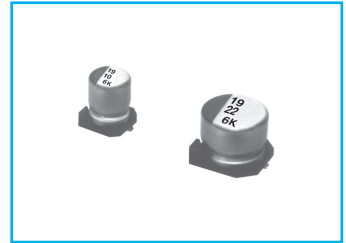


CK Chip type, Low Impedance, High CV Series

IZI Low Impedance **S** Solvent Proof



- Chip type, low impedance temperature range up to 105°C
- Designed for surface mounting on high density PC board
- Applicable to automatic insertion machine using carrier tape
- Complied to the RoHS directive

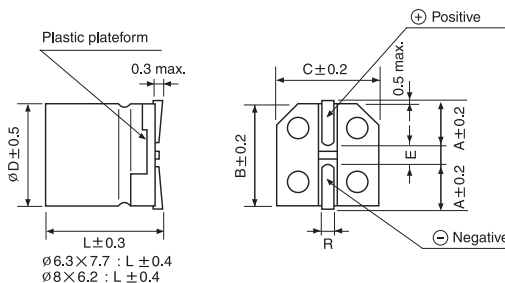
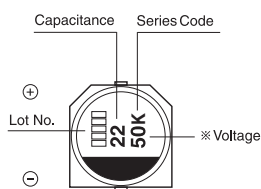
ZC → **CK**
Low Imp.

| Item | Characteristics | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--|-----------------|---------------------------|--------------------|------------------------------------|--------------|-----------------------------------|------|--------|---------------|-----|--------------|------|------|------|------|------|---------------|------|------|------|---|---|---|---|
| Operating temperature range | -55 ~ +105°C | | | | | | | | | | | | | | | | | | | | | | | | |
| Leakage current max. | $I = 0.01CV$ or $3\mu A$ whichever is greater (after 2 minutes) | | | | | | | | | | | | | | | | | | | | | | | | |
| Capacitance tolerance | $\pm 20\%$ at 120Hz, 20°C | | | | | | | | | | | | | | | | | | | | | | | | |
| Dissipation factor max. (at 120Hz, 20°C) | <table border="1"> <tr> <td>WV</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> <td>63</td> <td>80</td> <td>100</td> </tr> <tr> <td>$\tan\delta$</td> <td>0.24</td> <td>0.19</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.12</td> <td>0.10</td> <td>0.10</td> <td>0.10</td> </tr> </table> | WV | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 80 | 100 | $\tan\delta$ | 0.24 | 0.19 | 0.16 | 0.14 | 0.12 | 0.12 | 0.10 | 0.10 | 0.10 | | | | |
| WV | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 80 | 100 | | | | | | | | | | | | | | | | |
| $\tan\delta$ | 0.24 | 0.19 | 0.16 | 0.14 | 0.12 | 0.12 | 0.10 | 0.10 | 0.10 | | | | | | | | | | | | | | | | |
| Low temperature characteristics (Impedance ratio at 120Hz) | <table border="1"> <tr> <td>WV</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> <td>63~100</td> </tr> <tr> <td>Z-25°C/Z+20°C</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>3</td> </tr> <tr> <td>Z-55°C/Z+20°C</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>4</td> </tr> </table> | WV | 6.3 | 10 | 16 | 25 | 35 | 50 | 63~100 | Z-25°C/Z+20°C | 2 | 2 | 2 | 2 | 2 | 2 | 3 | Z-55°C/Z+20°C | 3 | 3 | 3 | 3 | 3 | 3 | 4 |
| WV | 6.3 | 10 | 16 | 25 | 35 | 50 | 63~100 | | | | | | | | | | | | | | | | | | |
| Z-25°C/Z+20°C | 2 | 2 | 2 | 2 | 2 | 2 | 3 | | | | | | | | | | | | | | | | | | |
| Z-55°C/Z+20°C | 3 | 3 | 3 | 3 | 3 | 3 | 4 | | | | | | | | | | | | | | | | | | |
| Load life (after application of the rated voltage for 2000 hours at 105°C) | <table border="1"> <tr> <td>Leakage current</td> <td>Less than specified value</td> </tr> <tr> <td>Capacitance change</td> <td>Within $\pm 25\%$ of initial value</td> </tr> <tr> <td>$\tan\delta$</td> <td>Less than 200% of specified value</td> </tr> </table> | Leakage current | Less than specified value | Capacitance change | Within $\pm 25\%$ of initial value | $\tan\delta$ | Less than 200% of specified value | | | | | | | | | | | | | | | | | | |
| Leakage current | Less than specified value | | | | | | | | | | | | | | | | | | | | | | | | |
| Capacitance change | Within $\pm 25\%$ of initial value | | | | | | | | | | | | | | | | | | | | | | | | |
| $\tan\delta$ | Less than 200% of specified value | | | | | | | | | | | | | | | | | | | | | | | | |
| Shelf life (at 105°C) | After 1000 hours no load test, leakage current, capacitance and $\tan\delta$ are same as load life value. The measurement shall be performed at 20°C by the KS C 6035 clause 5.4. | | | | | | | | | | | | | | | | | | | | | | | | |
| Resistance to soldering heat | <p>The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them at 250°C for 10 seconds.</p> <table border="1"> <tr> <td>Leakage current</td> <td>Less than specified value</td> </tr> <tr> <td>Capacitance change</td> <td>Within $\pm 10\%$ of initial value</td> </tr> <tr> <td>$\tan\delta$</td> <td>Less than specified value</td> </tr> </table> | Leakage current | Less than specified value | Capacitance change | Within $\pm 10\%$ of initial value | $\tan\delta$ | Less than specified value | | | | | | | | | | | | | | | | | | |
| Leakage current | Less than specified value | | | | | | | | | | | | | | | | | | | | | | | | |
| Capacitance change | Within $\pm 10\%$ of initial value | | | | | | | | | | | | | | | | | | | | | | | | |
| $\tan\delta$ | Less than specified value | | | | | | | | | | | | | | | | | | | | | | | | |

● DRAWING -Series code of CK is "K"

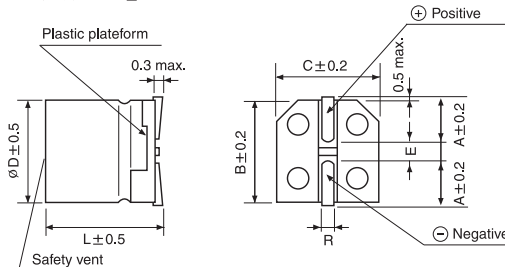
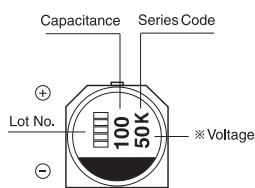
Unit : mm

($\phi 6.3, \phi 8 \times 6.2$)

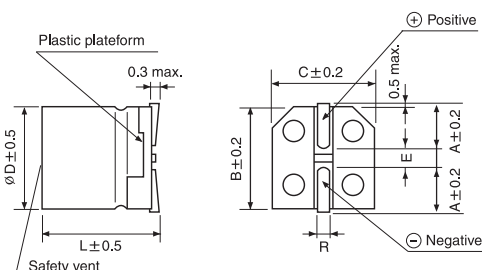
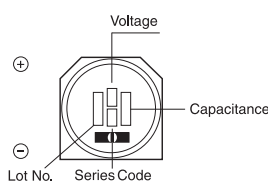


| ØD×L | A | B | C | E | R |
|-----------|-----|------|------|-----|---------|
| 6.3×5.8 | 2.4 | 6.6 | 6.6 | 2.2 | 0.5~0.8 |
| 6.3×7.7 | 2.4 | 6.6 | 6.6 | 2.2 | 0.5~0.8 |
| 8×6.2 | 3.3 | 8.3 | 8.3 | 2.3 | 0.5~0.8 |
| 8×10 | 2.9 | 8.3 | 8.3 | 3.1 | 0.8~1.1 |
| 10×10 | 3.2 | 10.3 | 10.3 | 4.5 | 0.8~1.1 |
| 12.5×13.5 | 4.6 | 12.8 | 12.8 | 4.5 | 0.8~1.4 |

($\phi 8 \times 10, \phi 10 \times 10$)



($\phi 12.5 \times 13.5$)



SURFACE MOUNT ALUMINUM ELECTROLYTIC CAPACITORS

CK series

● DIMENSIONS & MAXIMUM PERMISSIBLE RIPPLE CURRENT

| μF \diagdown WV | 6.3 | | | 10 | | | 16 | | | 25 | | | 35 | | | 50 | | |
|----------------------------|---------|------|-----|---------|------|-----|---------|------|-----|---------|------|-----|---------|------|-----|---------|------|-----|
| 10 | | | | | | | | | | | | | | | | 6.3×5.8 | 0.88 | 165 |
| 15 | | | | | | | | | | | | | | | | 6.3×5.8 | 0.88 | 165 |
| 22 | | | | | | | | | | | | | | | | 6.3×5.8 | 0.88 | 165 |
| 33 | | | | | | | 6.3×5.8 | 0.44 | 230 | 6.3×5.8 | 0.44 | 230 | 6.3×5.8 | 0.44 | 230 | 6.3×7.7 | 0.68 | 280 |
| | | | | | | | | | | | | | | | | 8×6.2 | 0.63 | 300 |
| 47 | | | | 6.3×5.8 | 0.44 | 230 | 6.3×5.8 | 0.44 | 230 | 6.3×5.8 | 0.44 | 230 | 6.3×5.8 | 0.44 | 230 | 6.3×7.7 | 0.68 | 280 |
| | | | | | | | | | | | | | | | | 8×6.2 | 0.63 | 300 |
| 68 | 6.3×5.8 | 0.44 | 230 | 6.3×5.8 | 0.44 | 230 | 6.3×5.8 | 0.44 | 230 | 6.3×5.8 | 0.44 | 230 | 6.3×7.7 | 0.34 | 280 | 8×10 | 0.34 | 450 |
| | | | | | | | | | | | | | 8×6.2 | 0.26 | 300 | | | |
| 100 | 6.3×5.8 | 0.44 | 230 | 6.3×5.8 | 0.44 | 230 | 6.3×5.8 | 0.44 | 230 | 6.3×7.7 | 0.34 | 280 | 8×10 | 0.17 | 450 | 10×10 | 0.18 | 670 |
| | | | | | | | | | | 8×6.2 | 0.26 | 300 | | | | | | |
| 150 | 6.3×5.8 | 0.44 | 230 | 6.3×5.8 | 0.44 | 230 | 6.3×7.7 | 0.34 | 280 | 8×10 | 0.17 | 450 | 8×10 | 0.17 | 450 | | | |
| | | | | | | | 8×6.2 | 0.26 | 300 | | | | | | | | | |
| 220 | 6.3×5.8 | 0.44 | 230 | 6.3×7.7 | 0.34 | 280 | 6.3×7.7 | 0.34 | 280 | 8×10 | 0.17 | 450 | 10×10 | 0.09 | 670 | | | |
| | | | | 8×6.2 | 0.26 | 300 | 8×6.2 | 0.26 | 300 | | | | | | | | | |
| 330 | 6.3×7.7 | 0.34 | 280 | 8×10 | 0.17 | 450 | 8×10 | 0.17 | 450 | 10×10 | 0.15 | 670 | | | | | | |
| | 8×6.2 | 0.26 | 300 | | | | | | | | | | | | | | | |
| 470 | 8×10 | 0.17 | 450 | 8×10 | 0.17 | 450 | 10×10 | 0.09 | 670 | | | | | | | | | |
| 680 | 8×10 | 0.17 | 450 | 10×10 | 0.09 | 670 | | | | | | | | | | | | |
| 1000 | 10×10 | 0.09 | 670 | | | | | | | | | | | | | | | |
| 1500 | 10×10 | 0.09 | 670 | | | | | | | | | | | | | | | |

| μF \diagdown WV | 63 | | | 80 | | | 100 | | |
|----------------------------|-----------|------|-----|-----------|------|-----|-----------|------|-----|
| 10 | 6.3×5.8 | 2.8 | 80 | 6.3×7.7 | 2.4 | 60 | | | |
| 22 | 6.3×7.7 | 2.1 | 120 | 8×10 | 1.3 | 130 | 8×10 | 1.3 | 130 |
| 33 | 8×10 | 0.9 | 250 | 8×10 | 1.3 | 130 | 10×10 | 0.7 | 200 |
| 47 | 8×10 | 0.9 | 250 | 10×10 | 0.7 | 200 | 12.5×13.5 | 0.45 | 500 |
| 68 | 10×10 | 0.5 | 400 | 12.5×13.5 | 0.45 | 500 | 12.5×13.5 | 0.45 | 500 |
| 100 | 10×10 | 0.5 | 400 | 12.5×13.5 | 0.45 | 500 | | | |
| 150 | 12.5×13.5 | 0.32 | 800 | 12.5×13.5 | 0.45 | 500 | | | |
| 220 | 12.5×13.5 | 0.32 | 800 | | | | | | |

Ripple current (mA rms) at 105°C, 100kHz
 Impedance (Ω) at 20°C, 100kHz
 Case size \varnothing D x L (mm)

● FREQUENCY COEFFICIENT OF PERMISSIBLE RIPPLE CURRENT

| Frequency | 50Hz | 120Hz | 300Hz | 1kHz | 10kHz \leq |
|-------------|------|-------|-------|------|--------------|
| Coefficient | 0.35 | 0.5 | 0.64 | 0.83 | 1.00 |