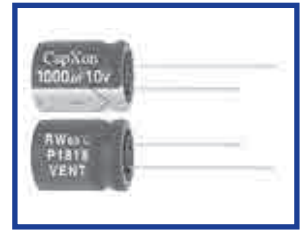


RW Series 85°C



Features

- ◆ Standard for audio equipment.
- ◆ RoHS Compliant

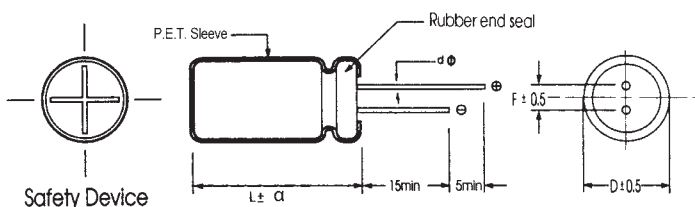
Specifications

| Item | Performance Characteristics | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|----------------------|-----|----|----|----|----|----|-----|-----|-----------------|----|----|----|----|----|----|----|---|-----------------|----|----|---|---|---|---|---|---|
| Operating Temperature Range | -40~+85°C | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rated Voltage Range | 6.3~100 VDC | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Capacitance Range | 0.1 to 33000 µ F | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Capacitance Tolerance | ±20%(120Hz,+20°C) | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Leakage Current (+20°C,max.) | $I \leq 0.01 CV$ or 3 (µ A) (After 1 minute with rated working voltage applied.) | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Dissipation Factor (tan δ , at 20°C , 120Hz) | <table border="1"> <tr> <td>Working Voltage(VDC)</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> <td>63</td> <td>100</td> </tr> <tr> <td>D.F.(%)max.</td> <td>28</td> <td>24</td> <td>20</td> <td>16</td> <td>14</td> <td>12</td> <td>10</td> <td>8</td> </tr> </table> | Working Voltage(VDC) | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 100 | D.F.(%)max. | 28 | 24 | 20 | 16 | 14 | 12 | 10 | 8 | | | | | | | | | |
| | Working Voltage(VDC) | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 100 | | | | | | | | | | | | | | | | | | | |
| D.F.(%)max. | 28 | 24 | 20 | 16 | 14 | 12 | 10 | 8 | | | | | | | | | | | | | | | | | | | | |
| For capacitance > 1000 µ F, add 2% per another 1000 µ F. | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Low Temperature Characteristics (at 120Hz) | Impedance ratio max | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <table border="1"> <tr> <td>Working voltage(VDC)</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> <td>63</td> <td>100</td> </tr> <tr> <td>Z-25°C / Z+20°C</td> <td>5</td> <td>4</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> </tr> <tr> <td>Z-40°C / Z+20°C</td> <td>12</td> <td>10</td> <td>8</td> <td>5</td> <td>4</td> <td>3</td> <td>3</td> <td>3</td> </tr> </table> | Working voltage(VDC) | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 100 | Z-25°C / Z+20°C | 5 | 4 | 3 | 2 | 2 | 2 | 2 | 2 | Z-40°C / Z+20°C | 12 | 10 | 8 | 5 | 4 | 3 | 3 | 3 |
| | Working voltage(VDC) | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 100 | | | | | | | | | | | | | | | | | | | |
| Z-25°C / Z+20°C | 5 | 4 | 3 | 2 | 2 | 2 | 2 | 2 | | | | | | | | | | | | | | | | | | | | |
| Z-40°C / Z+20°C | 12 | 10 | 8 | 5 | 4 | 3 | 3 | 3 | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Endurance | Test condition Duration time :2000 Hrs Ambient temperature :+85°C Applied voltage :Rated DC working voltage After test requirement at +20°C Capacitance change : ≤ ±20% of the initial measured value Dissipation factor : ≤200% of the initial specified value Leakage current : ≤The initial specified value | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Shelf Life | Test condition Duration time :1000 Hrs Ambient temperature :+85°C Applied voltage :None After test requirement at +20°C :Same limits as Endurance. | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Pre-treatment for measurements shall be conducted after application of DC working voltage for 30 minutes. | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Multiplier for Ripple Current vs. Frequency

| CAP(µ F)\Frequency(Hz) | 50(60) | 120 | 300 | 1K | 10K |
|------------------------|--------|------|------|------|------|
| CAP ≤47 | 0.75 | 1.00 | 1.35 | 1.57 | 1.20 |
| 100 < CAP ≤470 | 0.80 | 1.00 | 1.23 | 1.34 | 1.50 |
| 1000 ≤ CAP ≤33000 | 0.85 | 1.00 | 1.10 | 1.13 | 1.15 |

Diagram of Dimension:(unit:mm)



| D φ | 5 | 6.3 | 8 | 10 | 13 | 16 | 18 | 22 |
|-----|--------|-----------|-------------------|-----------|---------------------|-----|-----|--------|
| F | 2.0 | 2.5 | 3.5 | 5.0 | 5.0 | 7.5 | 7.5 | 10 |
| d φ | 0.5 | L < 20 | | L ≥ 20 | | 0.6 | 0.8 | |
| | | 0.5 | 0.6 | | | | | |
| α | D < 16 | D = 16 | | | D = 18 | | | D > 18 |
| | | L:25~35.5 | L < 25 and L ≥ 40 | L:25~31.5 | L < 25 and L ≥ 35.5 | | | |
| | 1.5 | 1.5 | 2.0 | 1.5 | 2.0 | 2.0 | 2.0 | 2.0 |

Case Size

| WV (Vdc) | Cap (µF) | Size (mm) | Rated Ripple current (mAmps/85°C /120Hz) |
|----------|----------|-----------|--|
| 6.3 | 330 | 6.3x11 | 282 |
| 6.3 | 470 | 6.3x11 | 330 |
| 6.3 | 1000 | 8x11.5 | 560 |
| 6.3 | 2200 | 10x20 | 1015 |
| 6.3 | 3300 | 10x20 | 1245 |
| 6.3 | 4700 | 13x20 | 1435 |
| 6.3 | 6800 | 13x25 | 1600 |
| 6.3 | 10000 | 16x25 | 2000 |
| 6.3 | 15000 | 16x35.5 | 2620 |
| 6.3 | 22000 | 18x40 | 3220 |
| 6.3 | 33000 | 22x50 | 3900 |
| 10 | 100 | 5x11 | 162 |
| 10 | 220 | 6.3x11 | 247 |
| 10 | 330 | 6.3x11 | 300 |
| 10 | 470 | 6.3x11 | 355 |
| 10 | 1000 | 10x12.5 | 600 |
| 10 | 2200 | 10x20 | 1075 |
| 10 | 3300 | 13x20 | 1410 |
| 10 | 4700 | 13x25 | 1800 |
| 10 | 6800 | 16x25 | 2200 |
| 10 | 10000 | 16x35.5 | 2450 |
| 10 | 15000 | 18x35.5 | 2900 |
| 10 | 22000 | 22x40 | 3700 |
| 10 | 33000 | 22x50 | 4300 |
| 16 | 100 | 5x11 | 155 |
| 16 | 220 | 6.3x11 | 265 |
| 16 | 330 | 8x11.5 | 365 |
| 16 | 470 | 8x11.5 | 445 |
| 16 | 1000 | 10x16 | 780 |
| 16 | 2200 | 13x20 | 1300 |
| 16 | 3300 | 13x25 | 1700 |
| 16 | 4700 | 16x25 | 2100 |
| 16 | 6800 | 16x35.5 | 2520 |
| 16 | 10000 | 18x35.5 | 2670 |
| 16 | 15000 | 22x40 | 3400 |
| 16 | 22000 | 22x50 | 4200 |
| 25 | 47 | 5x11 | 117 |
| 25 | 100 | 6.3x11 | 187 |
| 25 | 220 | 8x11.5 | 325 |
| 25 | 330 | 10x12.5 | 415 |
| 25 | 470 | 10x12.5 | 535 |
| 25 | 1000 | 10x20 | 950 |
| 25 | 2200 | 13x25 | 1550 |
| 25 | 3300 | 16x25 | 1675 |
| 25 | 4700 | 16x31.5 | 2380 |
| 25 | 6800 | 18x35.5 | 2650 |
| 25 | 10000 | 22x40 | 3000 |
| 25 | 15000 | 22x50 | 3800 |
| 35 | 33 | 5x11 | 107 |
| 35 | 47 | 5x11 | 125 |
| 35 | 100 | 6.3x11 | 205 |
| 35 | 220 | 10x12.5 | 370 |
| 35 | 330 | 10x12.5 | 475 |
| 35 | 470 | 10x16 | 630 |
| 35 | 1000 | 13x20 | 1120 |
| 35 | 2200 | 16x25 | 1650 |
| 35 | 3300 | 16x35.5 | 2270 |
| 35 | 4700 | 18x35.5 | 2540 |
| 35 | 6800 | 22x40 | 3000 |

| WV (Vdc) | Cap (µF) | Size (mm) | Rated Ripple current (mAmps/85°C /120Hz) |
|----------|----------|-----------|--|
| 50 | 0.1 | 5x11 | 2.1 |
| 50 | 0.22 | 5x11 | 2.7 |
| 50 | 0.33 | 5x11 | 4.2 |
| 50 | 0.47 | 5x11 | 6 |
| 50 | 1 | 5x11 | 12 |
| 50 | 2.2 | 5x11 | 24 |
| 50 | 3.3 | 5x11 | 35 |
| 50 | 4.7 | 5x11 | 41 |
| 50 | 10 | 5x11 | 65 |
| 50 | 22 | 5x11 | 97 |
| 50 | 33 | 5x11 | 120 |
| 50 | 47 | 6.3x11 | 150 |
| 50 | 100 | 8x11.5 | 255 |
| 50 | 220 | 10x12.5 | 417 |
| 50 | 330 | 10x16 | 580 |
| 50 | 470 | 13x20 | 770 |
| 50 | 1000 | 13x25 | 1320 |
| 50 | 2200 | 16x35.5 | 2090 |
| 50 | 3300 | 18x35.5 | 2430 |
| 50 | 4700 | 22x40 | 2900 |
| 50 | 6800 | 22x50 | 3500 |
| 63 | 0.1 | 5x11 | 1.5 |
| 63 | 0.22 | 5x11 | 3 |
| 63 | 0.33 | 5x11 | 5 |
| 63 | 0.47 | 5x11 | 7 |
| 63 | 1 | 5x11 | 15 |
| 63 | 2.2 | 5x11 | 28 |
| 63 | 3.3 | 5x11 | 35 |
| 63 | 4.7 | 5x11 | 45 |
| 63 | 10 | 5x11 | 70 |
| 63 | 22 | 5x11 | 107 |
| 63 | 33 | 6.3x11 | 137 |
| 63 | 47 | 6.3x11 | 172 |
| 63 | 100 | 10x12.5 | 300 |
| 63 | 220 | 10x16 | 485 |
| 63 | 330 | 10x20 | 670 |
| 63 | 470 | 13x20 | 880 |
| 63 | 1000 | 16x25 | 1350 |
| 63 | 2200 | 18x35.5 | 2220 |
| 63 | 3300 | 22x40 | 2700 |
| 63 | 4700 | 22x50 | 3400 |
| 100 | 0.1 | 5x11 | 2.1 |
| 100 | 0.22 | 5x11 | 4.7 |
| 100 | 0.33 | 5x11 | 7.5 |
| 100 | 0.47 | 5x11 | 11 |
| 100 | 1 | 5x11 | 21 |
| 100 | 2.2 | 5x11 | 31 |
| 100 | 3.3 | 5x11 | 40 |
| 100 | 4.7 | 5x11 | 46 |
| 100 | 10 | 6.3x11 | 75 |
| 100 | 22 | 6.3x11 | 125 |
| 100 | 33 | 8x11.5 | 165 |
| 100 | 47 | 10x12.5 | 220 |
| 100 | 100 | 10x20 | 370 |
| 100 | 220 | 13x25 | 615 |
| 100 | 330 | 13x25 | 755 |
| 100 | 470 | 16x25 | 1000 |
| 100 | 1000 | 18x40 | 1500 |
| 100 | 2200 | 22x50 | 2400 |