

KV Series

Features

- ◆ 85°C Low leakage current case diameter $\phi 4 \sim \phi 8$
- ◆ Reflow soldering is available
- ◆ Available for high density mounting
- ◆ RoHS Compliant



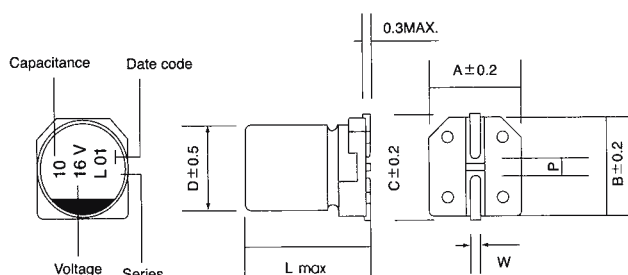
Specifications

| Item | Performance Characteristics | | | | | | |
|--|---|------------------------------------|----|----|----|----|----|
| Operating Temperature Range | -40~ +85°C | | | | | | |
| Rated Voltage Range | 6.3~50 VDC | | | | | | |
| Capacitance Range | 0.1 to 330 μ F | | | | | | |
| Capacitance Tolerance | $\pm 20\%$ (120Hz,+20°C) | | | | | | |
| Leakage Current (+20°C,max.) | $I \leq 0.002 CV$ or $0.4 (\mu A)$ After 2 minutes, whichever is greater measured with rated working voltage applied | | | | | | |
| Dissipation Factor ($\tan \delta$, at 20°C , 120Hz) | Working voltage(VDC) | 6.3 | 10 | 16 | 25 | 35 | 50 |
| | D.F. (%) max. | 26 | 22 | 18 | 16 | 14 | 12 |
| Low Temperature Characteristics (at 120Hz) | Impedance ratio max | | | | | | |
| | Working voltage(VDC) | 6.3 | 10 | 16 | 25 | 35 | 50 |
| | Z -25°C / Z +20°C | 4 | 3 | 2 | 2 | 2 | 2 |
| Endurance | Test conditions | | | | | | |
| | Duration time | :1000 Hrs | | | | | |
| | Ambient temperature | :+85°C | | | | | |
| Shelf Life | Test conditions | | | | | | |
| | Duration time | :1000 Hrs | | | | | |
| | Ambient temperature | :+85°C | | | | | |
| Resistance to soldering heat | 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. | | | | | | |
| Resistance to soldering heat | The capacitors shall be kept on the hot plate maintained at 250°C for 30 seconds. After removing from the hot plate and restored at room temperature, they meet the characteristic requirements listed under. | | | | | | |
| | 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 | $\geq 10K$ |
|-------------------------------|--------|-----|-----|------|------------|
| $0.1 \leq CAP \leq 100 \mu F$ | 0.8 | 1 | 1.2 | 1.3 | 1.5 |
| $100 < CAP \leq 330 \mu F$ | 0.8 | 1 | 1.1 | 1.15 | 1.2 |

Diagram of Dimensions:(unit:mm)



| ϕD | L | A | B | C | W | P |
|----------|------|------|------|------|---------|-----|
| 4 | 5.5 | 4.3 | 4.3 | 4.9 | 0.5~0.8 | 1.0 |
| 5 | 5.5 | 5.3 | 5.3 | 5.9 | 0.5~0.8 | 1.4 |
| 6.3 | 5.5 | 6.6 | 6.6 | 7.2 | 0.5~0.8 | 2.2 |
| 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 |

Case Size

φ DxL(mm)

| WV Cap(μF) | 6.3 | | 10 | | 16 | | 25 | | 35 | | 50 | |
|---------------|---------|--------|---------|--------|---------|--------|---------|--------|---------|--------|---------|--------|
| | Size | Ripple | Size | Ripple | Size | Ripple | Size | Ripple | Size | Ripple | Size | Ripple |
| 0.1 | | | | | | | | | | | 4x5.5 | 1 |
| 0.22 | | | | | | | | | | | 4x5.5 | 2 |
| 0.33 | | | | | | | | | | | 4x5.5 | 2.8 |
| 0.47 | | | | | | | | | | | 4x5.5 | 4 |
| 1 | | | | | | | | | | | 4x5.5 | 8.4 |
| 2.2 | | | | | | | | | 4x5.5 | 8.4 | 4x5.5 | 13 |
| 3.3 | | | | | | | 4x5.5 | 10 | 4x5.5 | 15 | 4x5.5 | 17 |
| 4.7 | | | | | 4x5.5 | 10 | 4x5.5 | 16 | 4x5.5 | 18 | 6.3x5.5 | 20 |
| 10 | 4x5.5 | 15 | 4x5.5 | 23 | 4x5.5 | 23 | 4x5.5 | 27 | 6.3x5.5 | 29 | 6.3x5.5 | 33 |
| 22 | 4x5.5 | 28 | 4x5.5 | 33 | 5x5.5 | 37 | 5x5.5 | 42 | 6.3x5.5 | 46 | 6.3x7.7 | 48 |
| | | | | | | | | | | | 8x6.5 | 52 |
| 33 | 4x5.5 | 37 | 5x5.5 | 41 | 6.3x5.5 | 49 | 6.3x5.5 | 52 | 6.3x7.7 | 58 | 6.3x7.7 | 66 |
| | | | | | | | | | 8x6.5 | 62 | 8x6.5 | 71 |
| 47 | 4x5.5 | 45 | 6.3x5.5 | 52 | 6.3x5.5 | 58 | 6.3x7.7 | 65 | 6.3x7.7 | 75 | | |
| | | | | | | | 8x6.5 | 70 | 8x6.5 | 80 | | |
| 100 | 5x5.5 | 70 | 6.3x7.7 | 75 | 6.3x7.7 | 85 | 6.3x7.7 | 102 | | | | |
| | | | 8x6.5 | 80 | 8x6.5 | 92 | 8x6.5 | 110 | | | | |
| 220 | 6.3x7.7 | 102 | 6.3x7.7 | 125 | | | | | | | | |
| | 8x6.5 | 110 | 8x6.5 | 135 | | | | | | | | |
| 330 | 6.3x7.7 | 155 | | | | | | | | | | |
| | 8x6.5 | 170 | | | | | | | | | | |

Ripple Current (mA, rms) at 85°C 120Hz