 330μF</td>
</tr>
<tr>
<td>Capacitance Tolerance</td>
<td>±20% at 120Hz, 20°C</td>
</tr>
<tr>
<td>Tangent of loss angle (tan δ)</td>
<td>Less than or equal to the specified value at 120Hz, 20°C</td>
</tr>
<tr>
<td>ESR (±1)</td>
<td>150% or less than the initial specified value</td>
</tr>
<tr>
<td>Leakage Current (±2)</td>
<td>Less than or equal to the specified value. After 2 minutes’ application of rated voltage at 20°C</td>
</tr>
</tbody>
</table>

Endurance:
- Test condition: 105°C, rated voltage 2000Hrs.
- Capacitance change: Within ±20% of initial value before test.
- ESR (±1): 150% or less than the initial specified value.
- Leakage current (±2): Less than or equal to the initial specified value.

1. ESR should be measured at both of the terminal ends closest where the terminals protrude through the plastic platform.
2. Conditioning: If any doubt arises, measure the leakage current after the voltage treatment of applying DC rated voltage continuously to the capacitor for 120 minutes at 105°C.

### Dimensions

<table>
<thead>
<tr>
<th>Type numbering system (Example : 2.5V 180μF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nichicon part number</td>
</tr>
<tr>
<td>RFS0ET181M CNGS</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FPCAP part number</th>
</tr>
</thead>
<tbody>
<tr>
<td>FP2R5ME181MFSR</td>
</tr>
</tbody>
</table>

- **Frequency coefficient of rated ripple current**
  - Frequency: 120Hz, 1kHz, 10kHz, 100kHz, 300kHz
  - Coefficient: 0.10, 0.45, 0.50, 1.00, 1.00

---

*Dimension table in next page.*
## RFS / RFA

### Dimensions

<table>
<thead>
<tr>
<th>Rated Voltage (V)</th>
<th>Surge Voltage (V)</th>
<th>Rated Capacitance (µF)</th>
<th>Case Size (φD×L (mm))</th>
<th>tan δ</th>
<th>Leakage Current (µA, 2min.)</th>
<th>ESR (mΩ)</th>
<th>Rated Ripple Current (mAms)</th>
<th>NICHICON</th>
<th>FPCAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.5 (0E)</td>
<td>2.8</td>
<td>180</td>
<td>5×5.7</td>
<td>0.12</td>
<td>300</td>
<td>21</td>
<td>2670</td>
<td>RFS0E181MCN1GS</td>
<td>FP-2R5ME181M-FSR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>330</td>
<td>5×5.7</td>
<td>0.12</td>
<td>500</td>
<td>10</td>
<td>3300</td>
<td>RFA0E331MCN1GS</td>
<td>FP-2R5ME331M-FAR</td>
</tr>
<tr>
<td>4.0 (0G)</td>
<td>4.6</td>
<td>100</td>
<td>5×5.7</td>
<td>0.12</td>
<td>300</td>
<td>22</td>
<td>2610</td>
<td>RFS0G101MCN1GS</td>
<td>FP-4R0ME101M-FSR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>150</td>
<td>5×5.7</td>
<td>0.12</td>
<td>300</td>
<td>22</td>
<td>2610</td>
<td>RFS0G151MCN1GS</td>
<td>FP-4R0ME151M-FSR</td>
</tr>
<tr>
<td>6.3 (0J)</td>
<td>7.2</td>
<td>47</td>
<td>5×5.7</td>
<td>0.12</td>
<td>300</td>
<td>30</td>
<td>2000</td>
<td>RFS0J470MCN1GS</td>
<td>FP-6R3ME470M-FSR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>100</td>
<td>5×5.7</td>
<td>0.12</td>
<td>300</td>
<td>24</td>
<td>2500</td>
<td>RFS0J101MCN1GS</td>
<td>FP-6R3ME101M-FSR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>120</td>
<td>5×5.7</td>
<td>0.12</td>
<td>300</td>
<td>24</td>
<td>2500</td>
<td>RFS0J121MCN1GS</td>
<td>FP-6R3ME121M-FSR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>180</td>
<td>5×5.7</td>
<td>0.12</td>
<td>567</td>
<td>17</td>
<td>3390</td>
<td>RFA0J181MCN1GS</td>
<td>FP-6R3ME181M-FAR</td>
</tr>
<tr>
<td>10 (1A)</td>
<td>11.5</td>
<td>10</td>
<td>4×5.2</td>
<td>0.12</td>
<td>100</td>
<td>220</td>
<td>700</td>
<td>RFS1A100MCN1GB</td>
<td>FP-010ME100M-FSR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>68</td>
<td>5×5.7</td>
<td>0.12</td>
<td>300</td>
<td>30</td>
<td>2000</td>
<td>RFS1A680MCN1GS</td>
<td>FP-010ME680M-FSR</td>
</tr>
<tr>
<td>16 (1C)</td>
<td>18.4</td>
<td>22</td>
<td>5×5.7</td>
<td>0.12</td>
<td>100</td>
<td>45</td>
<td>1210</td>
<td>RFS1C220MCN1GS</td>
<td>FP-016ME220M-FSR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>33</td>
<td>5×5.7</td>
<td>0.12</td>
<td>105</td>
<td>35</td>
<td>2070</td>
<td>RFS1C330MCN1GS</td>
<td>FP-016ME330M-FSR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>39</td>
<td>5×5.7</td>
<td>0.12</td>
<td>125</td>
<td>35</td>
<td>2070</td>
<td>RFS1C390MCN1GS</td>
<td>FP-016ME390M-FSR</td>
</tr>
<tr>
<td>25 (1E)</td>
<td>28.7</td>
<td>22</td>
<td>5×5.7</td>
<td>0.12</td>
<td>300</td>
<td>40</td>
<td>2200</td>
<td>RFS1E220MCN1GS</td>
<td>FP-025ME220M-FSR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>27</td>
<td>5×5.7</td>
<td>0.12</td>
<td>135</td>
<td>40</td>
<td>2450</td>
<td>RFS1E270MCN1GS</td>
<td>FP-025ME270M-FSR</td>
</tr>
</tbody>
</table>

### Frequency Characteristics

(The frequency characteristics are typical and not a guaranteed value.)

**Impedance (mΩ)**

![Impedance vs Frequency Graph](chart1)

**ESR (mΩ)**

![ESR vs Frequency Graph](chart2)

- Taping specifications are given in page 28.
- Recommended land size, soldering by reflow are given in page 25.
- Please refer to page 3 for the minimum order quantity.
Low ESR, High Capacitance, High ripple current.
Low Profile (Height 4.2mm).
Load life of 2000 hours at 105°C.
SMD type: Lead free reflow soldering condition at 260°C peak correspondence.
Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).

Specifications

<table>
<thead>
<tr>
<th>Item</th>
<th>Performance Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category Temperature Range</td>
<td>-55 to +105°C</td>
</tr>
<tr>
<td>Rated Voltage Range</td>
<td>2.5 to 25V</td>
</tr>
<tr>
<td>Rated Capacitance Range</td>
<td>15 to 330µF</td>
</tr>
<tr>
<td>Capacitance Tolerance</td>
<td>±20% at 120Hz, 20°C</td>
</tr>
<tr>
<td>Tangent of loss angle (tan δ)</td>
<td>Less than or equal to the specified value at 120Hz, 20°C</td>
</tr>
<tr>
<td>ESR (±1)</td>
<td>150% or less than the initial specified value</td>
</tr>
<tr>
<td>Leakage Current (±2)</td>
<td>Less than or equal to the specified value</td>
</tr>
</tbody>
</table>

Endurance

- Test condition: 105°C, rated voltage 2000Hrs.
- Capacitance change: Within ±20% of initial value before test.
- tan δ: 150% or less than the initial specified value.
- ESR (±1): 150% or less than the initial specified value.
- Leakage current (±2): Less than or equal to the initial specified value.

Note:
1. ESR should be measured at both of the terminal ends closest where the terminals protrude through the plastic platform.
2. Conditioning: If any doubt arises, measure the leakage current after the voltage treatment of applying DC rated voltage continuously to the capacitor for 120 minutes at 105°C.

Dimensions

<table>
<thead>
<tr>
<th>Lot No.</th>
<th>Capacitance</th>
<th>Voltage</th>
</tr>
</thead>
<tbody>
<tr>
<td>(mm)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ØDxL</td>
<td>W</td>
<td>H</td>
</tr>
<tr>
<td>6.3x4.2</td>
<td>6.5</td>
<td>6.5</td>
</tr>
<tr>
<td>0.2x0.2</td>
<td>7.2</td>
<td>0.5 to 0.9</td>
</tr>
</tbody>
</table>

Type numbering system (Example: 2.5V 330µF)

Nichicon part number

<table>
<thead>
<tr>
<th>R</th>
<th>S</th>
<th>L</th>
<th>0</th>
<th>E</th>
<th>3</th>
<th>3</th>
<th>1</th>
<th>M</th>
<th>C</th>
<th>N</th>
<th>G</th>
<th>B</th>
</tr>
</thead>
</table>

FPCAP part number

<table>
<thead>
<tr>
<th>F</th>
<th>P</th>
<th>2</th>
<th>R</th>
<th>S</th>
<th>E</th>
<th>M</th>
<th>3</th>
<th>3</th>
<th>1</th>
<th>M</th>
<th>S</th>
<th>L</th>
<th>R</th>
</tr>
</thead>
</table>

Frequency coefficient of rated ripple current

<table>
<thead>
<tr>
<th>Frequency</th>
<th>120Hz</th>
<th>1kHz</th>
<th>10kHz</th>
<th>100kHz</th>
<th>300kHz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coefficient</td>
<td>0.10</td>
<td>0.45</td>
<td>0.50</td>
<td>1.00</td>
<td>1.00</td>
</tr>
</tbody>
</table>

Dimension table in next page.
### Dimensions

<table>
<thead>
<tr>
<th>Rated Voltage (V)</th>
<th>Surge Voltage (V)</th>
<th>Rated Capacitance (µF)</th>
<th>Case Size φD×L (mm)</th>
<th>tan δ</th>
<th>Leakage Current (µA, 2min.)</th>
<th>ESR (mΩ) (20°C/100kHz)</th>
<th>Rated Ripple Current (mAms) (105°C/100kHz)</th>
<th>Nichicon</th>
<th>FPCAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.5 (0E)</td>
<td>2.8</td>
<td>100</td>
<td>6.3×4.2</td>
<td>0.12</td>
<td>300</td>
<td>16</td>
<td>3500</td>
<td>RSL0E101MCN1GB</td>
<td>FP-2R5ME101M-SLR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>220</td>
<td>6.3×4.2</td>
<td>0.12</td>
<td>300</td>
<td>16</td>
<td>3500</td>
<td>RSL0E221MCN1GB</td>
<td>FP-2R5ME221M-SLR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>330</td>
<td>6.3×4.2</td>
<td>0.12</td>
<td>413</td>
<td>16</td>
<td>3500</td>
<td>RSL0E331MCN1GB</td>
<td>FP-2R5ME331M-SLR</td>
</tr>
<tr>
<td>6.3 (0J)</td>
<td>7.2</td>
<td>100</td>
<td>6.3×4.2</td>
<td>0.12</td>
<td>315</td>
<td>18</td>
<td>3200</td>
<td>RSL0J101MCN1GB</td>
<td>FP-6R3ME101M-SLR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>150</td>
<td>6.3×4.2</td>
<td>0.12</td>
<td>473</td>
<td>18</td>
<td>3200</td>
<td>RSL0J151MCN1GB</td>
<td>FP-6R3ME151M-SLR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>220</td>
<td>6.3×4.2</td>
<td>0.12</td>
<td>693</td>
<td>18</td>
<td>3200</td>
<td>RSL0J221MCN1GB</td>
<td>FP-6R3ME221M-SLR</td>
</tr>
<tr>
<td>10 (1A)</td>
<td>11.5</td>
<td>100</td>
<td>6.3×4.2</td>
<td>0.12</td>
<td>500</td>
<td>25</td>
<td>2500</td>
<td>RSL1A101MCN1GB</td>
<td>FP-010ME101M-SLR</td>
</tr>
<tr>
<td>16 (1C)</td>
<td>18.4</td>
<td>15</td>
<td>6.3×4.2</td>
<td>0.12</td>
<td>300</td>
<td>45</td>
<td>1900</td>
<td>RSL1C150MCN1GB</td>
<td>FP-016ME150M-SLR</td>
</tr>
<tr>
<td>25 (1E)</td>
<td>28.7</td>
<td>15</td>
<td>6.3×4.2</td>
<td>0.12</td>
<td>100</td>
<td>55</td>
<td>1700</td>
<td>RSL1E150MCN1GB</td>
<td>FP-025ME150M-SLR</td>
</tr>
</tbody>
</table>

### Frequency Characteristics (The frequency characteristics are typical and not a guaranteed value.)

- Taping specifications are given in page 28.
- Recommended land size, soldering by reflow are given in page 25.
- Please refer to page 3 for the minimum order quantity.
### Specifications

<table>
<thead>
<tr>
<th>Item</th>
<th>Performance Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category Temperature Range</td>
<td>-55 to +105°C</td>
</tr>
<tr>
<td>Rated Voltage Range</td>
<td>4.0 to 25V</td>
</tr>
<tr>
<td>Rated Capacitance Range</td>
<td>10 to 1200µF</td>
</tr>
<tr>
<td>Capacitance Tolerance</td>
<td>±20% at 120°C, 20°C</td>
</tr>
<tr>
<td>Tangent of loss angle (tan δ)</td>
<td>Less than or equal to the specified value at 120Hz, 20°C</td>
</tr>
<tr>
<td>ESR (±1)</td>
<td>150% or less than the initial specified value</td>
</tr>
<tr>
<td>Leakage Current (±2)</td>
<td>Less than or equal to the initial specified value</td>
</tr>
</tbody>
</table>

**Endurance**

- Test condition: 105°C, rated voltage 2000Hrs.
- Capacitance change: Within ±20% of initial value before test
- tan δ: 150% or less than the initial specified value
- ESR (±1): 150% or less than the initial specified value
- Leakage current (±2): Less than or equal to the initial specified value

**Notes**

1. ESR should be measured at both of the terminal ends closest where the terminals protrude through the plastic platform.
2. Conditioning: If any doubt arises, measure the leakage current after the voltage treatment of applying DC rated voltage continuously to the capacitor for 120 minutes at 105°C.

### Dimensions

![Dimensions Diagram](image)

- Diameter (D) x Length (L): 6.3x7, 6.3x10, 8x11.5, 10x12.5
- Diameter (d): 0.45, 0.5, 0.6
- Lead Pitch (P): 2.5, 2.5, 3.5, 5.0
- Lead Forming: Nichicon part number
- Lead Forming Configuration: RNS \[1D1T1M] DN 1 PH
- Capacitance (100µF)
- Rated voltage (20V)
- Series name: Nichicon part number
- Type: Type numbering system (Example: 20V 100µF)

### Frequency coefficient of rated ripple current

<table>
<thead>
<tr>
<th>Frequency</th>
<th>120 Hz</th>
<th>1 kHz</th>
<th>10 kHz</th>
<th>100 kHz</th>
<th>300 kHz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coefficient</td>
<td>0.10</td>
<td>0.45</td>
<td>0.50</td>
<td>1.00</td>
<td>1.00</td>
</tr>
</tbody>
</table>

**Notes**

- Frequency coefficient of rated ripple current
- **Dimension table in next page.**

---

**Product Logo**

- Nichicon
- Capacitance
- Voltage
- Aluminum case
- Stand off
- Wire (Lead free)

**Configuration**

- Lead Forming
- Control code
- Capacitance tolerance (±20%)
- Rated capacitance (100µF)
- Rated voltage (20V)
- Series name
- Type

**FPCAP part number**

- FP020 RE101 MNS PH
- Control code
- Lead Forming
- Series name
- Capacitance tolerance (±20%)
- Rated capacitance (100µF)
- Configuration
- Voltage (20V)
- Type
### Dimensions

<table>
<thead>
<tr>
<th>Rated Voltage (V)</th>
<th>Surge Voltage (V)</th>
<th>Case Size (D×L) (mm)</th>
<th>tan δ</th>
<th>Leakage Current (µA, 2min.)</th>
<th>ESR (mΩ) (20°C/100kHz)</th>
<th>Rated Ripple Current (mArms)</th>
<th>NICHICON</th>
<th>FPCAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0 (0G)</td>
<td>4.6</td>
<td>560 8x11.5</td>
<td>0.08</td>
<td>336 10 5230</td>
<td>RNS0G561MDN1</td>
<td>FP-4R0RE561M-NS1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>820 10x12.5</td>
<td>0.08</td>
<td>492 10 5500</td>
<td>RNS0G821MDN1</td>
<td>FP-4R0RE821M-NS1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1200 10x12.5</td>
<td>0.15</td>
<td>720 10 5500</td>
<td>RNS0G122MDN1</td>
<td>FP-4R0RE122M-NS1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.3 (0J)</td>
<td>7.2</td>
<td>47 6.3x7</td>
<td>0.07</td>
<td>50 42 2050</td>
<td>RNS0J470MDS1</td>
<td>FP-6R3RE470M-NS1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>150 8x11.5</td>
<td>0.07</td>
<td>142 21 3900</td>
<td>RNS0J151MDN1</td>
<td>FP-6R3RE151M-NS1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>220 8x11.5</td>
<td>0.07</td>
<td>208 21 3900</td>
<td>RNS0J221MDN1</td>
<td>FP-6R3RE221M-NS1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>330 10x12.5</td>
<td>0.07</td>
<td>312 10 5500</td>
<td>RNS0J331MDN1</td>
<td>FP-6R3RE331M-NS1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>390 8x11.5</td>
<td>0.08</td>
<td>369 10 5230</td>
<td>RNS0J391MDN1</td>
<td>FP-6R3RE391M-NS1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>680 10x12.5</td>
<td>0.08</td>
<td>643 10 5500</td>
<td>RNS0J681MDN1</td>
<td>FP-6R3RE681M-NS1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>820 10x12.5</td>
<td>0.12</td>
<td>775 10 5500</td>
<td>RNS0J821MDN1</td>
<td>FP-6R3RE821M-NS1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1000 10x12.5</td>
<td>0.12</td>
<td>945 10 5500</td>
<td>RNS0J102MDN1</td>
<td>FP-6R3RE102M-NS1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 (1A)</td>
<td>11.5</td>
<td>33 6.3x7</td>
<td>0.07</td>
<td>50 49 1900</td>
<td>RNS1A330MDS1</td>
<td>FP-01R0E330M-NS1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>68 6.3x10</td>
<td>0.07</td>
<td>102 35 2650</td>
<td>RNS1A680MDS1</td>
<td>FP-01R0E680M-NS1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>100 8x11.5</td>
<td>0.07</td>
<td>150 21 3900</td>
<td>RNS1A101MDN1</td>
<td>FP-01R0E101M-NS1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>220 10x12.5</td>
<td>0.07</td>
<td>330 10 5500</td>
<td>RNS1A221MDN1</td>
<td>FP-01R0E221M-NS1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>470 10x12.5</td>
<td>0.08</td>
<td>705 10 5500</td>
<td>RNS1A471MDN1</td>
<td>FP-01R0E471M-NS1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>22 6.3x7</td>
<td>0.06</td>
<td>53 49 1900</td>
<td>RNS1C220MDS1</td>
<td>FP-01R0E220M-NS1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>33 6.3x7</td>
<td>0.06</td>
<td>79 49 1900</td>
<td>RNS1C330MDS1</td>
<td>FP-01R0E330M-NS1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>47 6.3x10</td>
<td>0.06</td>
<td>113 42 2400</td>
<td>RNS1C470MDS1</td>
<td>FP-01R0E470M-NS1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>68 8x11.5</td>
<td>0.06</td>
<td>163 25 3600</td>
<td>RNS1C680MDS1</td>
<td>FP-01R0E680M-NS1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>100 8x11.5</td>
<td>0.06</td>
<td>240 21 3900</td>
<td>RNS1C101MDN1</td>
<td>FP-01R0E101M-NS1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>150 10x12.5</td>
<td>0.06</td>
<td>360 10 5500</td>
<td>RNS1C151MDN1</td>
<td>FP-01R0E151M-NS1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>180 8x11.5</td>
<td>0.08</td>
<td>432 16 4700</td>
<td>RNS1C181MDN1</td>
<td>FP-01R0E181M-NS1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>330 10x12.5</td>
<td>0.08</td>
<td>792 10 5500</td>
<td>RNS1C331MDN1</td>
<td>FP-01R0E331M-NS1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16 (1C)</td>
<td>18.4</td>
<td>15 6.3x7</td>
<td>0.06</td>
<td>50 63 1700</td>
<td>RNS1D150MDS1</td>
<td>FP-02R0E150M-NS1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>22 6.3x7</td>
<td>0.06</td>
<td>66 49 1900</td>
<td>RNS1D220MDS1</td>
<td>FP-02R0E220M-NS1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>33 6.3x10</td>
<td>0.06</td>
<td>99 49 2200</td>
<td>RNS1D330MDS1</td>
<td>FP-02R0E330M-NS1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>47 8x11.5</td>
<td>0.06</td>
<td>141 28 3400</td>
<td>RNS1D470MDS1</td>
<td>FP-02R0E470M-NS1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>68 8x11.5</td>
<td>0.06</td>
<td>204 25 3600</td>
<td>RNS1D680MDS1</td>
<td>FP-02R0E680M-NS1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>100 10x12.5</td>
<td>0.06</td>
<td>300 15 4500</td>
<td>RNS1D101MDN1</td>
<td>FP-02R0E101M-NS1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20 (1D)</td>
<td>23.0</td>
<td>10 6.3x7</td>
<td>0.06</td>
<td>50 63 1700</td>
<td>RNS1E100MDS1</td>
<td>FP-02R0E100M-NS1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>15 6.3x10</td>
<td>0.06</td>
<td>75 49 2200</td>
<td>RNS1E150MDS1</td>
<td>FP-02R0E150M-NS1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>22 8x11.5</td>
<td>0.06</td>
<td>110 28 3400</td>
<td>RNS1E220MDS1</td>
<td>FP-02R0E220M-NS1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>33 10x12.5</td>
<td>0.06</td>
<td>165 20 3800</td>
<td>RNS1E330MDS1</td>
<td>FP-02R0E330M-NS1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>47 10x12.5</td>
<td>0.06</td>
<td>235 20 3800</td>
<td>RNS1E470MDS1</td>
<td>FP-02R0E470M-NS1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>100 10x12.5</td>
<td>0.08</td>
<td>500 15 4500</td>
<td>RNS1E101MDN1</td>
<td>FP-02R0E101M-NS1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Taping specifications are given in page 26, 27.
- Please refer to page 3 for the minimum order quantity.
**CONDUCTIVE POLYMER ALUMINUM SOLID ELECTROLYTIC CAPACITORS**

**RR7** Low ESR

- Ultra Low ESR, High ripple current.
- Load life of 2000 hours at 105°C.
- Radial lead type : Lead free flow soldering condition correspondence.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).

### Specifications

<table>
<thead>
<tr>
<th>Item</th>
<th>Performance Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category Temperature Range</td>
<td>±55 to +105°C</td>
</tr>
<tr>
<td>Rated Voltage Range</td>
<td>2.5 to 16V</td>
</tr>
<tr>
<td>Rated Capacitance Range</td>
<td>68 to 1500µF</td>
</tr>
<tr>
<td>Capacitance Tolerance</td>
<td>±20% at 120Hz, 20°C</td>
</tr>
<tr>
<td>Tangent of loss angle (tan δ)</td>
<td>Less than or equal to the specified value at 120Hz, 20°C</td>
</tr>
<tr>
<td>ESR (±1)</td>
<td>Less than or equal to the specified value at 100kHz, 20°C</td>
</tr>
<tr>
<td>Leakage Current (±2)</td>
<td>Less than or equal to the specified value. After 2 minutes’ application of rated voltage at 20°C</td>
</tr>
</tbody>
</table>

**Endurance**

- Test condition: 105°C, rated voltage 2000 / 5000Hrs.
- Capacitance change: Within ±20% of initial value before test.
- ESR (±1): 150% or less than the initial specified value.
- Leakage current (±2): Less than or equal to the initial specified value.

**Dimensions**

- **Lot No.**
- **Capacitance**
- **Aluminum case**
- **Stand off**
- **Wire (Lead free)**

<table>
<thead>
<tr>
<th>(mm)</th>
<th>øD x L</th>
<th>ød</th>
<th>P</th>
<th>α</th>
</tr>
</thead>
<tbody>
<tr>
<td>8 x 11.5</td>
<td>0.6</td>
<td>3.5</td>
<td>1.5</td>
<td></td>
</tr>
<tr>
<td>10 x 12.5</td>
<td>0.6</td>
<td>5.0</td>
<td>1.5</td>
<td></td>
</tr>
</tbody>
</table>

- **Frequency coefficient of rated ripple current**

<table>
<thead>
<tr>
<th>Frequency</th>
<th>120 Hz</th>
<th>1 kHz</th>
<th>10 kHz</th>
<th>100 kHz</th>
<th>300 kHz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coefficient</td>
<td>0.10</td>
<td>0.45</td>
<td>0.50</td>
<td>1.00</td>
<td>1.00</td>
</tr>
</tbody>
</table>

- **Type numbering system** (Example: 16V 330µF)

Nichicon part number:

- **Product Logo**
- **Voltage**
- **Configuration**
- **Capacitance tolerance (±20%)**
- **Rated capacitance (330µF)**
- **Rated voltage (16V)**
- **Series name**
- **Type**

- **FPCAP part number**

- **Lead Forming**
- **Control code**
- **Configuration**
- **Capacitance (330µF)**
- **Voltage (16V)**
- **Type**

- **Dimension table in next page.**

---

**Notes:**

1. ESR should be measured at both of the terminal ends closest to the capacitor body.
2. Conditioning: If any doubt arises, measure the leakage current after the voltage treatment of applying DC rated voltage continuously to the capacitor for 120 minutes at 105°C.
### Dimensions

<table>
<thead>
<tr>
<th>Rated Voltage (V)</th>
<th>Surge Voltage (V)</th>
<th>Rated Capacitance (µF)</th>
<th>Case Size (D×L (mm))</th>
<th>tan δ</th>
<th>Leakage Current (µA, 2 min.)</th>
<th>ESR (mΩ)</th>
<th>Rated Ripple Current (mArms)</th>
<th>NICHICON</th>
<th>FPCAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.5 (0E)</td>
<td>2.8</td>
<td>680</td>
<td>8×11.5</td>
<td>0.08</td>
<td>425</td>
<td>7</td>
<td>5600 RR70E681MDN1</td>
<td>FP-2R5RE681M-R7</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>820</td>
<td>8×11.5</td>
<td>0.08</td>
<td>513</td>
<td>7</td>
<td>5600 RR70E821MDN1</td>
<td>FP-2R5RE821M-R7</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1500</td>
<td>10×12.5</td>
<td>0.08</td>
<td>938</td>
<td>7</td>
<td>6100 RR70E152MDN1</td>
<td>FP-2R5RE152M-R7</td>
<td></td>
</tr>
<tr>
<td>4.0 (0G)</td>
<td>4.6</td>
<td>560</td>
<td>8×11.5</td>
<td>0.08</td>
<td>224</td>
<td>7</td>
<td>5600 RR70G561MDN1</td>
<td>FP-4R0RE561M-R7</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>820</td>
<td>10×12.5</td>
<td>0.08</td>
<td>328</td>
<td>7</td>
<td>6100 RR70G821MDN1</td>
<td>FP-4R0RE821M-R7</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1200</td>
<td>10×12.5</td>
<td>0.15</td>
<td>960</td>
<td>7</td>
<td>6100 RR70G122MDN1</td>
<td>FP-4R0RE122M-R7</td>
<td></td>
</tr>
<tr>
<td>6.3 (0J)</td>
<td>7.2</td>
<td>150</td>
<td>8×11.5</td>
<td>0.07</td>
<td>47</td>
<td>7</td>
<td>5600 RR70J151MDN1</td>
<td>FP-6R3RE151M-R7</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>220</td>
<td>8×11.5</td>
<td>0.07</td>
<td>69</td>
<td>7</td>
<td>5600 RR70J221MDN1</td>
<td>FP-6R3RE221M-R7</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>330</td>
<td>10×12.5</td>
<td>0.07</td>
<td>104</td>
<td>7</td>
<td>6100 RR70J331MDN1</td>
<td>FP-6R3RE331M-R7</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>390</td>
<td>8×11.5</td>
<td>0.08</td>
<td>246</td>
<td>7</td>
<td>5600 RR70J391MDN1</td>
<td>FP-6R3RE391M-R7</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>680</td>
<td>10×12.5</td>
<td>0.08</td>
<td>428</td>
<td>7</td>
<td>6100 RR70J681MDN1</td>
<td>FP-6R3RE681M-R7</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>820</td>
<td>10×12.5</td>
<td>0.12</td>
<td>517</td>
<td>7</td>
<td>6100 RR70J821MDN1</td>
<td>FP-6R3RE821M-R7</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1000</td>
<td>10×12.5</td>
<td>0.12</td>
<td>630</td>
<td>7</td>
<td>6100 RR70J102MDN1</td>
<td>FP-6R3RE102M-R7</td>
<td></td>
</tr>
<tr>
<td>10 (1A)</td>
<td>11.5</td>
<td>100</td>
<td>8×11.5</td>
<td>0.07</td>
<td>50</td>
<td>7</td>
<td>5600 RR71A101MDN1</td>
<td>FP-010RE101M-R7</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>220</td>
<td>10×12.5</td>
<td>0.07</td>
<td>110</td>
<td>7</td>
<td>6100 RR71A221MDN1</td>
<td>FP-010RE221M-R7</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>470</td>
<td>10×12.5</td>
<td>0.08</td>
<td>470</td>
<td>7</td>
<td>6100 RR71A471MDN1</td>
<td>FP-010RE471M-R7</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>680</td>
<td>10×12.5</td>
<td>0.10</td>
<td>1360</td>
<td>7</td>
<td>6100 RR71A681MDN1</td>
<td>FP-010RE681M-R7</td>
<td></td>
</tr>
<tr>
<td>16 (1C)</td>
<td>18.4</td>
<td>68</td>
<td>8×11.5</td>
<td>0.06</td>
<td>54</td>
<td>7</td>
<td>5600 RR71C680MDN1</td>
<td>FP-016RE680M-R7</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>100</td>
<td>8×11.5</td>
<td>0.06</td>
<td>80</td>
<td>7</td>
<td>5600 RR71C101MDN1</td>
<td>FP-016RE101M-R7</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>150</td>
<td>10×12.5</td>
<td>0.06</td>
<td>120</td>
<td>7</td>
<td>6100 RR71C151MDN1</td>
<td>FP-016RE151M-R7</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>270</td>
<td>10×12.5</td>
<td>0.08</td>
<td>648</td>
<td>7</td>
<td>6100 RR71C271MDN1</td>
<td>FP-016RE271M-R7</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>330</td>
<td>10×12.5</td>
<td>0.08</td>
<td>792</td>
<td>7</td>
<td>6100 RR71C331MDN1</td>
<td>FP-016RE331M-R7</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>*330</td>
<td>10×12.5</td>
<td>0.08</td>
<td>792</td>
<td>7</td>
<td>6100 RR71C331MDNASQ</td>
<td>FP-016RE331M-R7-5K</td>
<td></td>
</tr>
</tbody>
</table>

* Load life 5000 hours.

### Frequency Characteristics
(The frequency characteristics are typical and not a guaranteed value.)

![Impedance Graph](image1)

- Impedance (mΩ) vs. Frequency (kHz)
- ESR (mΩ) vs. Frequency (kHz)

- Load life 5000 hours.
- Please refer to page 3 for the minimum order quantity.
- Taping specifications are given on page 26, 27.
Conductive Polymer Aluminum Solid Electrolytic Capacitors

**RR5** Ultra-low ESR

- Ultra Low ESR, High ripple current.
- Load life of 2000 hours at 105°C.
- Radial lead type: Lead free flow soldering condition correspondence.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).

### Specifications

<table>
<thead>
<tr>
<th>Item</th>
<th>Performance Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category Temperature Range</td>
<td>−55 to +105°C</td>
</tr>
<tr>
<td>Rated Voltage Range</td>
<td>2.5 to 6.3V</td>
</tr>
<tr>
<td>Rated Capacitance Range</td>
<td>390 to 1500µF</td>
</tr>
<tr>
<td>Capacitance Tolerance</td>
<td>±20% at 120Hz, 20°C</td>
</tr>
<tr>
<td>Tangent of loss angle (tan δ)</td>
<td>Less than or equal to the specified value at 120Hz, 20°C</td>
</tr>
<tr>
<td>ESR (±1)</td>
<td>150% or less than the initial specified value</td>
</tr>
<tr>
<td>Leakage Current (±2)</td>
<td>Less than or equal to the specified value. After 2 minutes’ application of rated voltage at 20°C</td>
</tr>
<tr>
<td>Endurance Test condition</td>
<td>105°C, rated voltage 2000Hrs.</td>
</tr>
<tr>
<td>Capacitance change</td>
<td>Within ±20% of initial value before test</td>
</tr>
<tr>
<td>tan δ</td>
<td>150% or less than the initial specified value</td>
</tr>
<tr>
<td>ESR (±1)</td>
<td>150% or less than the initial specified value</td>
</tr>
<tr>
<td>Leakage current (±2)</td>
<td>Less than or equal to the initial specified value</td>
</tr>
</tbody>
</table>

※1 ESR should be measured at both of the terminal ends closest to the capacitor body.
※2 Conditioning: If any doubt arises, measure the leakage current after the voltage treatment of applying DC rated voltage continuously to the capacitor for 120 minutes at 105°C.

### Dimensions

- **Type numbering system** *(Example: 6.3V 470µF)*
  - Nichicon part number
  
  - **FPCAP part number**

#### Frequency coefficient of rated ripple current

<table>
<thead>
<tr>
<th>Frequency</th>
<th>120 Hz</th>
<th>1 kHz</th>
<th>10 kHz</th>
<th>100 kHz</th>
<th>300 kHz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coefficient</td>
<td>0.10</td>
<td>0.45</td>
<td>0.50</td>
<td>1.00</td>
<td>1.00</td>
</tr>
</tbody>
</table>

### Table

<table>
<thead>
<tr>
<th>φd x L</th>
<th>P</th>
<th>α</th>
</tr>
</thead>
<tbody>
<tr>
<td>8 x 11.5</td>
<td>0.6</td>
<td>3.5</td>
</tr>
<tr>
<td>10 x 12.5</td>
<td>0.6</td>
<td>5.0</td>
</tr>
</tbody>
</table>

---

- **Dimension table in next page.**
**Dimensions**

<table>
<thead>
<tr>
<th>Rated Voltage (V)</th>
<th>Surge Voltage (V)</th>
<th>Rated Capacitance (µF)</th>
<th>Case Size ØxL (mm)</th>
<th>tan δ</th>
<th>Leakage Current (µA, 2min)</th>
<th>ESR (mΩ)</th>
<th>Rated Ripple Current (mAmp)</th>
<th>NICHICON</th>
<th>FPCAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.5 (0E)</td>
<td>2.8</td>
<td>560</td>
<td>8×11.5</td>
<td>0.15</td>
<td>350</td>
<td>5</td>
<td>6630</td>
<td>RR50E561MDN1</td>
<td>FP-2R5RE561M-R5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>680</td>
<td>8×11.5</td>
<td>0.15</td>
<td>425</td>
<td>5</td>
<td>6630</td>
<td>RR50E681MDN1</td>
<td>FP-2R5RE681M-R5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>820</td>
<td>8×11.5</td>
<td>0.15</td>
<td>513</td>
<td>5</td>
<td>6630</td>
<td>RR50E821MDN1</td>
<td>FP-2R5RE821M-R5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1000</td>
<td>8×11.5</td>
<td>0.15</td>
<td>625</td>
<td>5</td>
<td>6630</td>
<td>RR50E102MDN1</td>
<td>FP-2R5RE102M-R5</td>
</tr>
<tr>
<td></td>
<td>1500</td>
<td>10x12.5</td>
<td>0.15</td>
<td>938</td>
<td>5</td>
<td>7220</td>
<td>RR50E152MDN1</td>
<td>FP-2R5RE152M-R5</td>
<td></td>
</tr>
<tr>
<td>4.0 (0G)</td>
<td>4.6</td>
<td>560</td>
<td>8×11.5</td>
<td>0.15</td>
<td>560</td>
<td>5</td>
<td>6630</td>
<td>RR50G561MDN1</td>
<td>FP-4R0RE561M-R5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>820</td>
<td>10x12.5</td>
<td>0.15</td>
<td>820</td>
<td>5</td>
<td>7220</td>
<td>RR50G821MDN1</td>
<td>FP-4R0RE821M-R5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1200</td>
<td>10x12.5</td>
<td>0.15</td>
<td>1200</td>
<td>5</td>
<td>7220</td>
<td>RR50G122MDN1</td>
<td>FP-4R0RE122M-R5</td>
</tr>
<tr>
<td>6.3 (0J)</td>
<td>7.2</td>
<td>390</td>
<td>8×11.5</td>
<td>0.15</td>
<td>614</td>
<td>5</td>
<td>6630</td>
<td>RR50J391MDN1</td>
<td>FP-6R3RE391M-R5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>470</td>
<td>8×11.5</td>
<td>0.15</td>
<td>592</td>
<td>5</td>
<td>6630</td>
<td>RR50J471MDN1</td>
<td>FP-6R3RE471M-R5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>680</td>
<td>10x12.5</td>
<td>0.15</td>
<td>1071</td>
<td>5</td>
<td>7220</td>
<td>RR50J681MDN1</td>
<td>FP-6R3RE681M-R5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>820</td>
<td>10x12.5</td>
<td>0.15</td>
<td>1292</td>
<td>5</td>
<td>7220</td>
<td>RR50J821MDN1</td>
<td>FP-6R3RE821M-R5</td>
</tr>
</tbody>
</table>

**Frequency Characteristics** (The frequency characteristics are typical and not a guaranteed value.)

- Taping specifications are given in page 26, 27.
- Please refer to page 3 for the minimum order quantity.
**Specifications**

<table>
<thead>
<tr>
<th>Item</th>
<th>Performance Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category Temperature Range</td>
<td>-55 to +105°C</td>
</tr>
<tr>
<td>Rated Voltage Range</td>
<td>2.5 to 35V</td>
</tr>
<tr>
<td>Rated capacitance range</td>
<td>100 to 1500µF</td>
</tr>
<tr>
<td>Capacitance Tolerance</td>
<td>±20% at 120Hz, 20°C</td>
</tr>
<tr>
<td>Tangent of loss angle</td>
<td>Less than or equal to the specified value at 120Hz, 20°C</td>
</tr>
<tr>
<td>ESR (±1)</td>
<td>150% or less than the initial specified value</td>
</tr>
<tr>
<td>Leakage Current (±2)</td>
<td>Less than or equal to the initial specified value after 2 minutes' application of rated voltage at 20°C</td>
</tr>
</tbody>
</table>

*1 ESR should be measured at both of the terminal ends closest to the capacitor body.  
*2 Conditioning: If any doubt arises, measure the leakage current after the voltage treatment of applying DC rated voltage continuously to the capacitor for 120 minutes at 105°C.

**Dimensions**

- **Type numbering system** (Example: 16V 270µF)
- **Nichicon part number**
- **FPCAP part number**

**Frequency coefficient of rated ripple current**

<table>
<thead>
<tr>
<th>Frequency</th>
<th>120Hz</th>
<th>1kHz</th>
<th>10kHz</th>
<th>100kHz</th>
<th>300kHz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coefficient</td>
<td>0.10</td>
<td>0.45</td>
<td>0.50</td>
<td>1.00</td>
<td>1.00</td>
</tr>
</tbody>
</table>

*Dimension table in next page.*
## Dimensions

<table>
<thead>
<tr>
<th>Rated Voltage (V)</th>
<th>Surge Voltage (V)</th>
<th>Case Size (D×L) (mm)</th>
<th>tan δ</th>
<th>Leakage Current (µA, 2min.)</th>
<th>ESR (mΩ) (20°C/100kHz)</th>
<th>Rated Ripple Current (mArms) (10°C/100kHz)</th>
<th>NICHICON</th>
<th>FPCAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>560</td>
<td>8×8</td>
<td>0.12</td>
<td>500</td>
<td>6</td>
<td>6100</td>
<td>RL80E561MDN1</td>
<td>FP-2R8RE561M-L8</td>
<td></td>
</tr>
<tr>
<td>560</td>
<td>8×8</td>
<td>0.12</td>
<td>500</td>
<td>6</td>
<td>6100</td>
<td>RL80E561MCN1</td>
<td>FP-2R8RE561M-L8-H</td>
<td></td>
</tr>
<tr>
<td>560</td>
<td>8×8</td>
<td>0.12</td>
<td>500</td>
<td>6</td>
<td>6100</td>
<td>RL80E561MDNASQ</td>
<td>FP-2R8RE561M-L8-SK</td>
<td></td>
</tr>
<tr>
<td>820</td>
<td>8×8</td>
<td>0.12</td>
<td>513</td>
<td>6</td>
<td>6100</td>
<td>RL80E821MDN1</td>
<td>FP-2R8RE821M-L8</td>
<td></td>
</tr>
<tr>
<td>820</td>
<td>8×8</td>
<td>0.12</td>
<td>513</td>
<td>6</td>
<td>6100</td>
<td>RL80E821MCN1</td>
<td>FP-2R8RE821M-L8-H</td>
<td></td>
</tr>
<tr>
<td>1000</td>
<td>8×8</td>
<td>0.12</td>
<td>625</td>
<td>6</td>
<td>6100</td>
<td>RL80E102MDN1</td>
<td>FP-2R8RE102M-L8</td>
<td></td>
</tr>
<tr>
<td>1000</td>
<td>8×8</td>
<td>0.12</td>
<td>625</td>
<td>6</td>
<td>6100</td>
<td>RL80E102MCN1</td>
<td>FP-2R8RE102M-L8-H</td>
<td></td>
</tr>
<tr>
<td>1200</td>
<td>8×8</td>
<td>0.12</td>
<td>750</td>
<td>7</td>
<td>6100</td>
<td>RL80E122MDN1</td>
<td>FP-2R8RE122M-L8</td>
<td></td>
</tr>
<tr>
<td>1200</td>
<td>8×8</td>
<td>0.12</td>
<td>750</td>
<td>7</td>
<td>6100</td>
<td>RL80E122MCN1</td>
<td>FP-2R8RE122M-L8-H</td>
<td></td>
</tr>
<tr>
<td>1500</td>
<td>8×8</td>
<td>0.12</td>
<td>938</td>
<td>7</td>
<td>6100</td>
<td>RL80E152MDN1</td>
<td>FP-2R8RE152M-L8</td>
<td></td>
</tr>
<tr>
<td>1500</td>
<td>8×8</td>
<td>0.12</td>
<td>938</td>
<td>7</td>
<td>6100</td>
<td>RL80E152MCN1</td>
<td>FP-2R8RE152M-L8-H</td>
<td></td>
</tr>
<tr>
<td>560</td>
<td>8×8</td>
<td>0.12</td>
<td>560</td>
<td>6</td>
<td>6100</td>
<td>RL80G561MDN1</td>
<td>FP-4R8RE561M-L8</td>
<td></td>
</tr>
<tr>
<td>560</td>
<td>8×8</td>
<td>0.12</td>
<td>560</td>
<td>6</td>
<td>6100</td>
<td>RL80G561MCN1</td>
<td>FP-4R8RE561M-L8-H</td>
<td></td>
</tr>
<tr>
<td>560</td>
<td>8×8</td>
<td>0.12</td>
<td>560</td>
<td>6</td>
<td>6100</td>
<td>RL80G561MDNASQ</td>
<td>FP-4R8RE561M-L8-SK</td>
<td></td>
</tr>
<tr>
<td>820</td>
<td>8×8</td>
<td>0.12</td>
<td>820</td>
<td>6</td>
<td>6100</td>
<td>RL80G821MDN1</td>
<td>FP-4R8RE821M-L8</td>
<td></td>
</tr>
<tr>
<td>820</td>
<td>8×8</td>
<td>0.12</td>
<td>820</td>
<td>6</td>
<td>6100</td>
<td>RL80G821MCN1</td>
<td>FP-4R8RE821M-L8-H</td>
<td></td>
</tr>
<tr>
<td>820</td>
<td>8×8</td>
<td>0.12</td>
<td>820</td>
<td>6</td>
<td>6100</td>
<td>RL80G821MDNASQ</td>
<td>FP-4R8RE821M-L8-SK</td>
<td></td>
</tr>
<tr>
<td>820</td>
<td>8×8</td>
<td>0.12</td>
<td>820</td>
<td>6</td>
<td>6100</td>
<td>RL80G821MCNASQ</td>
<td>FP-4R8RE821M-L8-SK</td>
<td></td>
</tr>
<tr>
<td>560</td>
<td>8×8</td>
<td>0.12</td>
<td>560</td>
<td>6</td>
<td>6100</td>
<td>RL80G561MDNASQ</td>
<td>FP-4R8RE561M-L8-SK</td>
<td></td>
</tr>
<tr>
<td>560</td>
<td>8×8</td>
<td>0.12</td>
<td>560</td>
<td>6</td>
<td>6100</td>
<td>RL80G561MCNASQ</td>
<td>FP-4R8RE561M-L8-SK</td>
<td></td>
</tr>
<tr>
<td>560</td>
<td>8×8</td>
<td>0.12</td>
<td>560</td>
<td>6</td>
<td>6100</td>
<td>RL80G561MCNASQ</td>
<td>FP-4R8RE561M-L8-SK</td>
<td></td>
</tr>
<tr>
<td>560</td>
<td>8×8</td>
<td>0.12</td>
<td>706</td>
<td>8</td>
<td>5700</td>
<td>RL80J561MDN1</td>
<td>FP-6R8RE561M-L8</td>
<td></td>
</tr>
<tr>
<td>560</td>
<td>8×8</td>
<td>0.12</td>
<td>706</td>
<td>8</td>
<td>5700</td>
<td>RL80J561MCN1</td>
<td>FP-6R8RE561M-L8-H</td>
<td></td>
</tr>
<tr>
<td>560</td>
<td>8×8</td>
<td>0.12</td>
<td>706</td>
<td>8</td>
<td>5700</td>
<td>RL80J561MDNASQ</td>
<td>FP-6R8RE561M-L8-SK</td>
<td></td>
</tr>
<tr>
<td>680</td>
<td>8×8</td>
<td>0.12</td>
<td>857</td>
<td>8</td>
<td>5700</td>
<td>RL80J851MDN1</td>
<td>FP-6R8RE851M-L8</td>
<td></td>
</tr>
<tr>
<td>680</td>
<td>8×8</td>
<td>0.12</td>
<td>857</td>
<td>8</td>
<td>5700</td>
<td>RL80J851MCN1</td>
<td>FP-6R8RE851M-L8-H</td>
<td></td>
</tr>
<tr>
<td>680</td>
<td>8×8</td>
<td>0.12</td>
<td>857</td>
<td>8</td>
<td>5700</td>
<td>RL80J851MDNASQ</td>
<td>FP-6R8RE851M-L8-SK</td>
<td></td>
</tr>
<tr>
<td>680</td>
<td>8×8</td>
<td>0.12</td>
<td>857</td>
<td>8</td>
<td>5700</td>
<td>RL80J851MCNASQ</td>
<td>FP-6R8RE851M-L8-SK</td>
<td></td>
</tr>
<tr>
<td>820</td>
<td>8×8</td>
<td>0.12</td>
<td>1033</td>
<td>8</td>
<td>5700</td>
<td>RL80J821MDN1</td>
<td>FP-6R8RE821M-L8</td>
<td></td>
</tr>
<tr>
<td>820</td>
<td>8×8</td>
<td>0.12</td>
<td>1033</td>
<td>8</td>
<td>5700</td>
<td>RL80J821MCN1</td>
<td>FP-6R8RE821M-L8-H</td>
<td></td>
</tr>
<tr>
<td>820</td>
<td>8×8</td>
<td>0.12</td>
<td>1033</td>
<td>8</td>
<td>5700</td>
<td>RL80J821MDNASQ</td>
<td>FP-6R8RE821M-L8-SK</td>
<td></td>
</tr>
<tr>
<td>820</td>
<td>8×8</td>
<td>0.12</td>
<td>1033</td>
<td>8</td>
<td>5700</td>
<td>RL80J821MCNASQ</td>
<td>FP-6R8RE821M-L8-SK</td>
<td></td>
</tr>
<tr>
<td>1000</td>
<td>8×8</td>
<td>0.12</td>
<td>1260</td>
<td>9</td>
<td>5700</td>
<td>RL80J102MDN1</td>
<td>FP-6R8RE102M-L8</td>
<td></td>
</tr>
<tr>
<td>1000</td>
<td>8×8</td>
<td>0.12</td>
<td>1260</td>
<td>9</td>
<td>5700</td>
<td>RL80J102MCN1</td>
<td>FP-6R8RE102M-L8-H</td>
<td></td>
</tr>
<tr>
<td>1000</td>
<td>8×8</td>
<td>0.12</td>
<td>1260</td>
<td>9</td>
<td>5700</td>
<td>RL80J102MDNASQ</td>
<td>FP-6R8RE102M-L8-SK</td>
<td></td>
</tr>
<tr>
<td>1000</td>
<td>8×8</td>
<td>0.12</td>
<td>1260</td>
<td>9</td>
<td>5700</td>
<td>RL80J102MCNASQ</td>
<td>FP-6R8RE102M-L8-SK</td>
<td></td>
</tr>
</tbody>
</table>

*: Load life 5000 hours.

- Taping specifications are given in page 26, 27.
- Please refer to page 3 for the minimum order quantity.
Taping specifications are given in page 26, 27. Please refer to page 3 for the minimum order quantity.
CONDUCTIVE POLYMER ALUMINUM SOLID ELECTROLYTIC CAPACITORS

RE5 Ultra-low ESR, Low Profile (φ8)

- Ultra Low ESR, High ripple current.
- Low Profile (Height 8mm).
- Load life of 2000 hours at 105°C.
- Radial lead type: Lead free flow soldering condition correspondence.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).

Specifications

<table>
<thead>
<tr>
<th>Item</th>
<th>Performance Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category Temperature Range</td>
<td>−55 to +105°C</td>
</tr>
<tr>
<td>Rated Voltage Range</td>
<td>2.5 to 4.0V</td>
</tr>
<tr>
<td>Rated Capacitance Range</td>
<td>560 to 820µF</td>
</tr>
<tr>
<td>Capacitance Tolerance</td>
<td>±20% at 120Hz, 20°C</td>
</tr>
<tr>
<td>Tangent of loss angle (tan δ)</td>
<td>Less than or equal to the specified value at 120Hz, 20°C</td>
</tr>
<tr>
<td>ESR (≥1)</td>
<td>150% or less than the initial specified value at 100kHz, 20°C</td>
</tr>
<tr>
<td>Leakage Current (≥2)</td>
<td>Less than or equal to the specified value. After 2 minutes' application of rated voltage at 20°C</td>
</tr>
</tbody>
</table>

Endurance

- Test condition: 105°C, rated voltage 2000Hrs.
- Capacitance change: Within ±20% of initial value before test
- tan δ: 150% or less than the initial specified value
- ESR (≥1): 150% or less than the initial specified value
- Leakage current (≥2): Less than or equal to the initial specified value

Note:
1. ESR should be measured at both of the terminal ends closest to the capacitor body.
2. Conditioning: If any doubt arises, measure the leakage current after the voltage treatment of applying DC rated voltage continuously to the capacitor for 120 minutes at 105°C.

Dimensions

Lot No. | Capacitance | Voltage | Product Logo | Capacitance tolerance (±20%) | Rated capacitance (820µF) | Rated voltage (2.5V) | Series name | Type numbering system (Example : 2.5V 820µF) |
|-------|-------------|---------|--------------|------------------------------|----------------------------|----------------------|-------------|--------------------------------------------|

- 4DxL  | 4d          | P       | α            |                              |                            |                      |             | R E 5 E B 2 1 M D N 1 C G                   |
| 8 x 8  | 0.6         | 3.5     | 1.0          |                              |                            |                      |             |

Type numbering system

- Lead Forming
- Configuration
- Capacitance tolerance (±20%)
- Rated capacitance (820µF)
- Rated voltage (2.5V)
- Series name
- Type

Frequency coefficient of rated ripple current

<table>
<thead>
<tr>
<th>Frequency</th>
<th>120Hz</th>
<th>1 kHz</th>
<th>10 kHz</th>
<th>100 kHz</th>
<th>300 kHz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coefficient</td>
<td>0.10</td>
<td>0.45</td>
<td>0.50</td>
<td>1.00</td>
<td>1.00</td>
</tr>
</tbody>
</table>

Frequency coefficient of rated ripple current

- Control code
- Lead Forming
- Series name
- Capacitance tolerance (±20%)
- Capacitance (820µF)
- Configuration
- Voltage (2.5V)
- Type

- Dimension table in next page.
### RE5

#### Dimensions

<table>
<thead>
<tr>
<th>Rated Voltage (V) (code)</th>
<th>Surge Voltage (V)</th>
<th>Rated Capacitance (µF)</th>
<th>Case Size øD×L (mm)</th>
<th>tan δ</th>
<th>Leakage Current (µA, 2min.)</th>
<th>ESR (mΩ)</th>
<th>Rated Ripple Current (mAmps) (105°C/100kHz)</th>
<th>NICHICON</th>
<th>FPCAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.5 (0E)</td>
<td>2.8</td>
<td>560</td>
<td>8×8</td>
<td>0.10</td>
<td>500</td>
<td>5</td>
<td>6300</td>
<td>RE50E561MDN1</td>
<td>FP-2R5RE561M-ES</td>
</tr>
<tr>
<td></td>
<td></td>
<td>820</td>
<td>8×8</td>
<td>0.10</td>
<td>513</td>
<td>5</td>
<td>6300</td>
<td>RE50E821MDN1</td>
<td>FP-2R5RE821M-ES</td>
</tr>
<tr>
<td>4.0 (0G)</td>
<td>4.6</td>
<td>560</td>
<td>8×8</td>
<td>0.10</td>
<td>560</td>
<td>5</td>
<td>6300</td>
<td>RE50G561MDN1</td>
<td>FP-4R0RE561M-ES</td>
</tr>
</tbody>
</table>

#### Frequency Characteristics

(The frequency characteristics are typical and not a guaranteed value.)

- Impedance (mΩ) vs. Frequency (kHz)
- ESR (mΩ) vs. Frequency (kHz)

- Taping specifications are given in page 26, 27.
- Please refer to page 3 for the minimum order quantity.
RS8 Low ESR / ESL, Low Profile (φ6.3)

- Low ESR/ESL, High ripple current.
- Low Profile (Height 8mm).
- Load life of 2000/5000 hours at 105°C.
- Radial lead type: Lead free flow soldering condition correspondence.

### Specifications

<table>
<thead>
<tr>
<th>Item</th>
<th>Performance Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category Temperature Range</td>
<td>–55 to +105°C</td>
</tr>
<tr>
<td>Rated Voltage Range</td>
<td>2.5 to 16V</td>
</tr>
<tr>
<td>Rated Capacitance Range</td>
<td>100 to 1200µF</td>
</tr>
<tr>
<td>Capacitance Tolerance</td>
<td>±20% at 120Hz, 20°C</td>
</tr>
<tr>
<td>Tangent of loss angle (tan δ)</td>
<td>Less than or equal to the specified value at 120Hz, 20°C</td>
</tr>
<tr>
<td>ESR (1)</td>
<td>Less than or equal to the specified value at 100kHz, 20°C</td>
</tr>
<tr>
<td>Leakage Current (2)</td>
<td>Less than or equal to the specified value. After 2 minutes’ application of rated voltage at 20°C</td>
</tr>
<tr>
<td>Test condition</td>
<td>105°C, rated voltage 2000 / 5000Hrs.</td>
</tr>
<tr>
<td>Capacitance change</td>
<td>Within ±20% of initial value before test</td>
</tr>
<tr>
<td>tan δ</td>
<td>150% or less than the initial specified value</td>
</tr>
<tr>
<td>ESR (1)</td>
<td>150% or less than the initial specified value</td>
</tr>
<tr>
<td>Leakage current (2)</td>
<td>Less than or equal to the initial specified value</td>
</tr>
</tbody>
</table>

1. ESR should be measured at both of the terminal ends closest to the capacitor body.
2. Conditioning: If any doubt arises, measure the leakage current after the voltage treatment of applying DC rated voltage continuously to the capacitor for 120 minutes at 105°C.

### Dimensions

- **Lot No.**
- **Product Logo**
- **Voltage**
- **Capacitance**
- **Aluminum case**
- **Stand off Wire (Lead free)**
- **Configuration**

**Type numbering system**

- **Voltage (6.3V)**
- **Rated capacitance (560µF)**
- **Series name**
- **Type**

**FPCAP part number**

- **Control code**
- **Configuration**
- **Capacitance tolerance (±20%)**
- **Rated capacitance (560µF)**
- **Rated voltage (6.3V)**
- **Series name**
- **Type**

**Frequency coefficient of rated ripple current**

<table>
<thead>
<tr>
<th>Frequency</th>
<th>120 Hz</th>
<th>1 kHz</th>
<th>10 kHz</th>
<th>100 kHz</th>
<th>300 kHz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coefficient</td>
<td>0.10</td>
<td>0.45</td>
<td>0.50</td>
<td>1.00</td>
<td>1.00</td>
</tr>
</tbody>
</table>

- **Dimension table in next page.**
## Dimensions

<table>
<thead>
<tr>
<th>Rated Voltage (V) (code)</th>
<th>Surge Voltage (V)</th>
<th>Rated Capacitance (µF)</th>
<th>Case Size 4D×L (mm)</th>
<th>tan δ</th>
<th>Leakage Current (µA, 2min.)</th>
<th>ESR (mΩ) (20°C/10kHz)</th>
<th>ESL (µF) (Typ.)</th>
<th>ESR (mΩ) (40MHz)</th>
<th>Rated Ripple Current (nA/kHz)</th>
<th>NICHICON</th>
<th>FPCAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>RS8</td>
<td>2.5 (0E)</td>
<td>330</td>
<td>6.3×8</td>
<td>0.10</td>
<td>500</td>
<td>7</td>
<td>2</td>
<td>5600</td>
<td>RS80E331MDN1_16</td>
<td>FP-2R5RE331M-S8_0E</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>470</td>
<td>6.3×8</td>
<td>0.10</td>
<td>500</td>
<td>7</td>
<td>2</td>
<td>5600</td>
<td>RS80E471MDN1_16</td>
<td>FP-2R5RE471M-S8_0E</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>560</td>
<td>6.3×8</td>
<td>0.10</td>
<td>500</td>
<td>7</td>
<td>2</td>
<td>5600</td>
<td>RS80E561MDN1_16</td>
<td>FP-2R5RE561M-S8_0E</td>
<td></td>
</tr>
<tr>
<td>4.0 (0G)</td>
<td>4.6</td>
<td>560</td>
<td>6.3×8</td>
<td>0.10</td>
<td>500</td>
<td>7</td>
<td>2</td>
<td>5600</td>
<td>RS80E561MDN1_16</td>
<td>FP-2R5RE561M-S8_0G</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>680</td>
<td>6.3×8</td>
<td>0.10</td>
<td>500</td>
<td>7</td>
<td>2</td>
<td>4700</td>
<td>RS80E681MDN1_16</td>
<td>FP-2R5RE681M-S8_0G</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>820</td>
<td>6.3×8</td>
<td>0.10</td>
<td>500</td>
<td>7</td>
<td>2</td>
<td>4700</td>
<td>RS80E821MDN1_16</td>
<td>FP-2R5RE821M-S8_0G</td>
<td></td>
</tr>
<tr>
<td>6.3 (0J)</td>
<td>7.2</td>
<td>680</td>
<td>6.3×8</td>
<td>0.10</td>
<td>500</td>
<td>7</td>
<td>2</td>
<td>4700</td>
<td>RS80E681MDN1_16</td>
<td>FP-2R5RE681M-S8_0J</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>820</td>
<td>6.3×8</td>
<td>0.10</td>
<td>500</td>
<td>7</td>
<td>2</td>
<td>4700</td>
<td>RS80E821MDN1_16</td>
<td>FP-2R5RE821M-S8_0J</td>
<td></td>
</tr>
<tr>
<td>16 (1C)</td>
<td>18.4</td>
<td>100</td>
<td>6.3×8</td>
<td>0.10</td>
<td>500</td>
<td>7</td>
<td>2</td>
<td>3800</td>
<td>RS81C101MDN1_16</td>
<td>FP-2R5RE101M-S8_1C</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>200</td>
<td>6.3×8</td>
<td>0.10</td>
<td>500</td>
<td>7</td>
<td>2</td>
<td>3800</td>
<td>RS81C201MDN1_16</td>
<td>FP-2R5RE201M-S8_2C</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>270</td>
<td>6.3×8</td>
<td>0.10</td>
<td>1296</td>
<td>15</td>
<td>2</td>
<td>3800</td>
<td>RS81C271MDN1_16</td>
<td>FP-2R5RE271M-S8_2C</td>
<td></td>
</tr>
</tbody>
</table>

* : Load life 5000hours.

### Frequency Characteristics

(The frequency characteristics are typical and not a guaranteed value.)

#### Impedance

![Impedance graph](image1)

#### ESR

![ESR graph](image2)

- Taping specifications are given on page 26, 27.
- Please refer to page 3 for the minimum order quantity.
CONDUCTIVE POLYMER ALUMINUM SOLID ELECTROLYTIC CAPACITORS

RF8 Low ESR / ESL, Low Profile (φ5)

- Low ESR/ESL, High ripple current.
- Low Profile (Height 8mm).
- Load life of 2000 hours at 105°C.
- Radial lead type: Lead free flow soldering condition correspondence.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).

### Specifications

<table>
<thead>
<tr>
<th>Item</th>
<th>Performance Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category Temperature Range</td>
<td>–55 to +105°C</td>
</tr>
<tr>
<td>Rated Voltage Range</td>
<td>2.5 to 6.3V</td>
</tr>
<tr>
<td>Rated Capacitance Range</td>
<td>100 to 560µF</td>
</tr>
<tr>
<td>Capacitance Tolerance</td>
<td>±20% at 120Hz, 20°C</td>
</tr>
<tr>
<td>Tangent of loss angle (tan δ)</td>
<td>Less than or equal to the specified value at 120Hz, 20°C</td>
</tr>
<tr>
<td>ESR (±1)</td>
<td>150% or less than the initial specified value</td>
</tr>
<tr>
<td>Leakage Current (±2)</td>
<td>Less than or equal to the specified value. After 2 minutes’ application of rated voltage at 20°C</td>
</tr>
</tbody>
</table>

#### Endurance

- **Test condition**: 105°C, rated voltage 2000Hrs.
- **Capacitance change**: Within ±20% of initial value before test
- **tan δ**: 150% or less than the initial specified value
- **ESR (±1)**: 150% or less than the initial specified value
- **Leakage current (±2)**: Less than or equal to the initial specified value

**#1** ESR should be measured at both of the terminal ends closest where the terminals protrude through the plastic platform.

**#2** Conditioning: If any doubt arises, measure the leakage current after the voltage treatment of applying DC rated voltage continuously to the capacitor for 120 minutes at 105°C.

### Dimensions

- **Lot No.**
- **Capacitance**
- **Voltage**
- **Product Logo**
- **Aluminum case**
- **Stand off**
- **Wire (Lead free)**

<table>
<thead>
<tr>
<th>φDxL</th>
<th>φd</th>
<th>P</th>
<th>α</th>
</tr>
</thead>
<tbody>
<tr>
<td>5x8</td>
<td>0.6</td>
<td>2.0</td>
<td>1.0</td>
</tr>
</tbody>
</table>

- **Frequency coefficient of rated ripple current**

<table>
<thead>
<tr>
<th>Frequency (Hz)</th>
<th>Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>120 Hz</td>
<td>0.10</td>
</tr>
<tr>
<td>1 kHz</td>
<td>0.45</td>
</tr>
<tr>
<td>10 kHz</td>
<td>0.50</td>
</tr>
<tr>
<td>100 kHz</td>
<td>1.00</td>
</tr>
<tr>
<td>300 kHz</td>
<td>1.00</td>
</tr>
</tbody>
</table>

### Type numbering system (Example: 2.5V 560µF)

- **Nichicon part number**
  - **R**
  - **F**
  - **8**
  - **E561**
  - **T**
  - **M**
  - **DN1**
  - **CG**

- **FPCAP part number**
  - **FP**
  - **2R5**
  - **RE**
  - **561**
  - **M**
  - **F8**
  - **CG**

### Frequency coefficient of rated ripple current

<table>
<thead>
<tr>
<th>Frequency (Hz)</th>
<th>Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>120 Hz</td>
<td>0.10</td>
</tr>
<tr>
<td>1 kHz</td>
<td>0.45</td>
</tr>
<tr>
<td>10 kHz</td>
<td>0.50</td>
</tr>
<tr>
<td>100 kHz</td>
<td>1.00</td>
</tr>
<tr>
<td>300 kHz</td>
<td>1.00</td>
</tr>
</tbody>
</table>

**Dimension table in next page.**
RF8

■ Dimensions

<table>
<thead>
<tr>
<th>Rated Voltage (V) (code)</th>
<th>Surge Voltage (V)</th>
<th>Rated Capacitance (µF)</th>
<th>Case Size d×L (mm)</th>
<th>tan δ</th>
<th>Leakage Current (µA, 2min.)</th>
<th>ESR (mΩ) (20°C/100kHz)</th>
<th>ESL (Typ.) (nH, 40MHz)</th>
<th>Rated Ripple Current (mAmps) (105°C/100kHz)</th>
<th>NICHICON</th>
<th>FPCAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.5 (0E)</td>
<td>2.8</td>
<td>100</td>
<td>5×8</td>
<td>0.10</td>
<td>500</td>
<td>7</td>
<td>1.5</td>
<td>4200</td>
<td>RF80E101MDN1</td>
<td>FP-2RSRE101M-F8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>330</td>
<td>5×8</td>
<td>0.10</td>
<td>500</td>
<td>7</td>
<td>1.5</td>
<td>4200</td>
<td>RF80E331MDN1</td>
<td>FP-2RSRE331M-F8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>470</td>
<td>5×8</td>
<td>0.10</td>
<td>500</td>
<td>7</td>
<td>1.5</td>
<td>4200</td>
<td>RF80E471MDN1</td>
<td>FP-2RSRE471M-F8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>560</td>
<td>5×8</td>
<td>0.10</td>
<td>500</td>
<td>7</td>
<td>1.5</td>
<td>4200</td>
<td>RF80E561MDN1</td>
<td>FP-2RSRE561M-F8</td>
</tr>
<tr>
<td>4.0 (0G)</td>
<td>4.6</td>
<td>330</td>
<td>5×8</td>
<td>0.10</td>
<td>500</td>
<td>8</td>
<td>1.5</td>
<td>4000</td>
<td>RF80G331MDN1</td>
<td>FP-4R0RE331M-F8</td>
</tr>
<tr>
<td>6.3 (0J)</td>
<td>7.2</td>
<td>270</td>
<td>5×8</td>
<td>0.10</td>
<td>500</td>
<td>11</td>
<td>1.5</td>
<td>3700</td>
<td>RF80J271MDN1</td>
<td>FP-6R3RE271M-F8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>330</td>
<td>5×8</td>
<td>0.10</td>
<td>500</td>
<td>11</td>
<td>1.5</td>
<td>3700</td>
<td>RF80J331MDN1</td>
<td>FP-6R3RE331M-F8</td>
</tr>
</tbody>
</table>

■ Frequency Characteristics (The frequency characteristics are typical and not a guaranteed value.)

- Taping specifications are given in page 26, 27.
- Please refer to page 3 for the minimum order quantity.
CONDUCTIVE POLYMER ALUMINUM SOLID ELECTROLYTIC CAPACITORS

RNU

High Capacitance

- Low ESR, High Capacitance, High ripple current.
- Load life of 2000/5000 hours at 105°C.
- Radial lead type: Lead free flow soldering condition correspondence.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).

Specifications

<table>
<thead>
<tr>
<th>Item</th>
<th>Performance Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category Temperature Range</td>
<td>−55 to +105°C</td>
</tr>
<tr>
<td>Rated Voltage Range</td>
<td>2.5 to 63V</td>
</tr>
<tr>
<td>Rated Capacitance Range</td>
<td>10 to 2700µF</td>
</tr>
<tr>
<td>Capacitance Tolerance</td>
<td>±20% at 120Hz, 20°C</td>
</tr>
<tr>
<td>Tangent of loss angle (tan δ)</td>
<td>Less than or equal to the specified value at 120Hz, 20°C</td>
</tr>
<tr>
<td>ESR (×1)</td>
<td>150% or less than the initial specified value</td>
</tr>
<tr>
<td>Leakage Current (×2)</td>
<td>Less than or equal to the specified value after 2 minutes' application of rated voltage at 20°C</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Endurance</th>
<th>Test condition</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Capacitance change</td>
</tr>
<tr>
<td></td>
<td>Within ±20% of initial value before test</td>
</tr>
<tr>
<td></td>
<td>ESR (×1)</td>
</tr>
<tr>
<td></td>
<td>150% or less than the initial specified value</td>
</tr>
<tr>
<td></td>
<td>Leakage current (×2)</td>
</tr>
<tr>
<td></td>
<td>Less than or equal to the initial specified value</td>
</tr>
</tbody>
</table>

# Dimensions

Type numbering system (Example: 25V 390µF)

Nichicon part number

RNU 1E3811 M C G

FPCAP part number

FP 025 RE 391 M NU CG 5K

<table>
<thead>
<tr>
<th>φD×L</th>
<th>φd</th>
<th>P</th>
<th>α</th>
</tr>
</thead>
<tbody>
<tr>
<td>4×5</td>
<td>0.45</td>
<td>1.5</td>
<td>1.0</td>
</tr>
<tr>
<td>6.3×10</td>
<td>0.5</td>
<td>2.5</td>
<td>1.0</td>
</tr>
<tr>
<td>8×11.5</td>
<td>0.6</td>
<td>3.5</td>
<td>1.5</td>
</tr>
<tr>
<td>10×12.5</td>
<td>0.6</td>
<td>5.0</td>
<td>1.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Frequency</th>
<th>120 Hz</th>
<th>1 kHz</th>
<th>10 kHz</th>
<th>100 kHz</th>
<th>300 kHz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coefficient</td>
<td>0.10</td>
<td>0.45</td>
<td>0.50</td>
<td>1.00</td>
<td>1.00</td>
</tr>
</tbody>
</table>

Frequency coefficient of rated ripple current

- Dimensions table in next page.
## Dimensions

<table>
<thead>
<tr>
<th>Rated Voltage (V)</th>
<th>Surge Voltage (V)</th>
<th>Rated Capacitance (µF)</th>
<th>Case Size (DxL, mm)</th>
<th>ESR (105°C/100kHz) (mΩ)</th>
<th>Current (105°C/100kHz) (mArms)</th>
<th>NICHICON</th>
<th>FPCAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.5 (0E)</td>
<td>2.8</td>
<td>1500</td>
<td>8x11.5</td>
<td>0.08</td>
<td>938</td>
<td>7</td>
<td>4700</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1500</td>
<td>8x11.5</td>
<td>0.08</td>
<td>938</td>
<td>7</td>
<td>4700</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2700</td>
<td>10x12.5</td>
<td>0.08</td>
<td>1350</td>
<td>7</td>
<td>6100</td>
</tr>
<tr>
<td></td>
<td></td>
<td>820</td>
<td>8x11.5</td>
<td>0.08</td>
<td>656</td>
<td>7</td>
<td>5700</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1000</td>
<td>8x11.5</td>
<td>0.08</td>
<td>800</td>
<td>7</td>
<td>5700</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1200</td>
<td>8x11.5</td>
<td>0.08</td>
<td>960</td>
<td>7</td>
<td>5700</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1800</td>
<td>10x12.5</td>
<td>0.08</td>
<td>1440</td>
<td>7</td>
<td>6100</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2200</td>
<td>10x12.5</td>
<td>0.08</td>
<td>1760</td>
<td>7</td>
<td>6100</td>
</tr>
<tr>
<td>4.0 (0G)</td>
<td>4.6</td>
<td>220</td>
<td>6.3x10</td>
<td>0.08</td>
<td>277</td>
<td>20</td>
<td>3200</td>
</tr>
<tr>
<td></td>
<td></td>
<td>470</td>
<td>8x11.5</td>
<td>0.08</td>
<td>592</td>
<td>7</td>
<td>5700</td>
</tr>
<tr>
<td></td>
<td></td>
<td>680</td>
<td>8x11.5</td>
<td>0.08</td>
<td>857</td>
<td>7</td>
<td>5700</td>
</tr>
<tr>
<td></td>
<td></td>
<td>820</td>
<td>8x11.5</td>
<td>0.08</td>
<td>1033</td>
<td>7</td>
<td>5700</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1000</td>
<td>8x11.5</td>
<td>0.08</td>
<td>1260</td>
<td>7</td>
<td>5700</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1000</td>
<td>8x11.5</td>
<td>0.08</td>
<td>1260</td>
<td>7</td>
<td>5700</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1200</td>
<td>8x11.5</td>
<td>0.08</td>
<td>1512</td>
<td>9</td>
<td>6100</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1200</td>
<td>8x11.5</td>
<td>0.08</td>
<td>1512</td>
<td>9</td>
<td>6100</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1500</td>
<td>10x12.5</td>
<td>0.08</td>
<td>1890</td>
<td>7</td>
<td>6100</td>
</tr>
<tr>
<td>6.3 (0J)</td>
<td>7.2</td>
<td>10</td>
<td>4x5</td>
<td>0.12</td>
<td>300</td>
<td>220</td>
<td>700</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10</td>
<td>4x5</td>
<td>0.12</td>
<td>300</td>
<td>220</td>
<td>700</td>
</tr>
<tr>
<td></td>
<td></td>
<td>820</td>
<td>8x11.5</td>
<td>0.08</td>
<td>1640</td>
<td>10</td>
<td>5800</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1200</td>
<td>10x12.5</td>
<td>0.08</td>
<td>2400</td>
<td>9</td>
<td>6200</td>
</tr>
<tr>
<td>10 (1A)</td>
<td>11.5</td>
<td>100</td>
<td>6.3x10</td>
<td>0.08</td>
<td>320</td>
<td>25</td>
<td>2820</td>
</tr>
<tr>
<td></td>
<td></td>
<td>100</td>
<td>6.3x10</td>
<td>0.08</td>
<td>320</td>
<td>25</td>
<td>2820</td>
</tr>
<tr>
<td></td>
<td></td>
<td>820</td>
<td>8x11.5</td>
<td>0.08</td>
<td>1640</td>
<td>10</td>
<td>5800</td>
</tr>
<tr>
<td></td>
<td></td>
<td>820</td>
<td>8x11.5</td>
<td>0.08</td>
<td>1640</td>
<td>10</td>
<td>5800</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1200</td>
<td>10x12.5</td>
<td>0.08</td>
<td>2400</td>
<td>9</td>
<td>6200</td>
</tr>
<tr>
<td>16 (1C)</td>
<td>18.4</td>
<td>180</td>
<td>8x11.5</td>
<td>0.08</td>
<td>576</td>
<td>8</td>
<td>5700</td>
</tr>
<tr>
<td></td>
<td></td>
<td>270</td>
<td>8x11.5</td>
<td>0.08</td>
<td>864</td>
<td>8</td>
<td>5000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>270</td>
<td>8x11.5</td>
<td>0.08</td>
<td>864</td>
<td>8</td>
<td>5000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>330</td>
<td>8x11.5</td>
<td>0.08</td>
<td>1056</td>
<td>8</td>
<td>6100</td>
</tr>
<tr>
<td></td>
<td></td>
<td>470</td>
<td>10x12.5</td>
<td>0.08</td>
<td>1504</td>
<td>10</td>
<td>6100</td>
</tr>
<tr>
<td></td>
<td></td>
<td>680</td>
<td>10x12.5</td>
<td>0.08</td>
<td>2176</td>
<td>10</td>
<td>6100</td>
</tr>
<tr>
<td>20 (1D)</td>
<td>23</td>
<td>390</td>
<td>8x11.5</td>
<td>0.12</td>
<td>1560</td>
<td>14</td>
<td>4970</td>
</tr>
<tr>
<td></td>
<td></td>
<td>390</td>
<td>8x11.5</td>
<td>0.12</td>
<td>1560</td>
<td>14</td>
<td>4970</td>
</tr>
<tr>
<td></td>
<td></td>
<td>680</td>
<td>10x12.5</td>
<td>0.12</td>
<td>2720</td>
<td>12</td>
<td>5400</td>
</tr>
</tbody>
</table>

* : Load life 5000hours.

* Taping specifications are given in page 28, 27.
* Please refer to page 3 for the minimum order quantity.
## Dimensions

<table>
<thead>
<tr>
<th>Rated Voltage (V) (code)</th>
<th>Surge Voltage (V)</th>
<th>Rated Capacitance (µF)</th>
<th>Case Size φxL (mm)</th>
<th>tan δ</th>
<th>Leakage Current (µA, 2min.)</th>
<th>ESR (mΩ) (20°C/10kHz)</th>
<th>Rated Ripple Current (mArms)</th>
<th>NICHICON</th>
<th>FPCAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>33</td>
<td>8x11.5</td>
<td>0.12</td>
<td>413</td>
<td>24</td>
<td>3600</td>
<td>RNU1E330MDN1</td>
<td>FP-025RE330M-NU</td>
<td></td>
<td></td>
</tr>
<tr>
<td>33</td>
<td>8x11.5</td>
<td>0.12</td>
<td>413</td>
<td>24</td>
<td>3600</td>
<td>RNU1E330MCN1</td>
<td>FP-025RE330M-NU-H</td>
<td></td>
<td></td>
</tr>
<tr>
<td>33</td>
<td>8x11.5</td>
<td>0.12</td>
<td>588</td>
<td>24</td>
<td>3600</td>
<td>RNU1E470MDN1</td>
<td>FP-025RE470M-NU</td>
<td></td>
<td></td>
</tr>
<tr>
<td>33</td>
<td>8x11.5</td>
<td>0.12</td>
<td>588</td>
<td>24</td>
<td>3600</td>
<td>RNU1E470MCN1</td>
<td>FP-025RE470M-NU-H</td>
<td></td>
<td></td>
</tr>
<tr>
<td>68</td>
<td>8x11.5</td>
<td>0.12</td>
<td>850</td>
<td>24</td>
<td>3600</td>
<td>RNU1E680MDN1</td>
<td>FP-025RE680M-NU</td>
<td></td>
<td></td>
</tr>
<tr>
<td>68</td>
<td>8x11.5</td>
<td>0.12</td>
<td>850</td>
<td>24</td>
<td>3600</td>
<td>RNU1E680MCN1</td>
<td>FP-025RE680M-NU-H</td>
<td></td>
<td></td>
</tr>
<tr>
<td>180</td>
<td>8x11.5</td>
<td>0.12</td>
<td>900</td>
<td>16</td>
<td>4650</td>
<td>RNU1E181MDN1</td>
<td>FP-025RE181M-NU</td>
<td></td>
<td></td>
</tr>
<tr>
<td>180</td>
<td>8x11.5</td>
<td>0.12</td>
<td>900</td>
<td>16</td>
<td>4650</td>
<td>RNU1E181MCN1</td>
<td>FP-025RE181M-NU-H</td>
<td></td>
<td></td>
</tr>
<tr>
<td>220</td>
<td>8x11.5</td>
<td>0.12</td>
<td>1100</td>
<td>16</td>
<td>4650</td>
<td>RNU1E221MDN1</td>
<td>FP-025RE221M-NU</td>
<td></td>
<td></td>
</tr>
<tr>
<td>220</td>
<td>8x11.5</td>
<td>0.12</td>
<td>1100</td>
<td>16</td>
<td>4650</td>
<td>RNU1E221MCN1</td>
<td>FP-025RE221M-NU-H</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*220</td>
<td>8x11.5</td>
<td>0.12</td>
<td>1100</td>
<td>16</td>
<td>4650</td>
<td>RNU1E221MDNASQ</td>
<td>FP-025RE221M-NU-5K</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*220</td>
<td>8x11.5</td>
<td>0.12</td>
<td>1100</td>
<td>16</td>
<td>4650</td>
<td>RNU1E221MCNASQ</td>
<td>FP-025RE221M-NU-5KH</td>
<td></td>
<td></td>
</tr>
<tr>
<td>330</td>
<td>10x12.5</td>
<td>0.12</td>
<td>1650</td>
<td>14</td>
<td>5000</td>
<td>RNU1E391MDN1</td>
<td>FP-025RE391M-NU</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*330</td>
<td>10x12.5</td>
<td>0.12</td>
<td>1650</td>
<td>14</td>
<td>5000</td>
<td>RNU1E391MCNASQ</td>
<td>FP-025RE391M-NU-5K</td>
<td></td>
<td></td>
</tr>
<tr>
<td>390</td>
<td>10x12.5</td>
<td>0.12</td>
<td>1950</td>
<td>14</td>
<td>5000</td>
<td>RNU1E391MCNASQ</td>
<td>FP-025RE391M-NU-5KH</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*390</td>
<td>10x12.5</td>
<td>0.12</td>
<td>1950</td>
<td>14</td>
<td>5000</td>
<td>RNU1E391MDNASQ</td>
<td>FP-025RE391M-NU-5K</td>
<td></td>
<td></td>
</tr>
<tr>
<td>47</td>
<td>8x11.5</td>
<td>0.12</td>
<td>329</td>
<td>24</td>
<td>3600</td>
<td>RNU1E470MDN1</td>
<td>FP-025RE470M-NU</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*82</td>
<td>8x11.5</td>
<td>0.12</td>
<td>574</td>
<td>20</td>
<td>4000</td>
<td>RNU1E820MDNASQ</td>
<td>FP-025RE820M-NU-4K</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*82</td>
<td>8x11.5</td>
<td>0.12</td>
<td>574</td>
<td>20</td>
<td>4000</td>
<td>RNU1E820MCNASQ</td>
<td>FP-025RE820M-NU-4KH</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*120</td>
<td>10x12.5</td>
<td>0.12</td>
<td>840</td>
<td>18</td>
<td>4400</td>
<td>RNU1E121MDNASQ</td>
<td>FP-025RE121M-NU-5K</td>
<td></td>
<td></td>
</tr>
<tr>
<td>150</td>
<td>10x12.5</td>
<td>0.12</td>
<td>1050</td>
<td>20</td>
<td>3800</td>
<td>RNU1E151MDN1</td>
<td>FP-025RE151M-NU</td>
<td></td>
<td></td>
</tr>
<tr>
<td>39</td>
<td>8x11.5</td>
<td>0.12</td>
<td>390</td>
<td>20</td>
<td>2400</td>
<td>RNU1E390MDN1</td>
<td>FP-025RE390M-NU</td>
<td></td>
<td></td>
</tr>
<tr>
<td>39</td>
<td>8x11.5</td>
<td>0.12</td>
<td>390</td>
<td>20</td>
<td>2400</td>
<td>RNU1E390MCN1</td>
<td>FP-025RE390M-NU-H</td>
<td></td>
<td></td>
</tr>
<tr>
<td>47</td>
<td>10x12.5</td>
<td>0.12</td>
<td>470</td>
<td>24</td>
<td>2700</td>
<td>RNU1E470MDN1</td>
<td>FP-025RE470M-NU</td>
<td></td>
<td></td>
</tr>
<tr>
<td>68</td>
<td>10x12.5</td>
<td>0.12</td>
<td>680</td>
<td>24</td>
<td>2700</td>
<td>RNU1E680MDN1</td>
<td>FP-025RE680M-NU</td>
<td></td>
<td></td>
</tr>
<tr>
<td>33</td>
<td>8x11.5</td>
<td>0.12</td>
<td>416</td>
<td>26</td>
<td>2300</td>
<td>RNU1J330MDN1</td>
<td>FP-028RE330M-NU</td>
<td></td>
<td></td>
</tr>
<tr>
<td>33</td>
<td>8x11.5</td>
<td>0.12</td>
<td>416</td>
<td>26</td>
<td>2300</td>
<td>RNU1J330MCN1</td>
<td>FP-028RE330M-NU-H</td>
<td></td>
<td></td>
</tr>
<tr>
<td>39</td>
<td>10x12.5</td>
<td>0.12</td>
<td>492</td>
<td>25</td>
<td>2600</td>
<td>RNU1J390MDN1</td>
<td>FP-028RE390M-NU</td>
<td></td>
<td></td>
</tr>
<tr>
<td>47</td>
<td>10x12.5</td>
<td>0.12</td>
<td>592</td>
<td>25</td>
<td>2600</td>
<td>RNU1J470MDN1</td>
<td>FP-028RE470M-NU</td>
<td></td>
<td></td>
</tr>
<tr>
<td>56</td>
<td>10x12.5</td>
<td>0.12</td>
<td>706</td>
<td>25</td>
<td>2600</td>
<td>RNU1J560MDN1</td>
<td>FP-028RE560M-NU</td>
<td></td>
<td></td>
</tr>
<tr>
<td>63</td>
<td>10x12.5</td>
<td>0.12</td>
<td>706</td>
<td>25</td>
<td>2600</td>
<td>RNU1J560MDN1</td>
<td>FP-028RE560M-NU</td>
<td></td>
<td></td>
</tr>
<tr>
<td>63</td>
<td>10x12.5</td>
<td>0.12</td>
<td>706</td>
<td>25</td>
<td>2600</td>
<td>RNU1J560MDN1</td>
<td>FP-028RE560M-NU</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* : Load life 5000hours.

## Frequency Characteristics

(The frequency characteristics are typical and not a guaranteed value.)

![Frequency Characteristics Graph](image-url)

- Taping specifications are given in page 26, 27.
- Please refer to page 3 for the minimum order quantity.
CONDUCTIVE POLYMER ALUMINUM SOLID ELECTROLYTIC CAPACITORS

RNE

High Capacitance

- Low ESR, High Capacitance, High ripple current.
- Load life of 2000/5000 hours at 105°C.
- Radial lead type: Lead free flow soldering condition correspondence.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).

Specifications

<table>
<thead>
<tr>
<th>Item</th>
<th>Performance Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category Temperature Range</td>
<td>–55 to +105°C</td>
</tr>
<tr>
<td>Rated Voltage Range</td>
<td>2.5 to 16V</td>
</tr>
<tr>
<td>Rated Capacitance Range</td>
<td>100 to 1500µF</td>
</tr>
<tr>
<td>Capacitance Tolerance</td>
<td>±20% at 120Hz, 20°C</td>
</tr>
<tr>
<td>Tangent of loss angle (tan δ)</td>
<td>Less than or equal to the specified value at 120Hz, 20°C</td>
</tr>
<tr>
<td>ESR (≠1)</td>
<td>Less than or equal to the specified value at 100kHz, 20°C</td>
</tr>
<tr>
<td>Leakage Current (≠2)</td>
<td>Less than or equal to the specified value after 2 minutes’ application of rated voltage at 20°C</td>
</tr>
</tbody>
</table>

Endurance

- Test condition: 105°C, rated voltage 2000 / 5000Hrs.
- Capacitance change: Within ±20% of initial value before test
- tan δ: 150% or less than the initial specified value
- ESR (≠1): 150% or less than the initial specified value
- Leakage current (≠2): Less than or equal to the initial specified value

Notes:
1. ESR should be measured at both of the terminal ends closest to the capacitor body.
2. Conditioning: If any doubt arises, measure the leakage current after the voltage treatment of applying DC rated voltage continuously to the capacitor for 120 minutes at 105°C.

Dimensions

<table>
<thead>
<tr>
<th>Type,numbering system</th>
<th>(Example: 16V 470µF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nichicon part number</td>
<td>R1C0471M</td>
</tr>
<tr>
<td>Lead Forming</td>
<td>RNE</td>
</tr>
<tr>
<td>Control code</td>
<td>12</td>
</tr>
<tr>
<td>Configuration</td>
<td>C</td>
</tr>
<tr>
<td>Capacitance tolerance</td>
<td>±20%</td>
</tr>
<tr>
<td>Rated capacitance (470µF)</td>
<td>470</td>
</tr>
<tr>
<td>Rated voltage (16V)</td>
<td>16</td>
</tr>
<tr>
<td>Series name</td>
<td>D</td>
</tr>
<tr>
<td>Type</td>
<td>E</td>
</tr>
<tr>
<td>Nichicon part number</td>
<td>4</td>
</tr>
<tr>
<td>Control code</td>
<td>N</td>
</tr>
<tr>
<td>Configuration</td>
<td>A</td>
</tr>
<tr>
<td>Capacitance tolerance</td>
<td>±20%</td>
</tr>
<tr>
<td>Rated capacitance (470µF)</td>
<td>470</td>
</tr>
<tr>
<td>Rated voltage (16V)</td>
<td>16</td>
</tr>
<tr>
<td>Type</td>
<td>P</td>
</tr>
<tr>
<td>Nichicon part number</td>
<td>7</td>
</tr>
<tr>
<td>Control code</td>
<td>K</td>
</tr>
<tr>
<td>Configuration</td>
<td>S</td>
</tr>
<tr>
<td>Capacitance tolerance</td>
<td>±20%</td>
</tr>
<tr>
<td>Rated capacitance (470µF)</td>
<td>470</td>
</tr>
<tr>
<td>Rated voltage (16V)</td>
<td>16</td>
</tr>
<tr>
<td>Type</td>
<td>X</td>
</tr>
</tbody>
</table>

Frequency coefficient of rated ripple current

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>120 Hz</td>
<td>0.10</td>
</tr>
<tr>
<td>1 kHz</td>
<td>0.45</td>
</tr>
<tr>
<td>10 kHz</td>
<td>0.50</td>
</tr>
<tr>
<td>100 kHz</td>
<td>1.00</td>
</tr>
<tr>
<td>300 kHz</td>
<td>1.00</td>
</tr>
</tbody>
</table>

- Dimension table in next page.
## Dimensions

<table>
<thead>
<tr>
<th>Rated Voltage (V) (code)</th>
<th>Surge Voltage (V)</th>
<th>Rated Capacitance (µF)</th>
<th>Case Size øD×L (mm)</th>
<th>tan δ</th>
<th>Leakage Current (µA, 2min.)</th>
<th>ESR (mΩ) 20°C/100kHz</th>
<th>Rated Ripple Current (mArms) 105°C/100kHz</th>
<th>NICHICON</th>
<th>FPCAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.5 (0E)</td>
<td>2.8</td>
<td>680</td>
<td>8×6</td>
<td>0.1</td>
<td>500</td>
<td>8</td>
<td>4900</td>
<td>RNE0E681MDN1</td>
<td>FP-2R5E681M-NE</td>
</tr>
<tr>
<td></td>
<td></td>
<td>* 820</td>
<td>8×6</td>
<td>0.1</td>
<td>500</td>
<td>8</td>
<td>4900</td>
<td>RNE0E821MDNASQ</td>
<td>FP-2R5E821M-NE</td>
</tr>
<tr>
<td>6.3 (0J)</td>
<td>7.2</td>
<td>270</td>
<td>5×8</td>
<td>0.1</td>
<td>500</td>
<td>12</td>
<td>3600</td>
<td>RNE0J271MDN1</td>
<td>FP-6R3E271M-NE</td>
</tr>
<tr>
<td></td>
<td></td>
<td>330</td>
<td>5×8</td>
<td>0.1</td>
<td>500</td>
<td>10</td>
<td>3700</td>
<td>RNE0J331MDN1</td>
<td>FP-6R3E331M-NE</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1200</td>
<td>8×9</td>
<td>0.08</td>
<td>1512</td>
<td>10</td>
<td>5700</td>
<td>RNE0J122MDN1</td>
<td>FP-6R3E122M-NE</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1500</td>
<td>8×11.5</td>
<td>0.12</td>
<td>1890</td>
<td>10</td>
<td>5400</td>
<td>RNE0J152MDN1</td>
<td>FP-6R3E152M-NE</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1500</td>
<td>8×11.5</td>
<td>0.12</td>
<td>1890</td>
<td>10</td>
<td>5400</td>
<td>RNE0J152MCN1</td>
<td>FP-6R3E152M-NE</td>
</tr>
<tr>
<td>10 (1A)</td>
<td>11.5</td>
<td>220</td>
<td>6.3×10</td>
<td>0.08</td>
<td>320</td>
<td>30</td>
<td>2500</td>
<td>RNE1A221MDN1</td>
<td>FP-016RE221M-NE</td>
</tr>
<tr>
<td></td>
<td></td>
<td>100</td>
<td>5×10</td>
<td>0.08</td>
<td>320</td>
<td>35</td>
<td>2300</td>
<td>RNE1C101MDN1</td>
<td>FP-016RE101M-NE</td>
</tr>
<tr>
<td></td>
<td></td>
<td>220</td>
<td>8×6</td>
<td>0.1</td>
<td>500</td>
<td>13</td>
<td>4150</td>
<td>RNE1C221MDN1</td>
<td>FP-016RE221M-NE</td>
</tr>
<tr>
<td></td>
<td></td>
<td>470</td>
<td>8×11.5</td>
<td>0.08</td>
<td>1504</td>
<td>10</td>
<td>5400</td>
<td>RNE1C471MDN1</td>
<td>FP-016RE471M-NE</td>
</tr>
<tr>
<td></td>
<td></td>
<td>470</td>
<td>8×11.5</td>
<td>0.08</td>
<td>1504</td>
<td>10</td>
<td>5400</td>
<td>RNE1C471MCN1</td>
<td>FP-016RE471M-NE</td>
</tr>
<tr>
<td></td>
<td></td>
<td>* 470</td>
<td>8×11.5</td>
<td>0.08</td>
<td>1504</td>
<td>10</td>
<td>5400</td>
<td>RNE1C471MDNASQ</td>
<td>FP-016RE471M-NE</td>
</tr>
<tr>
<td></td>
<td></td>
<td>* 470</td>
<td>8×11.5</td>
<td>0.08</td>
<td>1504</td>
<td>10</td>
<td>5400</td>
<td>RNE1C471MCNASQ</td>
<td>FP-016RE471M-NE</td>
</tr>
<tr>
<td></td>
<td></td>
<td>560</td>
<td>8×11.5</td>
<td>0.08</td>
<td>1792</td>
<td>14</td>
<td>5000</td>
<td>RNE1C561MDN1</td>
<td>FP-016RE561M-NE</td>
</tr>
<tr>
<td></td>
<td></td>
<td>560</td>
<td>8×11.5</td>
<td>0.08</td>
<td>1792</td>
<td>14</td>
<td>5000</td>
<td>RNE1C561MCN1</td>
<td>FP-016RE561M-NE</td>
</tr>
<tr>
<td></td>
<td></td>
<td>* 560</td>
<td>8×11.5</td>
<td>0.08</td>
<td>1792</td>
<td>14</td>
<td>5000</td>
<td>RNE1C561MDNASQ</td>
<td>FP-016RE561M-NE</td>
</tr>
<tr>
<td></td>
<td></td>
<td>* 560</td>
<td>8×11.5</td>
<td>0.08</td>
<td>1792</td>
<td>14</td>
<td>5000</td>
<td>RNE1C561MCNASQ</td>
<td>FP-016RE561M-NE</td>
</tr>
<tr>
<td></td>
<td></td>
<td>820</td>
<td>10×12.5</td>
<td>0.08</td>
<td>2624</td>
<td>11</td>
<td>5600</td>
<td>RNE1C821MDN1</td>
<td>FP-016RE821M-NE</td>
</tr>
<tr>
<td></td>
<td></td>
<td>* 820</td>
<td>10×12.5</td>
<td>0.08</td>
<td>2624</td>
<td>11</td>
<td>5600</td>
<td>RNE1C821MDNASQ</td>
<td>FP-016RE821M-NE</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1000</td>
<td>10×12.5</td>
<td>0.08</td>
<td>3200</td>
<td>10</td>
<td>6100</td>
<td>RNE1C102MDN1</td>
<td>FP-016RE102M-NE</td>
</tr>
<tr>
<td></td>
<td></td>
<td>* 1000</td>
<td>10×12.5</td>
<td>0.08</td>
<td>3200</td>
<td>10</td>
<td>6100</td>
<td>RNE1C102MDNASQ</td>
<td>FP-016RE102M-NE</td>
</tr>
</tbody>
</table>

* : Load life 5000 hours.

## Frequency Characteristics
(The frequency characteristics are typical and not a guaranteed value.)

![Impedance Frequency Graph](image1)

- Taping specifications are given in page 26, 27.
- Please refer to page 3 for the minimum order quantity.
**Specifications**

<table>
<thead>
<tr>
<th>Item</th>
<th>Performance Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category Temperature Range</td>
<td>-55 to +105°C</td>
</tr>
<tr>
<td>Rated Voltage Range</td>
<td>16V</td>
</tr>
<tr>
<td>Rated Capacitance Range</td>
<td>680 to 2200µF</td>
</tr>
<tr>
<td>Capacitance Tolerance</td>
<td>±20% at 120Hz, 20°C</td>
</tr>
<tr>
<td>Tangent of loss angle (tan δ)</td>
<td>Less than or equal to the specified value at 120Hz, 20°C</td>
</tr>
<tr>
<td>ESR (≠ 1)</td>
<td>Less than or equal to the specified value at 100kHz, 20°C</td>
</tr>
<tr>
<td>Leakage Current (≠ 2)</td>
<td>Less than or equal to the specified value. After 2 minutes' application of rated voltage at 20°C</td>
</tr>
</tbody>
</table>

1. ESR should be measured at both of the terminal ends closest to the capacitor body.
2. Conditioning: If any doubt arises, measure the leakage current after the voltage treatment of applying DC rated voltage continuously to the capacitor for 120 minutes at 105°C.

**Dimensions**

<table>
<thead>
<tr>
<th>Lot No.</th>
<th>Capacitance</th>
<th>Stand off</th>
<th>Wire (Lead free)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product Logo</td>
<td>Voltage</td>
<td>Aluminum case</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ø D x L</th>
<th>Ø d</th>
<th>P</th>
<th>α</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ø8 x 16L</td>
<td>0.6</td>
<td>3.5</td>
<td>1.5</td>
</tr>
<tr>
<td>Ø8 x 20L</td>
<td>0.6</td>
<td>3.5</td>
<td>1.5</td>
</tr>
<tr>
<td>Ø10 x 20L</td>
<td>0.6</td>
<td>5.0</td>
<td>1.5</td>
</tr>
</tbody>
</table>

**Frequency coefficient of rated ripple current**

<table>
<thead>
<tr>
<th>Frequency</th>
<th>120 Hz</th>
<th>1 kHz</th>
<th>10 kHz</th>
<th>100 kHz</th>
<th>300 kHz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coefficient</td>
<td>0.10</td>
<td>0.45</td>
<td>0.50</td>
<td>1.00</td>
<td>1.00</td>
</tr>
</tbody>
</table>

**Type numbering system** (Example: 16V 2200µF)

<table>
<thead>
<tr>
<th>Nichicon part number</th>
<th>FPCAP part number</th>
</tr>
</thead>
</table>

- **Configuration**
- **Capacitance tolerance (±20%)**
- **Rated capacitance (2200µF)**
- **Rated voltage (16V)**
- **Series name**
- **Type**

**Dimension table in next page.**
## RNL

### Dimensions

<table>
<thead>
<tr>
<th>Rated Voltage (V)</th>
<th>Surge Voltage (V)</th>
<th>Rated Capacitance (µF)</th>
<th>Case Size φD×L (mm)</th>
<th>tan δ</th>
<th>Leakage Current (µA, 2min.)</th>
<th>ESR (mΩ) (20°C/100kHz)</th>
<th>Rated Ripple Current (mA,Arms) (105°C/100kHz)</th>
<th>NICHICON</th>
<th>FPCAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>16 (1C)</td>
<td>18.4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>680</td>
<td>105</td>
<td>8 x 16</td>
<td>0.12</td>
<td></td>
<td>1088</td>
<td>8</td>
<td>7000</td>
<td>RNL1C681MDS1</td>
<td>FP-016RE681M-NL</td>
</tr>
<tr>
<td>820</td>
<td>105</td>
<td>▲8 x 16</td>
<td>0.12</td>
<td></td>
<td>1312</td>
<td>8</td>
<td>7000</td>
<td>RNL1C821MDS6</td>
<td>FP-016RE821M-NL-DS</td>
</tr>
<tr>
<td>820</td>
<td>105</td>
<td>8 x 20</td>
<td>0.12</td>
<td></td>
<td>1312</td>
<td>8</td>
<td>7500</td>
<td>RNL1C821MDS1</td>
<td>FP-016RE821M-NL</td>
</tr>
<tr>
<td>820</td>
<td>105</td>
<td>▲8 x 20</td>
<td>0.12</td>
<td></td>
<td>1312</td>
<td>8</td>
<td>7500</td>
<td>RNL1C821MDSASQ</td>
<td>FP-016RE821M-NL-5K</td>
</tr>
<tr>
<td>1000</td>
<td>18.4</td>
<td>8 x 20</td>
<td>0.12</td>
<td></td>
<td>1600</td>
<td>8</td>
<td>7500</td>
<td>RNL1C102MDS1</td>
<td>FP-016RE102M-NL</td>
</tr>
<tr>
<td>1000</td>
<td>18.4</td>
<td>▲8 x 20</td>
<td>0.12</td>
<td></td>
<td>1600</td>
<td>8</td>
<td>7500</td>
<td>RNL1C102MDSASQ</td>
<td>FP-016RE102M-NL-5K</td>
</tr>
<tr>
<td>1200</td>
<td>18.4</td>
<td>8 x 20</td>
<td>0.12</td>
<td></td>
<td>1920</td>
<td>8</td>
<td>7500</td>
<td>RNL1C122MDS1</td>
<td>FP-016RE122M-NL</td>
</tr>
<tr>
<td>1200</td>
<td>18.4</td>
<td>▲8 x 20</td>
<td>0.12</td>
<td></td>
<td>1920</td>
<td>8</td>
<td>7500</td>
<td>RNL1C122MDSASQ</td>
<td>FP-016RE122M-NL-5K</td>
</tr>
<tr>
<td>1500</td>
<td>18.4</td>
<td>8 x 20</td>
<td>0.12</td>
<td></td>
<td>2400</td>
<td>8</td>
<td>7500</td>
<td>RNL1C152MDS6</td>
<td>FP-016RE152M-NL-DS</td>
</tr>
<tr>
<td>1500</td>
<td>18.4</td>
<td>▲8 x 20</td>
<td>0.12</td>
<td></td>
<td>2400</td>
<td>8</td>
<td>8100</td>
<td>RNL1C152MDS1</td>
<td>FP-016RE152M-NL</td>
</tr>
<tr>
<td>1500</td>
<td>18.4</td>
<td>▲10 x 20</td>
<td>0.12</td>
<td></td>
<td>2400</td>
<td>8</td>
<td>8100</td>
<td>RNL1C152MDSASQ</td>
<td>FP-016RE152M-NL-5K</td>
</tr>
<tr>
<td>1500</td>
<td>18.4</td>
<td>▲10 x 20</td>
<td>0.12</td>
<td></td>
<td>2400</td>
<td>8</td>
<td>8100</td>
<td>RNL1C152MDSASQ</td>
<td>FP-016RE152M-NL-5K</td>
</tr>
<tr>
<td>1800</td>
<td>18.4</td>
<td>10 x 20</td>
<td>0.12</td>
<td></td>
<td>2880</td>
<td>8</td>
<td>8100</td>
<td>RNL1C182MDS1</td>
<td>FP-016RE182M-NL</td>
</tr>
<tr>
<td>1800</td>
<td>18.4</td>
<td>▲10 x 20</td>
<td>0.12</td>
<td></td>
<td>2880</td>
<td>8</td>
<td>8100</td>
<td>RNL1C182MDSASQ</td>
<td>FP-016RE182M-NL-5K</td>
</tr>
<tr>
<td>2200</td>
<td>18.4</td>
<td>10 x 20</td>
<td>0.12</td>
<td></td>
<td>3520</td>
<td>8</td>
<td>8100</td>
<td>RNL1C222MDS1</td>
<td>FP-016RE222M-NL</td>
</tr>
<tr>
<td>2200</td>
<td>18.4</td>
<td>▲10 x 20</td>
<td>0.12</td>
<td></td>
<td>3520</td>
<td>8</td>
<td>8100</td>
<td>RNL1C222MDSASQ</td>
<td>FP-016RE222M-NL-5K</td>
</tr>
</tbody>
</table>

* ▲: Load life 5000hours.

* "▲" In this case, [□] will be put at 12th digit of type numbering system.

### Frequency Characteristics (The frequency characteristics are typical and not a guaranteed value.)

![Impedance vs Frequency](image1)

- Taping specifications are given in page 26, 27.
- Please refer to page 3 for the minimum order quantity.
RS6

- Miniature Sized, High Capacitance
- Low ESR, High Capacitance, High ripple current.
- Radial lead type: Lead free flow soldering condition correspondence.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).

### Specifications

<table>
<thead>
<tr>
<th>Item</th>
<th>Performance Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category Temperature Range</td>
<td>–55 to +105°C</td>
</tr>
<tr>
<td>Rated Voltage Range</td>
<td>2.5 to 25V</td>
</tr>
<tr>
<td>Rated Capacitance Range</td>
<td>33 to 560µF</td>
</tr>
<tr>
<td>Capacitance Tolerance</td>
<td>±20% at 120Hz, 20°C</td>
</tr>
<tr>
<td>Tangent of loss angle (tan δ)</td>
<td>Less than or equal to the specified value at 120Hz, 20°C</td>
</tr>
<tr>
<td>ESR (±1)</td>
<td>Less than or equal to the specified value at 100kHz, 20°C</td>
</tr>
<tr>
<td>Leakage Current (±2)</td>
<td>Less than or equal to the specified value. After 2 minutes’ application of rated voltage at 20°C</td>
</tr>
</tbody>
</table>

#### Endurance

- **Test condition**: 105°C, rated voltage 2000 / 5000Hrs.
- **Capacitance change**: Within ±20% of initial value before test
- **tan δ**: 150% or less than the initial specified value
- **ESR (±1)**: 150% or less than the initial specified value
- **Leakage current (±2)**: Less than or equal to the initial specified value

1. ESR should be measured at both of the terminal ends closest to the capacitor body.
2. Conditioning: If any doubt arises, measure the leakage current after the voltage treatment of applying DC rated voltage continuously to the capacitor for 120 minutes at 105°C.

### Dimensions

#### Type numbering system (Example: 2.5V 560µF)
- **Nichicon part number**: RS6 0E561 M CN 1 JT

#### FPCAP part number
- **Control code**: Lead Forming
- **Configuration**: Capacitance tolerance (±20%)
- **Rated capacitance (560µF)**
- **Rated voltage (2.5V)**
- **Series name**
- **Type**

### Frequency coefficient of rated ripple current

<table>
<thead>
<tr>
<th>Frequency (Hz)</th>
<th>Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>120</td>
<td>0.10</td>
</tr>
<tr>
<td>1</td>
<td>0.46</td>
</tr>
<tr>
<td>10</td>
<td>0.50</td>
</tr>
<tr>
<td>100</td>
<td>1.00</td>
</tr>
<tr>
<td>300</td>
<td>1.00</td>
</tr>
</tbody>
</table>

### Configuration

- **Lot No.**
- **Product Logo**
- **Voltage**
- **Capacitance**
- **Stand off**
- **Wire (Lead free)**

**Configuration**: Lead Forming

### FPCAP part number

- **Control code**: Lead Forming
- **Series name**: Capacitance tolerance (±20%)
- **Rated capacitance (560µF)**
- **Rated voltage (2.5V)**
- **Type**

#### Type numbering system

- **Lot No.**
- **Product Logo**
- **Voltage**
- **Capacitance**
- **Stand off**
- **Wire (Lead free)**

**Configuration**: Lead Forming

### Frequency coefficient of rated ripple current

<table>
<thead>
<tr>
<th>Frequency (Hz)</th>
<th>Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>120</td>
<td>0.10</td>
</tr>
<tr>
<td>1</td>
<td>0.46</td>
</tr>
<tr>
<td>10</td>
<td>0.50</td>
</tr>
<tr>
<td>100</td>
<td>1.00</td>
</tr>
<tr>
<td>300</td>
<td>1.00</td>
</tr>
</tbody>
</table>

### Dimensions table

<table>
<thead>
<tr>
<th>φD×L</th>
<th>φd</th>
<th>P</th>
<th>α</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.3x5</td>
<td>0.5</td>
<td>2.5</td>
<td>1.0</td>
</tr>
<tr>
<td>6.3x6</td>
<td>0.45</td>
<td>2.5</td>
<td>1.0</td>
</tr>
</tbody>
</table>

- **Dimension table in next page.**
RS6

Dimensions

<table>
<thead>
<tr>
<th>Rated Voltage (V) (code)</th>
<th>Surge Voltage (V)</th>
<th>Rated Capacitance (µF)</th>
<th>Case Size φD×L (mm)</th>
<th>tan δ</th>
<th>Leakage Current (µA, 2min.)</th>
<th>ESR (mΩ) (20°C/100kHz)</th>
<th>Rated Ripple Current (mA, 2min, 105°C/100kHz)</th>
<th>NICHICON</th>
<th>FPCAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.5 (0E)</td>
<td>2.8</td>
<td>390</td>
<td>6.3×5</td>
<td>0.10</td>
<td>500</td>
<td>12</td>
<td>3500</td>
<td>RS60E391MCN1</td>
<td>□□</td>
</tr>
<tr>
<td></td>
<td></td>
<td>560</td>
<td>6.3×5</td>
<td>0.12</td>
<td>700</td>
<td>13</td>
<td>3600</td>
<td>RS60E561MCN1</td>
<td>□□</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>FP-2R5RE651M-S6</td>
<td>□□</td>
</tr>
<tr>
<td>6.3 (0J)</td>
<td>7.2</td>
<td>220</td>
<td>6.3×5</td>
<td>0.12</td>
<td>500</td>
<td>15</td>
<td>3200</td>
<td>RS60J221MCN1</td>
<td>□□</td>
</tr>
<tr>
<td>10 (1A)</td>
<td>11.5</td>
<td>150</td>
<td>6.3×5</td>
<td>0.10</td>
<td>450</td>
<td>25</td>
<td>2500</td>
<td>RS61A151MCN1</td>
<td>□□</td>
</tr>
<tr>
<td>16 (1C)</td>
<td>18.4</td>
<td>100</td>
<td>6.3×6</td>
<td>0.10</td>
<td>500</td>
<td>24</td>
<td>2490</td>
<td>RS61C101MDN1</td>
<td>□□</td>
</tr>
<tr>
<td></td>
<td></td>
<td>180</td>
<td>6.3×5</td>
<td>0.10</td>
<td>576</td>
<td>20</td>
<td>3200</td>
<td>RS61C181MCN1</td>
<td>□□</td>
</tr>
<tr>
<td>25 (1E)</td>
<td>28.7</td>
<td>33</td>
<td>6.3×5</td>
<td>0.10</td>
<td>165</td>
<td>60</td>
<td>1700</td>
<td>RS61E330MCN1</td>
<td>□□</td>
</tr>
<tr>
<td></td>
<td></td>
<td>47</td>
<td>6.3×5</td>
<td>0.10</td>
<td>235</td>
<td>30</td>
<td>2800</td>
<td>RS61E470MCN1</td>
<td>□□</td>
</tr>
<tr>
<td></td>
<td></td>
<td>56</td>
<td>6.3×5</td>
<td>0.10</td>
<td>280</td>
<td>30</td>
<td>2800</td>
<td>RS61E560MCN1</td>
<td>□□</td>
</tr>
</tbody>
</table>

*: Load life 5000hours.

Frequency Characteristics (The frequency characteristics are typical and not a guaranteed value.)

- Taping specifications are given on page 26, 27.
- Please refer to page 3 for the minimum order quantity.
CONDUCTIVE POLYMER ALUMINUM SOLID ELECTROLYTIC CAPACITORS

**RHT** High Temperature (125°C)

- Low ESR, High Capacitance, High ripple current.
- Load life of 1000 hours at 125°C.
- Radial lead type : Lead free flow soldering condition correspondence.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).

### Specifications

<table>
<thead>
<tr>
<th>Item</th>
<th>Performance Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category Temperature Range</td>
<td>−55 to +125°C</td>
</tr>
<tr>
<td>Rated Voltage Range</td>
<td>6.3 to 35V</td>
</tr>
<tr>
<td>Rated Capacitance Range</td>
<td>100 to 1000µF</td>
</tr>
<tr>
<td>Capacitance Tolerance</td>
<td>±20% at 120Hz, 20°C</td>
</tr>
<tr>
<td>Tangent of loss angle (tan δ)</td>
<td>Less than or equal to the specified value at 120Hz, 20°C</td>
</tr>
<tr>
<td>ESR (±1)</td>
<td>200% or less than the initial specified value</td>
</tr>
<tr>
<td>Leakage Current (±2)</td>
<td>Less than or equal to the specified value. After 2 minutes' application of rated voltage at 20°C</td>
</tr>
</tbody>
</table>

- **Endurance Test condition 125°C, rated voltage 1000Hrs.**
- **Capacitance change** Within ±20% of initial value before test
- **tan δ** 200% or less than the initial specified value
- **ESR (±1)** 200% or less than the initial specified value
- **Leakage current (±2)** Less than or equal to the initial specified value

- **Note 1** ESR should be measured at both of the terminal ends closest to the capacitor body.
- **Note 2** Conditioning : If any doubt arises, measure the leakage current after the voltage treatment of applying DC rated voltage continuously to the capacitor for 120 minutes at 105°C.

### Dimensions

![Dimensions Diagram]

- **Lot No.**
- **Capacitance**
- **Aluminum case**
- **Stand off**
- **Wire (Lead free)**
- **P**
- **d**
- **øD x L**
- **øD x L**

<table>
<thead>
<tr>
<th>øD x L</th>
<th>øD</th>
<th>P</th>
<th>α</th>
</tr>
</thead>
<tbody>
<tr>
<td>8 x 11.5</td>
<td>0.6</td>
<td>3.5</td>
<td>1.5</td>
</tr>
<tr>
<td>10 x 12.5</td>
<td>0.6</td>
<td>5.0</td>
<td>1.5</td>
</tr>
</tbody>
</table>

- **Type numbering system** (Example : 10V 330µF)
  - Nichicon part number

- **FPCAP part number**

### Frequency coefficient of rated ripple current

<table>
<thead>
<tr>
<th>Frequency</th>
<th>120 Hz</th>
<th>1 kHz</th>
<th>10 kHz</th>
<th>100 kHz</th>
<th>300 kHz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coefficient</td>
<td>0.10</td>
<td>0.45</td>
<td>0.50</td>
<td>1.00</td>
<td>1.00</td>
</tr>
</tbody>
</table>

- **Dimension table in next page.**
CONDUCTIVE POLYMER ALUMINUM SOLID ELECTROLYTIC CAPACITORS

RHT

■ Dimensions

<table>
<thead>
<tr>
<th>Rated Voltage (V)</th>
<th>Surge Voltage (V)</th>
<th>Rated Capacitance (µF)</th>
<th>Case Size φD×L (mm)</th>
<th>tan δ</th>
<th>Leakage Current (µA, 2min.)</th>
<th>ESR (mΩ) (20°C/100kHz)</th>
<th>Rated Ripple Current (mA rms)</th>
<th>NICHICON</th>
<th>FPCAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.3 (GJ)</td>
<td>7.2</td>
<td>680</td>
<td>10×12.5</td>
<td>0.12</td>
<td>857</td>
<td>12</td>
<td>5450</td>
<td>1740</td>
<td>RHT0J681MDN1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>820</td>
<td>10×12.5</td>
<td>0.12</td>
<td>1033</td>
<td>12</td>
<td>5450</td>
<td>1740</td>
<td>RHT0J821MDN1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1000</td>
<td>8×11.5</td>
<td>0.12</td>
<td>1260</td>
<td>10</td>
<td>5200</td>
<td>1600</td>
<td>RHT0J102MDN1</td>
</tr>
<tr>
<td>10 (1A)</td>
<td>11.5</td>
<td>220</td>
<td>8×11.5</td>
<td>0.12</td>
<td>440</td>
<td>17</td>
<td>3950</td>
<td>1260</td>
<td>RHT1A221MDN1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>330</td>
<td>8×11.5</td>
<td>0.12</td>
<td>660</td>
<td>17</td>
<td>3950</td>
<td>1260</td>
<td>RHT1A331MDN1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>390</td>
<td>8×11.5</td>
<td>0.12</td>
<td>780</td>
<td>16</td>
<td>3950</td>
<td>1260</td>
<td>RHT1A391MDN1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>560</td>
<td>10×12.5</td>
<td>0.12</td>
<td>1120</td>
<td>13</td>
<td>5250</td>
<td>1680</td>
<td>RHT1A561MDN1</td>
</tr>
<tr>
<td>16 (1C)</td>
<td>18.4</td>
<td>270</td>
<td>10×12.5</td>
<td>0.12</td>
<td>864</td>
<td>16</td>
<td>4750</td>
<td>1520</td>
<td>RHT1C271MDN1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>330</td>
<td>10×12.5</td>
<td>0.12</td>
<td>1056</td>
<td>16</td>
<td>4750</td>
<td>1520</td>
<td>RHT1C331MDN1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>470</td>
<td>10×12.5</td>
<td>0.12</td>
<td>1504</td>
<td>16</td>
<td>4750</td>
<td>1520</td>
<td>RHT1C471MDN1</td>
</tr>
<tr>
<td>20 (1D)</td>
<td>23.0</td>
<td>270</td>
<td>10×12.5</td>
<td>0.12</td>
<td>864</td>
<td>16</td>
<td>4750</td>
<td>1520</td>
<td>RHT1D151MDN1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>330</td>
<td>10×12.5</td>
<td>0.12</td>
<td>1056</td>
<td>16</td>
<td>4750</td>
<td>1520</td>
<td>RHT1D331MDN1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>470</td>
<td>10×12.5</td>
<td>0.12</td>
<td>1504</td>
<td>16</td>
<td>4750</td>
<td>1520</td>
<td>RHT1D471MDN1</td>
</tr>
<tr>
<td>35 (1V)</td>
<td>40.2</td>
<td>270</td>
<td>10×12.5</td>
<td>0.12</td>
<td>864</td>
<td>16</td>
<td>4750</td>
<td>1520</td>
<td>RHT1V101MDN1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>330</td>
<td>10×12.5</td>
<td>0.12</td>
<td>1056</td>
<td>16</td>
<td>4750</td>
<td>1520</td>
<td>RHT1V101MDN1</td>
</tr>
</tbody>
</table>

* : At ambient temperature

■ Frequency Characteristics (The frequency characteristics are typical and not a guaranteed value.)

- Taping specifications are given in page 26, 27.
- Please refer to page 3 for the minimum order quantity.