

RGA Series

Features

- 105°C, 2,000 hours assured
- 105°C standard series for general purposes
- RoHS Compliance
- If there is any requirement on ESR, it's suggested to use low ESR series instead of RGA. Please consult us for any inquiry.

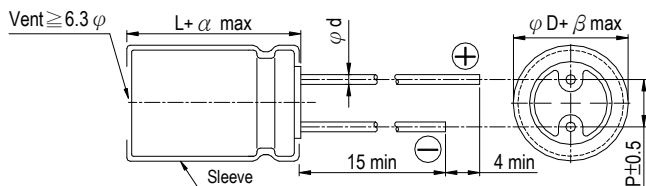


Sleeve & Marking Color: Black & White

Specifications

| Items | Performance | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--|--|-----------------------------------|-----------------------------------|--------|------|-----------------|------|-----------------|---|-----------------------------------|-----------------------------------|------|------|---------------|---------------|-----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|------------|---------------------|---------|------|------|------|------|------|------|------|------|------|------|------|------|----|---------------------|---------|---|---|---|---|---|---|---|---|---|----|----|----|---|---------------------|---------|---|---|---|---|---|---|---|---|---|----|----|----|---|
| Category Temperature Range | 6.3~400V | 450V | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | -40°C ~ +105°C | -25°C ~ +105°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Capacitance Tolerance | ±20% (at 120Hz, 20°C) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Leakage Current (at 20°C) | <table border="1"> <tr> <th>Rated voltage</th> <th>≤ 100V</th> <th>> 100V</th> </tr> <tr> <th>Time</th> <td colspan="2">after 5 minutes</td> </tr> <tr> <th>Leakage Current</th> <td>I = 0.01CV or 3 (μA) whichever is greater</td> <td>CV ≤ 1,000 I = 0.03CV + 15(μA)</td> <td>CV > 1,000 I = 0.02CV + 25(μA)</td> </tr> </table> | | Rated voltage | ≤ 100V | > 100V | Time | after 5 minutes | | Leakage Current | I = 0.01CV or 3 (μA) whichever is greater | CV ≤ 1,000 I = 0.03CV + 15(μA) | CV > 1,000 I = 0.02CV + 25(μA) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Rated voltage | ≤ 100V | > 100V | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Time | after 5 minutes | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Leakage Current | I = 0.01CV or 3 (μA) whichever is greater | CV ≤ 1,000 I = 0.03CV + 15(μA) | CV > 1,000 I = 0.02CV + 25(μA) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Where, C = rated capacitance in μF V = rated DC working voltage in V | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Tanδ (at 120 Hz, 20°C) | <table border="1"> <tr> <th>Rated Voltage</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63</th> <th>100</th> <th>160</th> <th>200</th> <th>250</th> <th>350</th> <th>400</th> <th>450</th> </tr> <tr> <th>Tanδ (max)</th> <td>0.23</td> <td>0.20</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.10</td> <td>0.09</td> <td>0.08</td> <td>0.12</td> <td>0.14</td> <td>0.17</td> <td>0.20</td> <td>0.25</td> <td>0.25</td> </tr> </table> | | | | | | | | | | | | | | Rated Voltage | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 100 | 160 | 200 | 250 | 350 | 400 | 450 | Tanδ (max) | 0.23 | 0.20 | 0.16 | 0.14 | 0.12 | 0.10 | 0.09 | 0.08 | 0.12 | 0.14 | 0.17 | 0.20 | 0.25 | 0.25 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Rated Voltage | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 100 | 160 | 200 | 250 | 350 | 400 | 450 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Tanδ (max) | 0.23 | 0.20 | 0.16 | 0.14 | 0.12 | 0.10 | 0.09 | 0.08 | 0.12 | 0.14 | 0.17 | 0.20 | 0.25 | 0.25 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| When the capacitance exceeds 1,000μF, 0.02 shall be added every 1,000μF increase. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Low Temperature Characteristics (at 120Hz) | Impedance ratio shall not exceed the values given in the table below. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Impedance Ratio | <table border="1"> <tr> <th>Rated Voltage</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63</th> <th>100</th> <th>160</th> <th>200</th> <th>250</th> <th>350</th> <th>400</th> <th>450</th> </tr> <tr> <th>Z(-25°C) / Z(+20°C)</th> <td>φD < 16</td> <td>4</td> <td>3</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>3</td> <td>6</td> <td>8</td> <td>12</td> <td>14</td> <td>16</td> </tr> <tr> <th>Z(-40°C) / Z(+20°C)</th> <td>φD < 16</td> <td>8</td> <td>6</td> <td>6</td> <td>4</td> <td>4</td> <td>3</td> <td>3</td> <td>4</td> <td>8</td> <td>10</td> <td>16</td> <td>18</td> <td>-</td> </tr> <tr> <th>Z(-25°C) / Z(+20°C)</th> <td>φD ≥ 16</td> <td>6</td> <td>4</td> <td>4</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>4</td> <td>8</td> <td>10</td> <td>16</td> <td>18</td> <td>-</td> </tr> </table> | | | | | | | | | | | | | | Rated Voltage | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 100 | 160 | 200 | 250 | 350 | 400 | 450 | Z(-25°C) / Z(+20°C) | φD < 16 | 4 | 3 | 3 | 2 | 2 | 2 | 2 | 3 | 6 | 8 | 12 | 14 | 16 | Z(-40°C) / Z(+20°C) | φD < 16 | 8 | 6 | 6 | 4 | 4 | 3 | 3 | 4 | 8 | 10 | 16 | 18 | - | Z(-25°C) / Z(+20°C) | φD ≥ 16 | 6 | 4 | 4 | 3 | 3 | 3 | 3 | 4 | 8 | 10 | 16 | 18 | - |
| | | Rated Voltage | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 100 | 160 | 200 | 250 | 350 | 400 | 450 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Z(-25°C) / Z(+20°C) | φD < 16 | 4 | 3 | 3 | 2 | 2 | 2 | 2 | 3 | 6 | 8 | 12 | 14 | 16 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Z(-40°C) / Z(+20°C) | φD < 16 | 8 | 6 | 6 | 4 | 4 | 3 | 3 | 4 | 8 | 10 | 16 | 18 | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Z(-25°C) / Z(+20°C) | φD ≥ 16 | 6 | 4 | 4 | 3 | 3 | 3 | 3 | 4 | 8 | 10 | 16 | 18 | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| * The above specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage applied with rated ripple current for 2,000 hours at 105°C. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Endurance | Test Time | | 2,000 Hrs | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Capacitance Change | | Within ±20% of initial value | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Tanδ | | Less than 200% of specified value | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Leakage Current | | Within specified value | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| * The above specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage applied with rated ripple current for 2,000 hours at 105°C. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Shelf Life Test | Test Time | | 1,000 Hrs | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Capacitance Change | | Within ±20% of initial value | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Tanδ | | Less than 200% of specified value | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Leakage Current | | Within specified value | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| * The above specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1,000 hours at 105°C without voltage applied. The rated voltage shall be applied to the capacitors before the measurements for 160 ~ 450V (Refer to JIS C 5101-4 4.1). | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ripple Current and Frequency Multipliers | Cap. (μF) | | Freq. (Hz) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 60 (50) | 120 | 500 | 1k | 10k up | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Under 100 | | 0.70 | 1.00 | 1.30 | 1.40 | 1.50 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 100 < C ≤ 1,000 | | 0.75 | 1.00 | 1.20 | 1.30 | 1.35 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1,000 up above | | 0.80 | 1.00 | 1.10 | 1.12 | 1.15 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Diagram of Dimensions

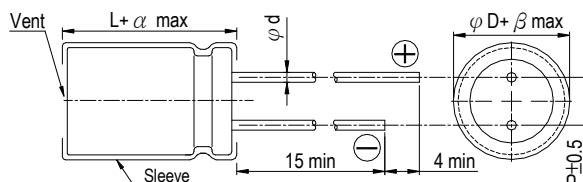


Lead Spacing and Diameter

Unit: mm

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

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





Dimension: $\phi D \times L(\text{mm})$

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

Dimension and Permissible Ripple Current

| μF | Contents | 6.3V (0J) | | 10V (1A) | | 16V (1C) | | 25V (1E) | | 35V (1V) | | 50V (1H) | | 63V (1J) | | 100V (2A) | |
|---------------|----------|-------------------|-------|-------------------|-------|-------------------|-------|-------------------|-------|-------------------|-------|-------------------|-------|-------------------|-------|-------------------|-------|
| | | $\phi D \times L$ | mA | $\phi D \times L$ | mA | $\phi D \times L$ | mA | $\phi D \times L$ | mA | $\phi D \times L$ | mA | $\phi D \times L$ | mA | $\phi D \times L$ | mA | $\phi D \times L$ | mA |
| 2.2 | 2R2 | | | | | | | | | | | 5×11 | 20 | | | 5×11 | 30 |
| 3.3 | 3R3 | | | | | | | | | | | 5×11 | 30 | | | 5×11 | 31 |
| 4.7 | 4R7 | | | | | | | | | | | 5×11 | 33 | | | 5×11 | 36 |
| 10 | 100 | | | | | | | | | | | 5×11 | 50 | | | 6.3×11 | 54 |
| 22 | 220 | | | | | | | | | | | 5×11 | 78 | 6.3×11 | 86 | 6.3×11 | 93 |
| 33 | 330 | | | | | | | | | 5×11 | 75 | 5×11 | 90 | 6.3×11 | 100 | 8×11.5 | 99 |
| 47 | 470 | | | | | | | 5×11 | 97 | 5×11 | 90 | 6.3×11 | 120 | 6.3×11 | 130 | 10×12.5 | 165 |
| 100 | 101 | | | | | 5×11 | 110 | 6.3×11 | 142 | 6.3×11 | 150 | 8×11.5 | 188 | 10×12.5 | 235 | 10×20 | 265 |
| 220 | 221 | 5×11 | 140 | 6.3×11 | 175 | 6.3×11 | 190 | 8×11.5 | 236 | 8×11.5 | 270 | 10×12.5 | 300 | 10×16 | 335 | 12.5×25 | 440 |
| 330 | 331 | | | 6.3×11 | 200 | 8×11.5 | 270 | 8×11.5 | 310 | 10×12.5 | 350 | 10×16 | 410 | 10×20 | 510 | 16×25 | 620 |
| 470 | 471 | 6.3×11 | 230 | 8×11.5 | 290 | 8×11.5 | 310 | 10×12.5 | 380 | 10×16 | 460 | 10×20 | 530 | 12.5×20 | 640 | 16×31.5 | 715 |
| 1,000 | 102 | 8×11.5 | 380 | 10×12.5 | 460 | 10×16 | 560 | 10×20 | 680 | 12.5×20 | 810 | 12.5×25 | 950 | 16×25 | 930 | 18×40 | 1,275 |
| 2,200 | 222 | 10×16 | 690 | 10×20 | 760 | 12.5×16 | 780 | 12.5×25 | 1,110 | 16×25 | 1,260 | 16×35.5 | 1,470 | 18×40 | 2,280 | 25×45 | 2,400 |
| 3,300 | 332 | 10×20 | 840 | 12.5×20 | 1,100 | 12.5×25 | 1,170 | 16×25 | 1,440 | 16×31.5 | 1,420 | 18×35.5 | 1,770 | 22×40 | 2,510 | | |
| 4,700 | 472 | 12.5×20 | 1,090 | 12.5×25 | 1,260 | 16×20 | 1,185 | 16×31.5 | 1,650 | 18×25 | 1,550 | 18×35.5 | 1,900 | 22×40 | 2,340 | 25×40 | 3,000 |
| 6,800 | 682 | 12.5×25 | 1,460 | 16×20 | 1,270 | 16×31.5 | 1,930 | 16×40 | 2,000 | 18×40 | 2,250 | 25×40 | 2,530 | | | | |
| 10,000 | 103 | 16×20 | 1,340 | 16×31.5 | 2,220 | 18×25 | 1,800 | 18×31.5 | 2,330 | 22×40 | 2,720 | | | | | | |
| 15,000 | 153 | 16×31.5 | 2,365 | 18×25 | 2,290 | 18×31.5 | 2,590 | 18×40 | 2,950 | 25×40 | 3,200 | | | | | | |
| 22,000 | 223 | 16×40 | 2,800 | 18×35.5 | 2,930 | 18×40 | 3,230 | 22×40 | 3,460 | | | | | | | | |
| 33,000 | 333 | 18×45 | 3,080 | 22×40 | 4,090 | 25×45 | 4,500 | | | | | | | | | | |

| μF | Contents | 160V (2C) | | 200V (2D) | | 250V (2E) | | 350V (2V) | | 400V (2G) | | 450V (2W) | |
|---------------|----------|-------------------|-------|-------------------|-------|-------------------|-------|-------------------|-----|-------------------|-----|-------------------|-----|
| | | $\phi D \times L$ | mA | $\phi D \times L$ | mA | $\phi D \times L$ | mA | $\phi D \times L$ | mA | $\phi D \times L$ | mA | $\phi D \times L$ | mA |
| 1 | 010 | | | | | | | | | 6.3×11 | 21 | 8×11.5 | 27 |
| 2.2 | 2R2 | | | 6.3×11 | 30 | 6.3×11 | 35 | 6.3×11 | 35 | 8×11.5 | 39 | 8×11.5 | 39 |
| 3.3 | 3R3 | | | 6.3×11 | 39 | 6.3×11 | 40 | 8×11.5 | 43 | 8×11.5 | 45 | 8×11.5 | 45 |
| 4.7 | 4R7 | | | 6.3×11 | 43 | 8×11.5 | 45 | 8×11.5 | 45 | 8×11.5 | 50 | 8×11.5 | 50 |
| 10 | 100 | 8×11.5 | 65 | 8×11.5 | 65 | 10×12.5 | 92 | 10×16 | 95 | 10×16 | 95 | 10×20 | 105 |
| 22 | 220 | 10×12.5 | 110 | 10×16 | 140 | 10×16 | 140 | 12.5×20 | 220 | 12.5×20 | 160 | 12.5×20 | 160 |
| 33 | 330 | 10×16 | 150 | 10×20 | 170 | 12.5×16 | 175 | 12.5×25 | 215 | 16×20 | 225 | 16×20 | 225 |
| 47 | 470 | 10×20 | 195 | 12.5×16 | 215 | 12.5×20 | 230 | 16×16 | 205 | 16×20 | 225 | 18×16 | 220 |
| 68 | 680 | 12.5×20 | 275 | 12.5×20 | 265 | 16×20 | 320 | 18×25 | 360 | 18×25 | 360 | 16×25 | 280 |
| 100 | 101 | 12.5×25 | 355 | 16×20 | 365 | 18×20 | 415 | 16×31.5 | 370 | 16×31.5 | 375 | 18×20 | 285 |
| 150 | 151 | 16×25 | 470 | 18×20 | 510 | 16×31.5 | 550 | 18×31.5 | 460 | 18×35.5 | 540 | 16×35.5 | 400 |
| 220 | 221 | 16×31.5 | 660 | 18×25 | 290 | 18×20 | 320 | 18×25 | 360 | 18×25 | 360 | 18×31.5 | 420 |
| 330 | 331 | 18×35.5 | 820 | 18×40 | 965 | 18×20 | 415 | 16×31.5 | 370 | 16×31.5 | 375 | 18×31.5 | 420 |
| 470 | 330 | 22×40 | 1,130 | 22×40 | 1,130 | 25×40 | 1,325 | 18×40 | 600 | 22×40 | 730 | 22×40 | 770 |

Part Numbering System

RGA Series 470 μF $\pm 20\%$ 6.3V Bulk Package Gas Type 6.3 $\phi \times 11L$ Pb-free and PET sleeve

RGA **471** **M** **0J** **BK** - **0611**

Series Name Capacitance Capacitance Tolerance Rated Voltage Lead Configuration & Package Rubber Type Case Size Lead Wire and Sleeve type

Note: For more details, please refer to "Part Numbering System (Radial Type)" on page 13.

RGL Series

Features

- 105°C, for general purposes
- 8φ ~ 18φ with large permissible ripple current
- Slim type included
- RoHS Compliance

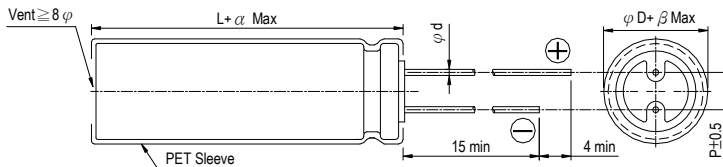


Sleeve & Marking Color: Black & Golden

Specifications

| Items | Performance | | | | | |
|--|---|-------------------|-----------------------------------|-----------------------------------|------------------|--------|
| Category Temperature Range | 400V | | 420 ~ 450V | | | |
| | -40°C ~ +105°C | | -25°C ~ +105°C | | | |
| Capacitance Tolerance | ±20% | | | | (at 120Hz, 20°C) | |
| Leakage Current (at 20°C) | Time | | after 5 minutes | | | |
| | Leakage Current | | CV ≤ 1,000 I = 0.03CV + 15(μA) | CV > 1,000 I = 0.02CV + 25(μA) | | |
| Where, C = rated capacitance in μF V = rated DC working voltage in V | | | | | | |
| Tanδ (at 120Hz, 20°C) | Rated Voltage | | 400 | 420 | 450 | |
| | Tanδ (max) | | 0.24 | 0.24 | 0.24 | |
| Low Temperature Characteristics (at 120Hz) | Impedance ratio shall not exceed the values given in the table below. | | | | | |
| | Rated Voltage | | 400 | 420 | 450 | |
| | Impedance Ratio | Z(-25°C)/Z(+20°C) | 5 | 6 | 6 | |
| Z(-40°C)/Z(+20°C) | | 6 | - | - | | |
| Endurance | Test Time | | 2,000 Hrs | | | |
| | Capacitance Change | | Within ±20% of initial value | | | |
| | Tanδ | | Less than 200% of specified value | | | |
| | Leakage Current | | Within specified value | | | |
| * The above specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage applied with rated ripple current for 2,000 hours at 105°C. | | | | | | |
| Shelf Life Test | Test Time | | 1,000 Hrs | | | |
| | Capacitance Change | | Within ±20% of initial value | | | |
| | Tanδ | | Less than 200% of specified value | | | |
| | Leakage Current | | Within specified value | | | |
| * The above specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1,000 hours at 105°C without voltage applied. The rated voltage shall be applied to the capacitors before the measurements (Refer to JIS C 5101-4 4.1). | | | | | | |
| Ripple Current and Frequency Multipliers | Frequency (Hz) | 60 | 120 | 500 | 1k | 10k up |
| | Multipliers | 0.8 | 1.00 | 1.25 | 1.45 | 1.50 |

Diagram of Dimensions



Lead Spacing and Diameter

Unit: mm

| φD | 8 | 10 | 12.5 | 16 | 18 |
|----|-----|-----|------|-----|-----|
| P | 3.5 | 5.0 | 5.0 | 7.5 | 7.5 |
| φd | 0.6 | | 0.8 | | |
| α | 2.0 | | | | |
| β | 0.5 | | | | |



Dimension and Permissible Ripple Current Dimension: $\phi D \times L$ (mm)
Ripple Current: mA/rms at 105°C

| V. DC | Cap. (μF) | 8 φ | | | | 10 φ | | | 12.5 φ | | | 16 φ | | | 18 φ | | |
|-----------|-----------|-------|----------------|---------|-------|----------------|---------|---------|----------------|---------|---------|----------------|---------|---------|----------------|---------|--|
| | | φ D×L | Ripple Current | | φ D×L | Ripple Current | | φ D×L | Ripple Current | | φ D×L | Ripple Current | | φ D×L | Ripple Current | | |
| | | | 120 Hz | 100k Hz | | 120 Hz | 100k Hz | | 120 Hz | 100k Hz | | 120 Hz | 100k Hz | | 120 Hz | 100k Hz | |
| 400V (2G) | 15 | 8×30 | 190 | 285 | | | | | | | | | | | | | |
| | 22 | 8×35 | 250 | 375 | | | | | | | | | | | | | |
| | 27 | 8×40 | 300 | 450 | 10×30 | 245 | 370 | | | | | | | | | | |
| | 33 | 8×45 | 350 | 525 | 10×35 | 295 | 445 | | | | | | | | | | |
| | 39 | 8×50 | 390 | 585 | 10×40 | 345 | 515 | | | | | | | | | | |
| | 47 | | | | 10×45 | 400 | 600 | | | | | | | | | | |
| | 56 | | | | 10×50 | 450 | 675 | 12.5×30 | 470 | 705 | | | | | | | |
| | 68 | | | | | | | 12.5×35 | 540 | 810 | | | | | | | |
| | 82 | | | | | | | 12.5×40 | 620 | 930 | | | | | | | |
| | 100 | | | | | | | | | | | | | | | | |
| | 120 | | | | | | | | | | 16×35.5 | 800 | 1,200 | | | | |
| | | | | | | | | | | | 16×40 | 840 | 1,260 | | | | |
| | 150 | | | | | | | | | | 16×45 | 940 | 1,410 | 18×35.5 | 920 | 1,380 | |
| 180 | | | | | | | | | | 16×50 | 1,050 | 1,575 | 18×40 | 1,060 | 1,590 | | |
| 220 | | | | | | | | | | | | | 18×45 | 1,200 | 1,800 | | |
| 420V (2P) | 15 | 8×30 | 195 | 293 | | | | | | | | | | | | | |
| | 22 | 8×35 | 255 | 383 | | | | | | | | | | | | | |
| | 27 | 8×45 | 320 | 480 | 10×30 | 245 | 370 | | | | | | | | | | |
| | 33 | 8×50 | 370 | 555 | 10×35 | 295 | 445 | | | | | | | | | | |
| | 39 | | | | 10×40 | 345 | 515 | | | | | | | | | | |
| | 47 | | | | 10×45 | 400 | 600 | | | | | | | | | | |
| | 56 | | | | 10×50 | 450 | 675 | 12.5×30 | 470 | 705 | | | | | | | |
| | 68 | | | | | | | 12.5×35 | 540 | 810 | | | | | | | |
| | 82 | | | | | | | 12.5×45 | 630 | 945 | | | | | | | |
| | 100 | | | | | | | 12.5×50 | 730 | 1,095 | 16×35.5 | 730 | 1,095 | | | | |
| | 120 | | | | | | | | | | 16×40 | 840 | 1,260 | 18×35.5 | 850 | 1,275 | |
| | | | | | | | | | | | 16×45 | 885 | 1,330 | | | | |
| | 150 | | | | | | | | | | 16×50 | 1030 | 1,545 | 18×35.5 | 920 | 1,380 | |
| | | | | | | | | | | | | | 18×40 | 960 | 1,440 | | |
| 180 | | | | | | | | | | | | | 18×45 | 1,100 | 1,650 | | |
| 220 | | | | | | | | | | | | | 18×50 | 1,220 | 1,830 | | |
| 450V (2W) | 15 | 8×30 | 195 | 293 | | | | | | | | | | | | | |
| | 22 | 8×40 | 270 | 405 | 10×30 | 225 | 330 | | | | | | | | | | |
| | 27 | 8×45 | 320 | 480 | 10×35 | 265 | 400 | | | | | | | | | | |
| | 33 | 8×50 | 370 | 555 | 10×40 | 315 | 475 | | | | | | | | | | |
| | 39 | | | | 10×45 | 360 | 545 | 12.5×30 | 400 | 600 | | | | | | | |
| | 47 | | | | 10×50 | 420 | 625 | 12.5×35 | 460 | 690 | | | | | | | |
| | 56 | | | | | | | 12.5×40 | 520 | 780 | | | | | | | |
| | 68 | | | | | | | 12.5×45 | 580 | 870 | | | | | | | |
| | 82 | | | | | | | 12.5×50 | 660 | 990 | 16×35.5 | 660 | 990 | | | | |
| | 100 | | | | | | | | | | 16×40 | 750 | 1,125 | | | | |
| | 120 | | | | | | | | | | 16×45 | 840 | 1,260 | 18×35.5 | 820 | 1,230 | |
| | 150 | | | | | | | | | | 16×50 | 980 | 1,470 | 18×45 | 995 | 1,490 | |
| | 180 | | | | | | | | | | | | | 18×50 | 1,140 | 1,710 | |

Remark: Other sizes and specification are available, please contact us for detail.

Part Numbering System

RGL Series 22μF ±20% 450V Bulk Package Gas Type 10 φ ×30L Pb-free and PET sleeve

RGL **220** **M** **2W** **BK** - **1030**

Series Name Capacitance Capacitance Tolerance Rated Voltage Lead Configuration & Package Rubber Type Case Size Lead Wire and Sleeve type

Note: For more details, please refer to "Part Numbering System (Radial Type)" on page 13.

Компания «Океан Электроники» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Поставка оригинальных импортных электронных компонентов напрямую с производств Америки, Европы и Азии, а так же с крупнейших складов мира;
- Широкая линейка поставок активных и пассивных импортных электронных компонентов (более 30 млн. наименований);
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Помощь Конструкторского Отдела и консультации квалифицированных инженеров;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Поставка электронных компонентов под контролем ВП;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- При необходимости вся продукция военного и аэрокосмического назначения проходит испытания и сертификацию в лаборатории (по согласованию с заказчиком);
- Поставка специализированных компонентов военного и аэрокосмического уровня качества (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Actel, Aeroflex, Peregrine, VPT, Syfer, Eurofarad, Texas Instruments, MS Kennedy, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

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JONHON

«**JONHON**» (основан в 1970 г.)

Разъемы специального, военного и аэрокосмического назначения:

(Применяются в военной, авиационной, аэрокосмической, морской, железнодорожной, горно- и нефтедобывающей отраслях промышленности)

«**FORSTAR**» (основан в 1998 г.)

ВЧ соединители, коаксиальные кабели, кабельные сборки и микроволновые компоненты:

(Применяются в телекоммуникациях гражданского и специального назначения, в средствах связи, РЛС, а так же военной, авиационной и аэрокосмической отраслях промышленности).



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