

CAPACITOR

Aluminum Electrolytic Capacitor Series

KLS10 - CD294 (SK) Series

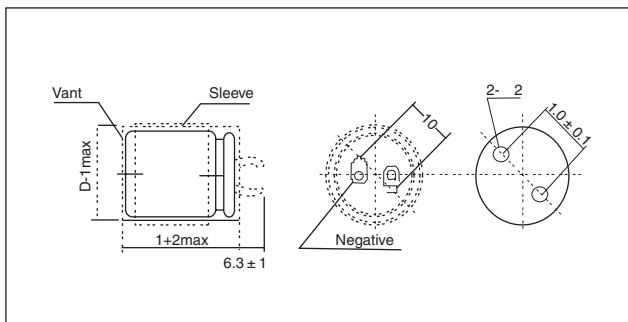
- Load life of 2000 hours at 105
- High ripple current
- Smaller Size
- PCB Mounting



SPECIFICATIONS

| Item | Characteristics | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------------|--|------------------|------------|-----------------|------------------------------------|--------------------|------------------------------------|--------------------|--|---------|-----------------|------------|------|------|------|------|------|------|------|------------|----|----|---|---|---|---|--|
| Operating Temperature Range() | -40 - + 105 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Capacitance Tolerance(25 ,120Hz) | ± 20% | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Leakage Current(µ A) | 0.01CV or 1.2mA whichever is smaller.(at 25 ,after 5 minutes) C:Nominal Capacitance(µ F)V:Rated Voltage(V) | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Dissipation Factor(25 ,120Hz) | <table border="1"> <thead> <tr> <th>Rated Voltage(V)</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63~100</th> <th>160~200</th> <th>250~400</th> </tr> </thead> <tbody> <tr> <td>tan δ</td> <td>0.45</td> <td>0.35</td> <td>0.30</td> <td>0.25</td> <td>0.20</td> <td>0.15</td> <td>0.12</td> <td>0.15</td> </tr> </tbody> </table> | Rated Voltage(V) | 10 | 16 | 25 | 35 | 50 | 63~100 | 160~200 | 250~400 | tan δ | 0.45 | 0.35 | 0.30 | 0.25 | 0.20 | 0.15 | 0.12 | 0.15 | | | | | | | | |
| Rated Voltage(V) | 10 | 16 | 25 | 35 | 50 | 63~100 | 160~200 | 250~400 | | | | | | | | | | | | | | | | | | | |
| tan δ | 0.45 | 0.35 | 0.30 | 0.25 | 0.20 | 0.15 | 0.12 | 0.15 | | | | | | | | | | | | | | | | | | | |
| Temperature Stability(120Hz) | <table border="1"> <thead> <tr> <th colspan="2">Rated Voltage(V)</th> <th>10,16</th> <th>25</th> <th>35</th> <th>50,63</th> <th>80,100</th> <th>160~200</th> <th>250~400</th> </tr> </thead> <tbody> <tr> <td rowspan="2">Impedance Ratio</td> <td>Z-25 /Z+20</td> <td>4</td> <td>3</td> <td>3</td> <td>2</td> <td>2</td> <td>3</td> <td>4</td> </tr> <tr> <td>Z-40 /Z+20</td> <td>15</td> <td>10</td> <td>8</td> <td>6</td> <td>5</td> <td>6</td> <td></td> </tr> </tbody> </table> | Rated Voltage(V) | | 10,16 | 25 | 35 | 50,63 | 80,100 | 160~200 | 250~400 | Impedance Ratio | Z-25 /Z+20 | 4 | 3 | 3 | 2 | 2 | 3 | 4 | Z-40 /Z+20 | 15 | 10 | 8 | 6 | 5 | 6 | |
| Rated Voltage(V) | | 10,16 | 25 | 35 | 50,63 | 80,100 | 160~200 | 250~400 | | | | | | | | | | | | | | | | | | | |
| Impedance Ratio | Z-25 /Z+20 | 4 | 3 | 3 | 2 | 2 | 3 | 4 | | | | | | | | | | | | | | | | | | | |
| | Z-40 /Z+20 | 15 | 10 | 8 | 6 | 5 | 6 | | | | | | | | | | | | | | | | | | | | |
| Load Life(+105) | <table border="1"> <tbody> <tr> <td>Time</td> <td>2000 hours</td> </tr> <tr> <td>Leakage Current</td> <td>Not more than the specified value.</td> </tr> <tr> <td>Capacitance Change</td> <td>Within + 20% of the initial value.</td> </tr> <tr> <td>Dissipation Factor</td> <td>Not more than 200% of the specified value.</td> </tr> </tbody> </table> | Time | 2000 hours | Leakage Current | Not more than the specified value. | Capacitance Change | Within + 20% of the initial value. | Dissipation Factor | Not more than 200% of the specified value. | | | | | | | | | | | | | | | | | | |
| Time | 2000 hours | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Leakage Current | Not more than the specified value. | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Capacitance Change | Within + 20% of the initial value. | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Dissipation Factor | Not more than 200% of the specified value. | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Shelf Life(+105) | 500 hours.No voltage applied.After test:U,to be applied for 60 minutes,24 to 48 hours before measurement. | | | | | | | | | | | | | | | | | | | | | | | | | | |

DIMENSION



MULTIPLIER FOR RIPPLE CURRENT

| Frequency coefficient | | | | | |
|-----------------------|----------|-----|------|------|------|
| Rated Voltage(V) | Freq(Hz) | | | | |
| | 50 | 120 | 1K | 10K | 20K |
| 50 | 0.95 | 1 | 1.10 | 1.15 | 1.15 |
| 6.3~100 | 0.95 | 1 | 1.16 | 1.30 | 1.33 |
| 160 | 0.90 | 1 | 1.20 | 1.50 | 1.55 |

| Temperature coefficient | | | | | |
|-------------------------|-----|-----|-----|-----|------|
| Temperature() | +40 | +55 | +70 | +85 | +105 |
| Factor | 2.7 | 2.5 | 2.1 | 1.7 | 1.0 |

Aluminum Electrolytic Capacitor Series

KLS10 - CD294 (SK) Series Case Size of Standard Products

ALUMINUM ELECTROLYTIC CAPACITORS

STANDARD RATINGS



| WV(V) D x L(mm) | 10 | | 16 | | 25 | | 35 | | 50 | | 63 | | 80 | | 100 | |
|--------------------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|------|--------|------|--------|------|--------|
| | Cap | Ripple | Cap | Ripple | Cap | Ripple | Cap | Ripple | Cap | Ripple | Cap | Ripple | Cap | Ripple | Cap | Ripple |
| | uF | mArms | uF | mArms | uF | mArms | uF | mArms | uF | mArms | uF | mArms | uF | mArms | uF | mArms |
| 22 x 25 | 6800 | 1.5 | 4700 | 1.4 | 3300 | 1.3 | 2200 | 1.1 | 1200 | 0.96 | 820 | 0.92 | 560 | 0.76 | 390 | 0.64 |
| 22 x 30 | 10000 | 1.9 | 6800 | 1.8 | 4700 | 1.6 | 2700 | 1.3 | 1800 | 1.2 | 1200 | 1.2 | 820 | 0.96 | 560 | 0.80 |
| 22 x 35 | 12000 | 2.1 | 8200 | 2.0 | 5600 | 1.8 | 3900 | 1.6 | 2200 | 1.4 | 1500 | 1.3 | 1000 | 1.1 | 680 | 0.92 |
| 22 x 40 | 15000 | 2.5 | 10000 | 2.3 | 6800 | 2.0 | 4700 | 1.9 | 2700 | 1.6 | 1800 | 1.5 | 1200 | 1.2 | 820 | 1.0 |
| 22 x 50 | 18000 | 2.8 | 15000 | 2.9 | 10000 | 2.6 | 6800 | 2.4 | - | - | 2200 | 1.7 | 1800 | 1.6 | 1200 | 1.3 |
| 25 x 25 | 8200 | 1.7 | 6800 | 1.8 | 4700 | 1.6 | 3300 | 1.3 | 1800 | 1.2 | 1200 | 1.1 | 820 | 0.96 | 560 | 0.80 |
| 25 x 30 | 12000 | 2.1 | 10000 | 2.2 | 5600 | 1.8 | 3900 | 1.6 | 2700 | 1.5 | 1500 | 1.3 | 1000 | 1.1 | 680 | 0.92 |
| 25 x 35 | 15000 | 2.5 | 12000 | 2.5 | 8200 | 2.2 | 5600 | 2.0 | 3300 | 1.8 | 1800 | 1.5 | 1500 | 1.4 | 1000 | 1.1 |
| 25 x 40 | 18000 | 2.8 | 15000 | 2.9 | 10000 | 2.6 | 6800 | 2.3 | - | - | - | - | 1800 | 1.6 | - | - |
| 25 x 50 | - | - | 18000 | 3.3 | 12000 | 2.9 | 8200 | 2.7 | 5600 | 2.5 | 3300 | 2.2 | 2200 | 1.8 | 1500 | 1.5 |
| 30 x 25 | 12000 | 2.2 | 10000 | 2.3 | 6800 | 2.0 | 4700 | 1.9 | 2700 | 1.6 | 1500 | 1.4 | 1200 | 1.3 | 820 | 1.0 |
| 30 x 30 | 18000 | 2.8 | 12000 | 2.6 | 8200 | 2.3 | 5600 | 2.1 | 3300 | 1.8 | 2200 | 1.7 | 1500 | 1.5 | 1000 | 1.2 |
| 30 x 35 | 22000 | 3.2 | 18000 | 3.3 | 12000 | 2.9 | 8200 | 2.9 | 4700 | 2.3 | 2700 | 2.0 | 1800 | 1.6 | 1200 | 1.4 |
| 30 x 40 | - | - | 22000 | 3.7 | 15000 | 3.3 | 10000 | 3.0 | 5600 | 2.5 | 3300 | 2.3 | 2200 | 1.9 | 1500 | 1.6 |
| 30 x 50 | - | - | - | - | 18000 | 3.8 | 12000 | 3.4 | 6800 | 2.9 | 4700 | 2.8 | 3300 | 2.3 | 2200 | 2.0 |
| 35 x 25 | 15000 | 2.6 | 12000 | 2.7 | 8200 | 2.4 | 5600 | 2.2 | 3300 | 1.8 | 2200 | 1.8 | 1500 | 1.5 | 1000 | 1.3 |
| 35 x 30 | 22000 | 3.3 | 18000 | 3.4 | 12000 | 3.0 | 8200 | 2.8 | 4700 | 2.4 | 2700 | 2.1 | 2200 | 1.9 | 1200 | 1.4 |
| 35 x 35 | - | - | 22000 | 3.9 | 15000 | 3.5 | 10000 | 3.1 | 5600 | 2.7 | - | - | 2700 | 2.2 | 1800 | 1.8 |
| 35 x 40 | - | - | - | - | 18000 | 3.9 | 12000 | 3.5 | 6800 | 3.0 | 4700 | 2.9 | 3300 | 2.4 | 2200 | 2.0 |
| 35 x 50 | - | - | - | - | - | - | 18000 | 4.5 | 10000 | 3.8 | 6800 | 3.6 | 4700 | 3.2 | 2700 | 2.3 |

| WV(V) D x L(mm) | 160 | | 180 | | 200 | | 250 | | 315 | | 350 | | 400 | |
|--------------------|------|--------|------|--------|------|--------|-----|--------|-----|--------|-----|--------|-----|--------|
| | Cap | Ripple | Cap | Ripple | Cap | Ripple | Cap | Ripple | Cap | Ripple | Cap | Ripple | Cap | Ripple |
| | uF | mArms | uF | mArms | uF | mArms | uF | mArms | uF | mArms | uF | mArms | uF | mArms |
| 22 x 25 | 180 | 0.65 | 180 | 0.65 | 150 | 0.60 | 100 | 0.45 | 56 | 0.34 | 56 | 0.37 | 39 | 0.32 |
| 22 x 30 | 270 | 0.83 | 220 | 0.75 | 220 | 0.76 | 150 | 0.58 | 82 | 0.43 | 82 | 0.47 | 56 | 0.39 |
| 22 x 35 | 330 | 0.94 | 270 | 0.86 | 270 | 0.87 | 180 | 0.65 | 120 | 0.53 | 100 | 0.53 | 68 | 0.45 |
| 22 x 40 | 390 | 1.1 | 390 | 1.1 | 330 | 0.99 | 220 | 0.75 | 150 | 0.61 | 120 | 0.60 | 82 | 0.51 |
| 22 x 50 | 560 | 1.3 | 470 | 1.2 | 470 | 1.2 | 330 | 0.96 | 180 | 0.71 | 180 | 0.78 | 120 | 0.64 |
| 25 x 25 | 270 | 0.82 | 220 | 0.75 | 220 | 0.76 | 150 | 0.58 | 82 | 0.42 | 68 | 0.43 | 56 | 0.40 |
| 25 x 30 | 390 | 1.1 | 330 | 0.96 | 270 | 0.87 | 220 | 0.73 | 120 | 0.53 | 100 | 0.54 | 68 | 0.48 |
| 25 x 35 | 470 | 1.2 | 390 | 1.1 | 390 | 1.1 | 270 | 0.83 | 150 | 0.62 | 120 | 0.61 | 100 | 0.57 |
| 25 x 40 | 560 | 1.3 | 470 | 1.2 | 470 | 1.3 | 330 | 0.95 | - | - | 180 | 0.77 | 120 | 0.63 |
| 25 x 50 | 820 | 1.7 | 680 | 1.5 | 560 | 1.4 | 470 | 1.2 | 270 | 0.89 | 220 | 0.89 | 150 | 0.75 |
| 30 x 25 | 390 | 1.1 | 330 | 1.0 | 270 | 0.92 | 220 | 0.77 | 120 | 0.56 | 100 | 0.57 | 82 | 0.53 |
| 30 x 30 | 560 | 1.3 | 470 | 1.2 | 390 | 1.1 | 270 | 0.88 | 180 | 0.71 | 150 | 0.72 | 100 | 0.61 |
| 30 x 35 | 680 | 1.5 | 560 | 1.4 | 560 | 1.4 | 390 | 1.1 | 220 | 0.80 | 180 | 0.82 | 150 | 0.77 |
| 30 x 40 | 620 | 1.7 | 680 | 1.6 | 680 | 1.6 | 470 | 1.2 | 270 | 0.92 | 220 | 0.93 | 180 | 0.87 |
| 30 x 50 | 1000 | 2.0 | 1000 | 2.0 | 820 | 1.8 | 560 | 1.4 | 390 | 1.2 | 330 | 1.2 | 220 | 1.0 |
| 35 x 25 | 470 | 1.3 | 390 | 1.2 | 390 | 1.2 | 270 | 0.93 | 180 | 0.74 | 150 | 0.77 | 100 | 0.65 |
| 35 x 30 | 680 | 1.6 | 560 | 1.5 | 560 | 1.5 | 390 | 1.2 | 220 | 0.84 | 220 | 0.97 | 150 | 0.83 |
| 35 x 35 | 820 | 1.8 | 820 | 1.8 | 680 | 1.7 | 470 | 1.3 | 330 | 1.1 | 270 | 1.1 | 180 | 0.93 |
| 35 x 40 | 1000 | 2.0 | 1000 | 2.1 | 820 | 1.9 | 560 | 1.5 | 390 | 1.2 | 330 | 1.3 | 220 | 1.1 |
| 35 x 50 | 1500 | 2.6 | 1200 | 2.4 | 1200 | 2.4 | 820 | 1.9 | 470 | 1.4 | 470 | 1.6 | 330 | 1.3 |

Note: We can also provide the capacitors according to the customer's request.