

CapXon TV Series

TV Series High Temperature 125°C

Features

- ◆ Chip type ,operating temperature range-40 to +125°C
- ◆ Designed for surface mounting on high density PC board
- ◆ Applicable to automatic insertion machine using carrier tape
- ◆ For detail specifications, please refer to Engineering Bulletin NO. E157
- ◆ RoHS Compliant



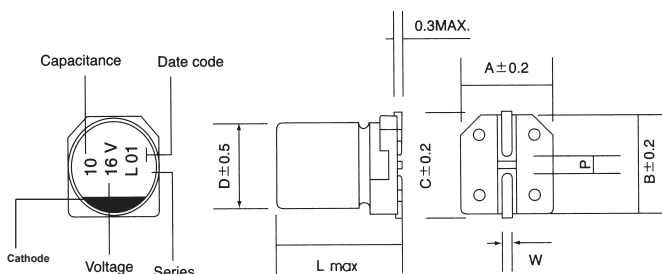
Specifications

| Item | Performance Characteristics | | | | | | | | | | | | |
|--|--|---------------------------|---------------------------|--------------------|------------------------------------|---------------|---------------------------|----------------|----|----|----|----|----|
| Operating Temperature Range | -40~+125°C | | | | | | | | | | | | |
| Rated Voltage Range | 10~50 VDC | | | | | | | | | | | | |
| Capacitance Range | 10 to 330 μ F | | | | | | | | | | | | |
| Capacitance Tolerance | $\pm 20\%$ (120Hz,+20°C) | | | | | | | | | | | | |
| Leakage Current (+20°C,max.) | $I \leq 0.03 CV$ or 4 (μ A)After 1 minutes whichever is greater measured with rated working voltage applied. | | | | | | | | | | | | |
| Dissipation Factor ($\tan \delta$, at 20°C , 120Hz) | <table border="1"> <tr> <td>Working Voltage(VDC)</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> </tr> <tr> <td>D.F.(%)max.</td> <td>32</td> <td>24</td> <td>21</td> <td>18</td> <td>18</td> </tr> </table> | Working Voltage(VDC) | 10 | 16 | 25 | 35 | 50 | D.F.(%)max. | 32 | 24 | 21 | 18 | 18 |
| | Working Voltage(VDC) | 10 | 16 | 25 | 35 | 50 | | | | | | | |
| D.F.(%)max. | 32 | 24 | 21 | 18 | 18 | | | | | | | | |
| Low Temperature Characteristics (at 120Hz) | Impedance ratio max <table border="1"> <tr> <td>Working voltage(VDC)</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> </tr> <tr> <td>Z-25°C / +20°C</td> <td>12</td> <td>8</td> <td>6</td> <td>4</td> <td>4</td> </tr> </table> | Working voltage(VDC) | 10 | 16 | 25 | 35 | 50 | Z-25°C / +20°C | 12 | 8 | 6 | 4 | 4 |
| | Working voltage(VDC) | 10 | 16 | 25 | 35 | 50 | | | | | | | |
| Z-25°C / +20°C | 12 | 8 | 6 | 4 | 4 | | | | | | | | |
| Load Life | Test condition Duration time : 1000 Hrs ($\Phi 8 \times 6.5\text{mm}$ & $6.3 \times 7.7\text{mm}$) ; 2000Hrs ($\Phi 8 \times 10.5\text{mm}$ & $10 \times 10.5\text{mm}$) Ambient temperature : +125°C Applied voltage : Rated DC working voltage After test requirement at +20°C Capacitance change : Within $\pm 30\%$ of initial value Dissipation factor : Less than 300% of specified value Leakage current : Less than specified value | | | | | | | | | | | | |
| Shelf Life | Test condition Duration time : 1000 Hrs Ambient temperature : +125°C Applied voltage : None After test requirement at +20°C : Same limits as Load life. Pre-treatment for measurements shall be conducted after application of DC working voltage for 30 minutes. | | | | | | | | | | | | |
| Resistance to soldering heat | The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them at 250°C for 30 seconds. | | | | | | | | | | | | |
| | <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 | | | | | | | | | | | | |
| | | | | | | | | | | | | | |

Multiplier for Ripple Current vs. Frequency

| CAP(μ F) \ Frequency(Hz) | 60(50) | 120 | 500 | 1K | $\geq 10K$ |
|-------------------------------|--------|-----|------|------|------------|
| 0.1~47 μ F | 0.8 | 1.0 | 1.20 | 1.30 | 1.50 |
| 100~1000 μ F | 0.8 | 1.0 | 1.10 | 1.15 | 1.20 |

Diagram of Dimensions:(unit:mm)



| ΦD | L | A | B | C | W | P |
|----------|------|------|------|------|---------|-----|
| 6.3 | 7.7 | 6.6 | 6.6 | 7.2 | 0.5~0.8 | 2.2 |
| 8 | 6.5 | 8.3 | 8.3 | 9.0 | 0.5~0.8 | 2.3 |
| 8 | 10.5 | 8.3 | 8.3 | 9.0 | 0.7~1.1 | 3.1 |
| 10 | 10.5 | 10.3 | 10.3 | 11.0 | 0.7~1.1 | 4.5 |

CapXon TV Series

Case Size

φ D×L(mm)

| WV(SV) Cap(μF) | 10 (13) | | 16 (20) | | 25 (32) | | 35 (44) | | 50 (63) | |
|-------------------|------------|--------|------------|--------|------------|--------|------------|--------|------------|--------|
| | Size | Ripple | Size | Ripple | Size | Ripple | Size | Ripple | Size | Ripple |
| 10 | | | | | | | | | 6.3X7.7 | 22 |
| | | | | | | | | | 8X6.5 | 24 |
| 22 | | | | | | | | | 6.3X7.7 | 35 |
| | | | | | | | | | 8X6.5 | 38 |
| 33 | | | | | | | 6.3X7.7 | 40 | | |
| | | | | | | | 8X6.5 | 44 | 8X10.5 | 46 |
| 47 | | | | | 6.3X7.7 | 45 | | | | |
| | | | | | 8X6.5 | 48 | 8X10.5 | 52 | 10X10.5 | 58 |
| 100 | 6.3X7.7 | 53 | | | | | | | | |
| | 8X6.5 | 58 | 8X10.5 | 66 | 8X10.5 | 74 | 10X10.5 | 80 | | |
| 220 | 8X10.5 | 90 | 10X10.5 | 102 | 10X10.5 | 116 | | | | |
| 330 | 10X10.5 | 112 | | | | | | | | |

Ripple Current (mA, rms) at 125°C 120Hz

SMD