

PC30 - Surface Mount Aluminum Electrolytic Capacitor

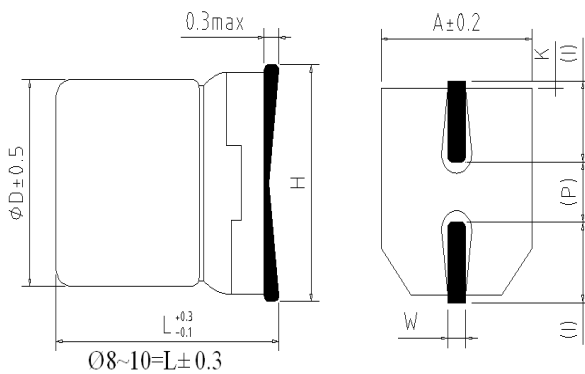
- * Features: 105°C 2000 hours, Non-polarized, Low profile vertical chip, 5.5mm height ($\leq \Phi 6.3$)
- * Recommended Applications: Suitable for AV(TV, Video, Audio), Monitor/Computer, OA/HA/Communication, Reversed polarity circuit
- * Corresponding product to RoHS



Specifications

| Item | Characteristics | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|--------------------|--|--------------------|---|-----------------|-----------------------------------|----|----------|--|--|--|--|--|--|--------------------|---|---|---|---|---|---|--------------------|---|---|---|---|---|---|
| Operating Temperature Range | -40 ~ +105°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rated Voltage Range (WV) | 6.3 ~ 35VDC | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Capacitance Range | 0.22 ~ 47 μ F | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Capacitance Tolerance | $\pm 20\%$ at 120Hz, 20°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Leakage Current (MAX) (20°C) | $I \leq 0.01CV$ or 3(μ A), whichever is greater. (After rated voltage applied for 2 minutes) I= Leakage Current (μ A) C= Nominal Capacitance (μ F) V= Rated Voltage (V) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Dissipation Factor (MAX) (tan δ) (120Hz, 20°C) | Shown in the table of standard rating | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Low Temperature Stability Impedance Ratio (MAX) | <table border="1"> <thead> <tr> <th>WV</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> </tr> </thead> <tbody> <tr> <td>Z(120HZ)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Z(-25°C) / Z(20°C)</td> <td>4</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> </tr> <tr> <td>Z(-40°C) / Z(20°C)</td> <td>8</td> <td>6</td> <td>4</td> <td>4</td> <td>3</td> <td>3</td> </tr> </tbody> </table> | WV | 6.3 | 10 | 16 | 25 | 35 | 50 | Z(120HZ) | | | | | | | Z(-25°C) / Z(20°C) | 4 | 3 | 2 | 2 | 2 | 2 | Z(-40°C) / Z(20°C) | 8 | 6 | 4 | 4 | 3 | 3 |
| WV | 6.3 | 10 | 16 | 25 | 35 | 50 | | | | | | | | | | | | | | | | | | | | | | | |
| Z(120HZ) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Z(-25°C) / Z(20°C) | 4 | 3 | 2 | 2 | 2 | 2 | | | | | | | | | | | | | | | | | | | | | | | |
| Z(-40°C) / Z(20°C) | 8 | 6 | 4 | 4 | 3 | 3 | | | | | | | | | | | | | | | | | | | | | | | |
| Endurance | <p>After applying rated voltage for 2000hrs at 105°C, the capacitors shall meet the following requirements. (The polarity shall be reversed every 250 hours)</p> <table border="1"> <tbody> <tr> <td>Capacitance Change</td> <td>Within $\pm 20\%$ of the initial value</td> </tr> <tr> <td>Dissipation Factor</td> <td>Not more than 200% of the specified value</td> </tr> <tr> <td>Leakage Current</td> <td>Not more than the specified value</td> </tr> </tbody> </table> | Capacitance Change | Within $\pm 20\%$ of the initial value | Dissipation Factor | Not more than 200% of the specified value | Leakage Current | Not more than the specified value | | | | | | | | | | | | | | | | | | | | | | |
| Capacitance Change | Within $\pm 20\%$ of the initial value | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Dissipation Factor | Not more than 200% of the specified value | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Leakage Current | Not more than the specified value | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Shelf Life | After placed at 105°C without voltage applied for 1000 hours, the capacitor shall meet the same requirement as Endurance. | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Diagram of Dimensions (mm)



| ΦD | L | A | H | I | W | P | K |
|----------|-----|-----|---------|-----|----------------|---------------|------------------------|
| 4.0 | 5.4 | 4.3 | 5.5 Max | 1.8 | 0.65 \pm 0.1 | 1.0 \pm 0.2 | 0.35 +0.15 -0.20 |
| 5.0 | 5.4 | 5.3 | 6.5 Max | 2.2 | 0.65 \pm 0.1 | 1.5 \pm 0.2 | 0.35 +0.15 -0.20 |
| 6.3 | 5.4 | 6.6 | 7.8 Max | 2.6 | 0.65 \pm 0.1 | 1.8 \pm 0.2 | 0.35 +0.15 -0.20 |

Multiplier for Ripple Current

| Frequency coefficient | | | | |
|--------------------------|-----------|------|------|------|
| Frequency (Hz) | 60 | 120 | 1K | 10K |
| Coefficient | 0.85 | 1.00 | 1.10 | 1.20 |
| Temperature coefficient | | | | |
| Ambient Temperature (°C) | ≤ 50 | 70 | 85 | 105 |
| Coefficient | 1.90 | 1.75 | 1.40 | 1.00 |

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Dimensions, Max Dissipation Factor, Max Permissible Ripple Current, Max Equivalent Series Resistance

| Capacitance (μF) | Rated (Surge) Voltage | | | | | | | | | | | | | | | |
|----------------------------------|-----------------------|--------------|--------|------|---------|--------------|--------|------|---------|--------------|--------|------|---------|--------------|----|------|
| | 6.3(8) | | | | 10(13) | | | | 16(20) | | | | 25(32) | | | |
| | Size | $\tan\delta$ | Ripple | ESR | Size | $\tan\delta$ | Ripple | ESR | Size | $\tan\delta$ | Ripple | ESR | Size | $\tan\delta$ | e | ESR |
| 2.2 | | | | | | | | | | | | | | | | |
| 3.3 | | | | | | | | | | | | | 4x5.4 | 0.28 | 12 | 100 |
| 4.7 | | | | | | | | | 4x5.4 | 0.32 | 20 | 70.5 | 5x5.4 | 0.28 | 21 | 70.5 |
| 10 | | | | | 4x5.4 | 0.40 | 25 | 39.7 | 5x5.4 | 0.32 | 25 | 33.1 | 6.3x5.4 | 0.28 | 28 | 33.1 |
| 22 | 5x5.4 | 0.52 | 29 | 21.1 | 6.3x5.4 | 0.40 | 39 | 18.0 | 6.3x5.4 | 0.32 | 39 | 15.0 | | | | |
| 33 | 6.3x5.4 | 0.52 | 43 | 12.0 | 6.3x5.4 | 0.40 | 43 | 14.0 | | | | | | | | |
| 47 | 6.3x5.4 | 0.52 | 46 | 9.87 | | | | | | | | | | | | |

| Capacitance (μF) | Rated (Surge) Voltage | | | | | | | |
|----------------------------------|-----------------------|--------------|--------|------|---------|--------------|--------|------|
| | 35(44) | | | | 50(63) | | | |
| | Size | $\tan\delta$ | Ripple | ESR | Size | $\tan\delta$ | Ripple | ESR |
| 0.22 | | | | | 4x5.4 | 0.24 | 2 | 1507 |
| 0.33 | | | | | 4x5.4 | 0.24 | 3 | 1004 |
| 0.47 | | | | | 4x5.4 | 0.24 | 5 | 705 |
| 1 | | | | | 4x5.4 | 0.24 | 10 | 331 |
| 2.2 | 4x5.4 | 0.24 | 12 | 150 | 5x5.4 | 0.24 | 16 | 150 |
| 3.3 | 5x5.4 | 0.24 | 21 | 100 | 5x5.4 | 0.24 | 21 | 100 |
| 4.7 | 5x5.4 | 0.24 | 22 | 70.5 | 6.3x5.4 | 0.24 | 31 | 70.5 |
| 10 | 6.3x5.4 | 0.24 | 30 | 33.1 | | | | |

☆Size:D Φ x L(mm). ☆ $\tan\delta$:20°C, 120Hz. ☆Ripple Current:105°C, 120Hz,(mA/rms) ☆ESR:20°C, 120Hz,(Ω).