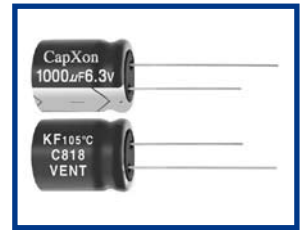


KF Series Low Impedance

Features

- ◆ Used in communication equipments, switching power supply, industrial measuring instruments, etc.
- ◆ Load life 2000~5000 Hrs at 105°C
- ◆ Safety vent construction design.
- ◆ For detail specifications, please refer to Engineering Bulletin No. E126
- ◆ RoHS Compliant



Specifications

| Item | Performance Characteristics | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--|---|-----|------------|-----------|------|-----|------|--------|------|-----------------|----|----|----|----|----|---|---|---|--|----------------------|-----|-----|-----|-----|-----|-----|-----|--|----------------------|-----|-----|-----|-----|-----|-----|-----------------|---|---|---|---|---|---|-----------------|---|---|---|---|---|
| Operating Temperature Range | -40 to +105°C | -25 to +105°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rated Voltage Range | 6.3 to 100 VDC | 160 to 450 VDC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Capacitance Range | 0.47 to 15000 µF | 0.47 to 470 µF | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Capacitance Tolerance | ±20%(120Hz,+20°C) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Leakage Current (+20°C,max.) | I ≤ 0.01 CV or 3 (µA) After 2 minutes whichever is greater measured with rated working voltage applied. | I ≤ 0.03 CV (µA) After 2 minutes withrate working voltage applied. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Dissipation Factor (tan δ , at 20°C , 120Hz) | <table border="1"> <tr> <td>Working Voltage(VDC)</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> <td>63</td> <td>100</td> </tr> <tr> <td>D.F. (%)max.</td> <td>18</td> <td>16</td> <td>14</td> <td>12</td> <td>10</td> <td>9</td> <td>8</td> <td>8</td> </tr> </table> | Working Voltage(VDC) | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 100 | D.F. (%)max. | 18 | 16 | 14 | 12 | 10 | 9 | 8 | 8 | <table border="1"> <tr> <td>Working Voltage(VDC)</td> <td>160</td> <td>200</td> <td>250</td> <td>350</td> <td>400</td> <td>420</td> <td>450</td> </tr> <tr> <td>D.F. (%)max.</td> <td>12</td> <td>12</td> <td>12</td> <td>15</td> <td>15</td> <td>17</td> <td>17</td> </tr> </table> | Working Voltage(VDC) | 160 | 200 | 250 | 350 | 400 | 420 | 450 | D.F. (%)max. | 12 | 12 | 12 | 15 | 15 | 17 | 17 | | | | | | | | | | | | | |
| | Working Voltage(VDC) | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 100 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| D.F. (%)max. | 18 | 16 | 14 | 12 | 10 | 9 | 8 | 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Working Voltage(VDC) | 160 | 200 | 250 | 350 | 400 | 420 | 450 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| D.F. (%)max. | 12 | 12 | 12 | 15 | 15 | 17 | 17 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| For capacitance > 1000 µF, add 2% per another 1000uF. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Low Temperature Characteristics (at 120Hz) | Impedance ratio max | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <table border="1"> <tr> <td>Working Voltage(VDC)</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> <td>63</td> <td>100</td> </tr> <tr> <td>Z-25°C / Z+20°C</td> <td>4</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</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>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> </tr> </table> | Working Voltage(VDC) | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 100 | Z-25°C / Z+20°C | 4 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | Z-40°C / Z+20°C | 8 | 6 | 4 | 3 | 3 | 3 | 3 | 3 | <table border="1"> <tr> <td>Working Voltage(VDC)</td> <td>160</td> <td>200</td> <td>250</td> <td>350</td> <td>400</td> <td>450</td> </tr> <tr> <td>Z-25°C / Z+20°C</td> <td>2</td> <td>2</td> <td>3</td> <td>5</td> <td>5</td> <td>6</td> </tr> <tr> <td>Z-40°C / Z+20°C</td> <td>3</td> <td>6</td> <td>6</td> <td>6</td> <td>6</td> <td>-</td> </tr> </table> | Working Voltage(VDC) | 160 | 200 | 250 | 350 | 400 | 450 | Z-25°C / Z+20°C | 2 | 2 | 3 | 5 | 5 | 6 | Z-40°C / Z+20°C | 3 | 6 | 6 | 6 | 6 |
| Working Voltage(VDC) | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 100 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Z-25°C / Z+20°C | 4 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Z-40°C / Z+20°C | 8 | 6 | 4 | 3 | 3 | 3 | 3 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Working Voltage(VDC) | 160 | 200 | 250 | 350 | 400 | 450 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Z-25°C / Z+20°C | 2 | 2 | 3 | 5 | 5 | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Z-40°C / Z+20°C | 3 | 6 | 6 | 6 | 6 | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| For capacitance > 1000 µF, add 0.5 per another 1000uF for -25°C / +20°C add 1 per another 1000uF for -40°C / +20°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Load Life | Test conditions Duration time : as right Ambient temperature : +105°C Applied voltage : Rated DC working voltage After test requirement at +20°C Capacitance change : ≤ ±20% of the initial measured value Dissipation factor : ≤ 200% of the initial specified value Leakage current : ≤ The initial specified value | <table border="1"> <thead> <tr> <th>D φ</th> <th>Life hours</th> </tr> </thead> <tbody> <tr> <td>5 - 6.3 φ</td> <td>2000</td> </tr> <tr> <td>8 φ</td> <td>3000</td> </tr> <tr> <td>≥ 10 φ</td> <td>5000</td> </tr> </tbody> </table> (160-450V : 2000hrs) | D φ | Life hours | 5 - 6.3 φ | 2000 | 8 φ | 3000 | ≥ 10 φ | 5000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| D φ | Life hours | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 - 6.3 φ | 2000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 φ | 3000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ≥ 10 φ | 5000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Shelf Life | Test conditions Duration time : 1000Hrs Ambient temperature : +105°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. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Multiplier for Ripple Current vs. Frequency

| CAP (µF) \ Frequency(Hz) | 50(60) | 120 | 400 | 1K | 10K | 50K-100K |
|--------------------------|--------|------|------|------|------|----------|
| CAP ≤ 10 | 0.47 | 0.59 | 0.76 | 0.85 | 0.97 | 1 |
| 10 < CAP ≤ 100 | 0.52 | 0.62 | 0.80 | 0.89 | 0.97 | 1 |
| 100 < CAP ≤ 1000 | 0.58 | 0.72 | 0.84 | 0.90 | 0.98 | 1 |
| 1000 < CAP | 0.63 | 0.78 | 0.87 | 0.91 | 0.98 | 1 |

Diagram of Dimensions:(unit:mm)



| D φ | 5 | 6.3 | 8 | 10 | 13 | 16 | 18 | 22 |
|-----|--------|----------|---------------|---------------|-----|-----|-----|----|
| F | 2.0 | 2.5 | 3.5 | 5.0 | 5.0 | 7.5 | 7.5 | 10 |
| d φ | 0.5 | | L < 20 0.5 | L ≥ 20 0.6 | 0.6 | | 0.8 | |
| α | D < 18 | D = 18 | | D > 18 | | | | |
| | 1.5 | L < 35.5 | L ≥ 35.5 | 1.5 | 2.0 | 2.0 | | |

Case Size

| WV(SV) Cap(μF) | 6.3 (8) | | | 10 (13) | | | 16 (20) | | |
|-------------------|------------|--------|-----------|------------|--------|-----------|------------|--------|-----------|
| | Size | Ripple | Impedance | Size | Ripple | Impedance | Size | Ripple | Impedance |
| 10 | | | | | | | 5x11 | 74 | 4.7 |
| 22 | | | | 5x11 | 98 | 2.7 | 5x11 | 100 | 2.6 |
| 33 | | | | 5x11 | 100 | 2.6 | 5x11 | 114 | 2 |
| 47 | | | | 5x11 | 150 | 1.34 | 5x11 | 155 | 1.1 |
| 56 | | | | 5x11 | 160 | 1.23 | 5x11 | 180 | 0.82 |
| 68 | | | | 5x11 | 170 | 1.05 | 5x11 | 195 | 0.69 |
| 100 | 5x11 | 170 | 1.00 | 5x11 | 210 | 0.8 | 6.3x11 | 265 | 0.5 |
| 120 | 5x11 | 175 | 0.92 | 6.3x11 | 250 | 0.75 | 6.3x11 | 270 | 0.47 |
| 150 | 6.3x11 | 220 | 0.81 | 6.3x11 | 290 | 0.61 | 6.3x11 | 290 | 0.41 |
| | 5x11 | 185 | 0.90 | | | | | | |
| 180 | 6.3x11 | 240 | 0.76 | 6.3x11 | 320 | 0.46 | 8x11.5 | 370 | 0.34 |
| | | | | | | | 6.3x11 | 315 | 0.38 |
| 220 | 6.3x11 | 310 | 0.65 | 6.3x11 | 340 | 0.35 | 8x11.5 | 480 | 0.25 |
| 270 | 6.3x11 | 340 | 0.54 | 8x11.5 | 400 | 0.3 | 8x11.5 | 520 | 0.21 |
| 330 | 8x11.5 | 390 | 0.42 | 8x11.5 | 460 | 0.27 | 8x11.5 | 590 | 0.156 |
| 470 | 8x11.5 | 450 | 0.25 | 8x11.5 | 580 | 0.25 | 10x12.5 | 750 | 0.124 |
| 560 | 8x11.5 | 490 | 0.23 | 10x12.5 | 635 | 0.16 | 10x12.5 | 785 | 0.105 |
| | | | | 8x11.5 | 550 | 0.17 | | | |
| 680 | 8x11.5 | 550 | 0.21 | 10x12.5 | 765 | 0.11 | 10x16 | 1100 | 0.092 |
| 820 | 8x16 | 620 | 0.20 | 10x16 | 890 | 0.1 | 10x16 | 1180 | 0.078 |
| 1000 | 10x12.5 | 770 | 0.17 | 10x16 | 1040 | 0.076 | 10x20 | 1350 | 0.065 |
| | 8x16 | 750 | 0.15 | | | | | | |
| 1200 | 10x16 | 860 | 0.16 | 10x16 | 1200 | 0.067 | 10x25 | 1500 | 0.061 |
| 1500 | 10x16 | 1100 | 0.14 | 10x20 | 1400 | 0.062 | 10x30 | 1600 | 0.056 |
| | | | | | | | 13x20 | 1380 | 0.06 |
| 1800 | 10x20 | 1250 | 0.11 | 10x25 | 1550 | 0.058 | 13x20 | 1800 | 0.047 |
| | | | | | | | 10x25 | 1730 | 0.05 |
| 2200 | 10x20 | 1380 | 0.090 | 13x20 | 1750 | 0.041 | 13x25 | 2000 | 0.038 |
| | 10x25 | 1470 | 0.095 | 10x25 | 1650 | 0.52 | 13x20 | 1880 | 0.04 |
| 2700 | 10x25 | 1490 | 0.075 | 13x20 | 1900 | 0.035 | 13x25 | 2450 | 0.033 |
| | 13x20 | 1550 | 0.075 | | | | | | |
| 3300 | 13x20 | 1650 | 0.036 | 13x25 | 2000 | 0.031 | 16x25 | 2790 | 0.030 |
| | | | | | | | 13x30 | 2640 | 0.030 |
| 4700 | 13x30 | 2100 | 0.036 | 16x25 | 2100 | 0.030 | 16x31.5 | 2880 | 0.026 |
| | 13x25 | 1900 | 0.040 | | | | | | |
| 5600 | 13x30 | 2160 | 0.034 | 16x25 | 2290 | 0.028 | 16x35.5 | 2990 | 0.025 |
| 6800 | 16x25 | 2350 | 0.032 | 16x31.5 | 2650 | 0.026 | 18x35.5 | 3200 | 0.024 |
| 8200 | 16x31.5 | 2550 | 0.027 | 16x35.5 | 2770 | 0.026 | 18x35.5 | 3320 | 0.024 |
| 10000 | 16x35.5 | 2700 | 0.024 | 18x35.5 | 2850 | 0.024 | 18x41 | 3550 | 0.024 |
| 15000 | 18x35.5 | 2950 | 0.023 | | | | | | |

φ DxL(mm)

Ripple Current (mA, rms) at 105°C 100KHz
Max Impedance (Ω) at 20°C 100KHz

φ DxL(mm)

| WV(SV) Cap(μF) | 25 (32) | | | 35 (44) | | | 50 (63) | | |
|-------------------|------------|--------|-----------|------------|--------|-----------|------------|--------|-----------|
| | Size | Ripple | Impedance | Size | Ripple | Impedance | Size | Ripple | Impedance |
| 0.47 | | | | | | | 5x11 | 25 | 5.4 |
| 1 | | | | | | | 5x11 | 40 | 4 |
| 2.2 | | | | | | | 5x11 | 55 | 2.8 |
| 3.3 | | | | | | | 5x11 | 60 | 2.2 |
| 4.7 | 5x11 | 68 | 3.95 | 5x11 | 85 | 3.65 | 5x11 | 90 | 2 |
| 5.6 | 5x11 | 75 | 3.25 | 5x11 | 92 | 3.09 | 5x11 | 105 | 1.93 |
| 6.8 | 5x11 | 80 | 2.98 | 5x11 | 97 | 2.82 | 5x11 | 110 | 1.89 |
| 10 | 5x11 | 85 | 2.56 | 5x11 | 105 | 2.37 | 5x11 | 120 | 1.82 |
| 22 | 5x11 | 125 | 1.95 | 5x11 | 150 | 1.5 | 6.3x11 | 150 | 1.25 |
| 33 | 5x11 | 155 | 1.42 | 5x11 | 180 | 1.21 | 6.3x11 | 250 | 0.8 |
| 47 | 5x11 | 190 | 1.10 | 6.3x11 | 280 | 0.8 | 6.3x11 | 290 | 0.65 |
| | 6.3x11 | 220 | 1.00 | | | | | | |
| 56 | 6.3x11 | 250 | 0.79 | 6.3x11 | 310 | 0.64 | 8x11.5 | 310 | 0.49 |
| 68 | 6.3x11 | 280 | 0.65 | 8x11.5 | 350 | 0.52 | 8x11.5 | 375 | 0.33 |
| 100 | 6.3x11 | 370 | 0.35 | 8x11.5 | 450 | 0.25 | 10x12.5 | 480 | 0.17 |
| 120 | 6.3x11 | 380 | 0.33 | 8x11.5 | 510 | 0.22 | 10x12.5 | 530 | 0.156 |
| 150 | 8x11.5 | 410 | 0.31 | 8x11.5 | 540 | 0.191 | 10x12.5 | 590 | 0.132 |
| 180 | 8x11.5 | 455 | 0.25 | 10x12.5 | 650 | 0.172 | 10x16 | 860 | 0.114 |
| 220 | 8x11.5 | 550 | 0.15 | 10x12.5 | 750 | 0.114 | 10x16 | 930 | 0.096 |
| 270 | 10x12.5 | 720 | 0.125 | 10x16 | 910 | 0.095 | 10x20 | 1060 | 0.078 |
| 330 | 10x12.5 | 820 | 0.114 | 10x16 | 1050 | 0.079 | 10x25 | 1150 | 0.065 |
| 470 | 10x16 | 1200 | 0.076 | 10x20 | 1200 | 0.065 | 13x20 | 1590 | 0.055 |
| 560 | 10x16 | 1250 | 0.072 | 10x25 | 1500 | 0.061 | 13x20 | 1740 | 0.05 |
| 680 | 10x20 | 1320 | 0.065 | 13x20 | 1570 | 0.056 | 13x25 | 1930 | 0.044 |
| | 10x20 | 1400 | 0.052 | 13x20 | 1700 | 0.048 | 13x30 | 2100 | 0.039 |
| 820 | 10x25 | 1530 | 0.052 | | | | | | |
| | 13x20 | 1650 | 0.045 | 13x25 | 1900 | 0.042 | 16x25 | 2300 | 0.036 |
| 1200 | 13x25 | 1980 | 0.041 | 13x30 | 2130 | 0.039 | 16x31.5 | 2650 | 0.036 |
| 1500 | 13x25 | 2210 | 0.038 | 16x25 | 2270 | 0.036 | 16x35.5 | 2750 | 0.034 |
| 1800 | 16x25 | 2510 | 0.036 | 16x31.5 | 2700 | 0.035 | 16x35.5 | 2850 | 0.034 |
| 2200 | 16x25 | 2650 | 0.035 | 16x31.5 | 2780 | 0.034 | 18x35.5 | 3040 | 0.032 |
| 2700 | 16x25 | 2820 | 0.031 | 16x35.5 | 2850 | 0.029 | 18x41 | 3070 | 0.027 |
| 3300 | 16x31.5 | 3240 | 0.026 | 18x35.5 | 3100 | 0.026 | 18x41 | 3100 | 0.025 |
| 4700 | 16x35.5 | 3650 | 0.024 | 18x41 | 3500 | 0.024 | | | |
| 5600 | 18x35.5 | 3720 | 0.024 | | | | | | |
| 6800 | 18x41 | 3850 | 0.024 | | | | | | |

Ripple Current (mA, rms) at 105°C 100KHz
 Max Impedance (Ω) at 20°C 100KHz

φ DxL(mm)

| WV(SV) Cap(μF) | 63 (79) | | | 100 (125) | | | 160 (200) | | |
|-------------------|------------|--------|-----------|--------------|--------|-----------|--------------|--------|-----------|
| | Size | Ripple | Impedance | Size | Ripple | Impedance | Size | Ripple | Impedance |
| 0.47 | 5x11 | 25 | 5.4 | 5x11 | 20 | 5.9 | 5x11 | 36 | 9.44 |
| 1 | 5x11 | 33 | 4 | 5x11 | 30 | 4.4 | 6.3x11 | 45 | 7.85 |
| 2.2 | 5x11 | 45 | 2.8 | 5x11 | 42 | 3.3 | 6.3x11 | 55 | 5.21 |
| 3.3 | 5x11 | 58 | 2.2 | 5x11 | 55 | 2.8 | 8x11.5 | 70 | 4.31 |
| 4.7 | 5x11 | 65 | 2 | 5x11 | 72 | 2.6 | 8x11.5 | 80 | 4.16 |
| 5.6 | 5x11 | 95 | 1.9 | 5x11 | 100 | 2.33 | 10x12.5 | 91 | 3.61 |
| 6.8 | 5x11 | 100 | 1.82 | 6.3x11 | 115 | 1.95 | 10x16 | 100 | 3.12 |
| 10 | 5x11 | 110 | 1.75 | 6.3x11 | 130 | 1.77 | 10x16 | 140 | 2.69 |
| 22 | 6.3x11 | 180 | 0.80 | 8x11.5 | 220 | 0.85 | 10x16 | 205 | 1.3 |
| 33 | 8x11.5 | 270 | 0.61 | 10x12.5 | 320 | 0.69 | 10x20 | 260 | 1.1 |
| 47 | 8x11.5 | 300 | 0.56 | 10x12.5 | 370 | 0.58 | 13x20 | 320 | 0.91 |
| 56 | 8x11.5 | 330 | 0.38 | 10x12.5 | 400 | 0.43 | 13x20 | 340 | 0.67 |
| | | | | 10x16 | 440 | 0.42 | 13x25 | 370 | 0.66 |
| 68 | 10x12.5 | 480 | 0.21 | 10x16 | 470 | 0.35 | 13x25 | 450 | 0.56 |
| 100 | 10x16 | 610 | 0.14 | 10x25 | 560 | 0.3 | 16x25 | 540 | 0.47 |
| 120 | 10x16 | 620 | 0.13 | 10x25 | 660 | 0.22 | 16x25 | 560 | 0.35 |
| 150 | 10x16 | 700 | 0.11 | 13x20 | 780 | 0.174 | 16x31.5 | 710 | 0.26 |
| 180 | 10x20 | 800 | 0.10 | 13x20 | 820 | 0.142 | 16x35.5 | 760 | 0.22 |
| 220 | 10x20 | 920 | 0.080 | 13x25 | 950 | 0.13 | 16x35.5 | 820 | 0.19 |
| 270 | 13x20 | 1150 | 0.065 | 13x30 | 1120 | 0.11 | 18x35.5 | 990 | 0.18 |
| 330 | 13x20 | 1250 | 0.055 | 16x25 | 1440 | 0.1 | 18x41 | 1180 | 0.16 |
| 470 | 13x25 | 1620 | 0.053 | 16x31.5 | 1650 | 0.09 | | | |
| 560 | 13x25 | 1680 | 0.049 | 16x35.5 | 1720 | 0.085 | | | |
| 680 | 13x30 | 1950 | 0.043 | 18x35.5 | 1790 | 0.08 | | | |
| 820 | 16x25 | 2150 | 0.038 | 18x35.5 | 1840 | 0.071 | | | |
| 1000 | 16x31.5 | 2350 | 0.034 | 18x41 | 1930 | 0.066 | | | |
| 1200 | 16x35.5 | 2550 | 0.032 | | | | | | |
| 1500 | 18x35.5 | 2710 | 0.031 | | | | | | |
| 1800 | 18x41 | 3000 | 0.027 | | | | | | |

Ripple Current (mA, rms) at 105°C 100KHz
 Max Impedance (Ω) at 20°C 100KHz

φ DxL(mm)

| WV(SV) Cap(μF) | 200 (250) | | | 250 (300) | | | 350 (400) | | |
|-------------------|--------------|--------|-----------|--------------|--------|-----------|--------------|--------|-----------|
| | Size | Ripple | Impedance | Size | Ripple | Impedance | Size | Ripple | Impedance |
| 0.47 | 5x11 | 36 | 9.38 | 5x11 | 40 | 8.85 | 6.3x11 | 40 | 8.82 |
| 1 | 6.3x11 | 45 | 7.76 | 6.3x11 | 50 | 6.54 | 6.3x11.5 | 50 | 7.90 |
| | | | | | | | 8x11.5 | 58 | 6.35 |
| 2.2 | 6.3x11 | 55 | 5.18 | 8x11.5 | 72 | 4.12 | 8x11.5 | 75 | 5.3 |
| | | | | | | | 10x12.5 | 86 | 4.02 |
| 3.3 | 8x11.5 | 71 | 4.25 | 8x11.5 | 75 | 3.85 | 10x12.5 | 90 | 3.80 |
| | | | | | | | 10x16 | 100 | 3.52 |
| 4.7 | 8x11.5 | 78 | 5.00 | 8x11.5 | 85 | 3.50 | 10x16 | 118 | 3.13 |
| | 10x12.5 | 85 | 4.12 | 10x12.5 | 100 | 2.95 | 10x20 | 130 | 2.77 |
| 5.6 | 8x11.5 | 90 | 4.50 | 8x11.5 | 95 | 2.93 | 10x16 | 120 | 2.76 |
| | 10x12.5 | 95 | 3.55 | 10x12.5 | 105 | 2.72 | 10x20 | 132 | 2.58 |
| 6.8 | 8x16 | 115 | 3.25 | 8x16 | 124 | 2.50 | 10x16 | 148 | 2.43 |
| | 10x16 | 140 | 2.71 | 10x12.5 | 126 | 2.20 | 10x25 | 180 | 1.65 |
| 10 | | | | 10x16 | 140 | 1.86 | | | |
| | 10x16 | 150 | 2.02 | 8x16 | 141 | 1.80 | 10x16 | 165 | 1.64 |
| | | | | 10x12.5 | 144 | 1.75 | 10x25 | 200 | 1.35 |
| 22 | | | | 10x16 | 160 | 1.4 | | | |
| | 10x16 | 186 | 1.80 | | | | | | |
| | 10x20 | 205 | 1.40 | 10x20 | 210 | 1.3 | 13x20 | 220 | 1.22 |
| 33 | 10x20 | 280 | 1.00 | 10x25 | 248 | 1.25 | 13x20 | 263 | 1.02 |
| | 13x20 | 330 | 0.80 | 13x20 | 310 | 0.9 | 13x25 | 290 | 0.86 |
| 47 | 13x20 | 360 | 0.65 | 13x20 | 375 | 0.60 | 16x25 | 389 | 0.76 |
| | 13x25 | 400 | 0.62 | 13x25 | 405 | 0.45 | 16x31.5 | 430 | 0.62 |
| 56 | 13x20 | 430 | 0.45 | 13x25 | 420 | 0.42 | 16x35.5 | 460 | 0.60 |
| | | | | | | | | | |
| 68 | 13x25 | 480 | 0.42 | | | | | | |
| | 16x25 | 540 | 0.35 | 16x25 | 490 | 0.38 | 16x31.5 | 475 | 0.57 |
| 100 | 16x25 | 780 | 0.30 | 16x31.5 | 675 | 0.27 | 16x35.5 | 481 | 0.56 |
| | 16x31.5 | 820 | 0.28 | | | | 18x31.5 | 487 | 0.56 |
| | | | | | | | 18x35.5 | 513 | 0.55 |
| 120 | 16x25 | 740 | 0.28 | 16x31.5 | 692 | 0.26 | 18x35.5 | 525 | 0.54 |
| | 16x31.5 | 830 | 0.26 | 16x35.5 | 730 | 0.25 | 18x41 | 560 | 0.52 |
| 150 | 16x31.5 | 840 | 0.25 | 16x35.5 | 750 | 0.24 | 18x41 | 590 | 0.50 |
| | 16x35.5 | 860 | 0.23 | 18x31.5 | 750 | 0.23 | | | |
| 180 | 18x31.5 | 920 | 0.20 | 18x35.5 | 830 | 0.21 | | | |
| 220 | 18x35.5 | 1050 | 0.19 | 18x31.5 | 850 | 0.20 | | | |
| | 18x41 | 1090 | 0.16 | 18x41 | 910 | 0.19 | | | |

| WV(SV) Cap(μF) | 400 (450) | | | 420 (470) | | | 450 (500) | | |
|-------------------|--------------|--------|-----------|--------------|--------|-----------|--------------|--------|-----------|
| | Size | Ripple | Impedance | Size | Ripple | Impedance | Size | Ripple | Impedance |
| 0.47 | 6.3x11 | 26 | 33.00 | 6.3x11 | 28 | 34.00 | 8x11.5 | 30 | 34.00 |
| 1 | 8x11.5 | 36 | 16.50 | 8x11.5 | 38 | 17.00 | 8x11.5 | 45 | 17.35 |
| 2.2 | 10x12.5 | 76 | 13.00 | 10x12.5 | 58 | 12.10 | 10x16 | 65 | 10.25 |
| | 8x11.5 | 65 | 13.00 | | | | | | |
| 3.3 | 8x11.5 | 86 | 12.00 | 10x12.5 | 87 | 11.00 | 10x16 | 89 | 10.00 |
| 4.7 | 10x12.5 | 105 | 10.00 | 10x16 | 102 | 8.50 | 10x20 | 105 | 5.00 |
| 5.6 | 8x16 | 105 | 8.00 | 10x16 | 109 | 6.80 | 10x20 | 110 | 4.75 |
| | 10x12.5 | 120 | 9.00 | | | | | | 4.60 |
| 6.8 | 10x16 | 160 | 7.50 | 10x16 | 160 | 6.00 | 10x20 | 135 | 4.05 |
| 10 | 10x20 | 235 | 3.60 | 10x20 | 180 | 3.70 | 10x25 | 180 | 3.75 |
| 22 | 13x20 | 295 | 2.65 | 13x25 | 330 | 2.70 | 13x25 | 320 | 2.80 |
| 33 | 13x25 | 440 | 1.60 | 16x25 | 480 | 1.80 | 16x25 | 460 | 2.20 |
| 47 | 16x25 | 580 | 1.40 | 16x31.5 | 620 | 1.10 | 16x35.5 | 650 | 1.05 |
| 56 | 16x31.5 | 650 | 0.85 | 16x35.5 | 670 | 0.90 | 18x31.5 | 730 | 0.95 |
| 68 | 16x31.5 | 800 | 0.80 | 18x31.5 | 750 | 0.80 | 18x35.5 | 760 | 0.75 |
| 100 | 18x35.5 | 900 | 0.61 | 18x35.5 | 820 | 0.70 | 18x41 | 880 | 0.74 |

Ripple Current (mA, rms) at 105°C 100KHz

Max Impedance (Ω) at 20°C 100KHz