

Features

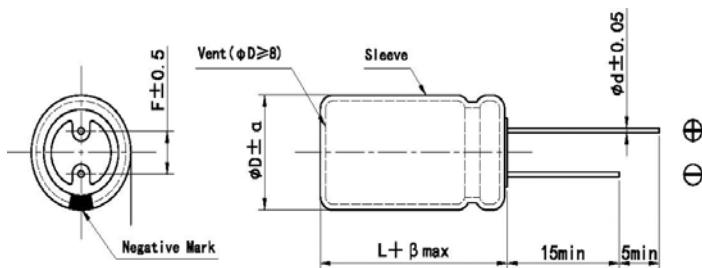
- 125°C, 2000 hours
- Designed for energy-saving lamps, automobile modules and other high temperature applications.



◆ Specifications

| Items | Characteristics | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|-------|--------|---------|---------|--------|---------|---------|--|---------------------------|--------------------------------------|-------------|---|-----------------|---|---|---------|---------|------------|------|------|---|------|------|------|------|------|
| Rated Voltage Range | 6.3~450V.DC | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Operating Temperature Range | -55~+125°C (6.3V~63V) ; -40~+125°C (80V~450V) | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Capacitance Tolerance | $\pm 20\%(\text{M})$ (25°C,100 or 120Hz) | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Leakage Current | $I \leq 0.02 CV$ or $3(\mu\text{A})$ (6.3V~100V) $I \leq 0.03 CV + 10 (\mu\text{A})$ (160V~450V) Where,I:max.leakage current(μA), C: Nominal capacitance(μF),V:Rated voltage(V)(At 25°C after 2 minutes) | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Dissipation Factor tanδ | (25°C,100 or 120Hz) <table border="1"> <tr> <td>Rated voltage(V_{dc})</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50~100</td> <td>160~250</td> <td>350~450</td> </tr> <tr> <td>tanδ(Max.)</td> <td>0.24</td> <td>0.20</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.10</td> <td>0.12</td> <td>0.15</td> </tr> </table> <p>When nominal capacitance exceeds 1000μF,add 0.02 to the value above for each 1000μF increase.</p> | | | | | | | | | Rated voltage(V_{dc}) | 6.3 | 10 | 16 | 25 | 35 | 50~100 | 160~250 | 350~450 | tanδ(Max.) | 0.24 | 0.20 | 0.16 | 0.14 | 0.12 | 0.10 | 0.12 | 0.15 |
| Rated voltage(V_{dc}) | 6.3 | 10 | 16 | 25 | 35 | 50~100 | 160~250 | 350~450 | | | | | | | | | | | | | | | | | | | |
| tanδ(Max.) | 0.24 | 0.20 | 0.16 | 0.14 | 0.12 | 0.10 | 0.12 | 0.15 | | | | | | | | | | | | | | | | | | | |
| Low Temperature Characteristics (Max.Impedance Ratio) | Impedance ratio at 100Hz or 120Hz shall not exceed the values given in the below table. <table border="1"> <tr> <td>Rated voltage(V_{dc})</td> <td>6.3~16</td> <td>25~63</td> <td>80~100</td> <td>160~250</td> <td>350~450</td> </tr> <tr> <td>$Z_{-40^\circ\text{C}}/Z_{+20^\circ\text{C}}$</td> <td>/</td> <td>/</td> <td>4</td> <td>6</td> <td>10</td> </tr> <tr> <td>$Z_{-55^\circ\text{C}}/Z_{+20^\circ\text{C}}$</td> <td>5</td> <td>4</td> <td>/</td> <td>/</td> <td>/</td> </tr> </table> <p>When nominal capacitance exceeds 1000μF,add 1 to the value above for each 1000μF increase.</p> | | | | | | | | | Rated voltage(V_{dc}) | 6.3~16 | 25~63 | 80~100 | 160~250 | 350~450 | $Z_{-40^\circ\text{C}}/Z_{+20^\circ\text{C}}$ | / | / | 4 | 6 | 10 | $Z_{-55^\circ\text{C}}/Z_{+20^\circ\text{C}}$ | 5 | 4 | / | / | / |
| Rated voltage(V_{dc}) | 6.3~16 | 25~63 | 80~100 | 160~250 | 350~450 | | | | | | | | | | | | | | | | | | | | | | |
| $Z_{-40^\circ\text{C}}/Z_{+20^\circ\text{C}}$ | / | / | 4 | 6 | 10 | | | | | | | | | | | | | | | | | | | | | | |
| $Z_{-55^\circ\text{C}}/Z_{+20^\circ\text{C}}$ | 5 | 4 | / | / | / | | | | | | | | | | | | | | | | | | | | | | |
| Shelf Life | After storage at 125°C for 1000 hours, the capacitors shall meet the following requirements. (500 hours for 350V~450V) <table border="1"> <tr> <td>Capacitance Change</td> <td>$\leq \pm 20\%$ of the initial value</td> </tr> <tr> <td>D.F.(tanδ)</td> <td>$\leq 200\%$ of the initial specified value</td> </tr> <tr> <td>Leakage Current</td> <td>$\leq 500\%$ of the initial specified value</td> </tr> </table> | | | | | | | | | Capacitance Change | $\leq \pm 20\%$ of the initial value | D.F.(tanδ) | $\leq 200\%$ of the initial specified value | Leakage Current | $\leq 500\%$ of the initial specified value | | | | | | | | | | | | |
| Capacitance Change | $\leq \pm 20\%$ of the initial value | | | | | | | | | | | | | | | | | | | | | | | | | | |
| D.F.(tanδ) | $\leq 200\%$ of the initial specified value | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Leakage Current | $\leq 500\%$ of the initial specified value | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Load Life | After application of rated voltage with rated ripple current for the 2000hours at +125°C, the capacitors shall meet the following limits. <table border="1"> <tr> <td>Capacitance Change</td> <td>$\leq \pm 20\%$ of the initial value</td> </tr> <tr> <td>D.F.(tanδ)</td> <td>$\leq 200\%$ of the initial specified value</td> </tr> <tr> <td>Leakage Current</td> <td>\leq the Initial specified value</td> </tr> </table> | | | | | | | | | Capacitance Change | $\leq \pm 20\%$ of the initial value | D.F.(tanδ) | $\leq 200\%$ of the initial specified value | Leakage Current | \leq the Initial specified value | | | | | | | | | | | | |
| Capacitance Change | $\leq \pm 20\%$ of the initial value | | | | | | | | | | | | | | | | | | | | | | | | | | |
| D.F.(tanδ) | $\leq 200\%$ of the initial specified value | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Leakage Current | \leq the Initial specified value | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Others | Meet Q/RME 40-2008, GB/T 5993-2003 | | | | | | | | | | | | | | | | | | | | | | | | | | |

◆ Dimensions



mm

| D | 8 | 10 | 13 | 16 |
|---|-----|-----|-----|----|
| d | 0.5 | 0.6 | 0.8 | |
| F | 3.5 | 5.0 | 7.5 | |
| α | | 0.5 | | |
| β | | 2.0 | | |

◆ Size and Max Ripple Current

| Voltage (V) | Capacitance (μ F) | Size $\Phi D \times L$ (mm) | $\tan\delta$ | Z (Ω , 25°C, 100KHz) | I_R (mArms, 125°C, 100KHz) |
|-------------|------------------------|-----------------------------|--------------|--------------------------------|------------------------------|
| 10 | 220 | 8×12 | 0.20 | 0.32 | 340 |
| | 330 | 10×12 | 0.20 | 0.15 | 620 |
| | 470 | 10×12 | 0.20 | 0.15 | 620 |
| | 1000 | 10×20 | 0.20 | 0.075 | 950 |
| | 2200 | 13×25 | 0.22 | 0.040 | 1350 |
| | 3300 | 16×25 | 0.24 | 0.031 | 1620 |
| | 4700 | 16×30 | 0.26 | 0.025 | 1860 |
| 16 | 100 | 8×12 | 0.16 | 0.32 | 340 |
| | 220 | 10×12 | 0.16 | 0.15 | 620 |
| | 330 | 10×12 | 0.16 | 0.15 | 620 |
| | 470 | 10×16 | 0.16 | 0.094 | 790 |
| | 1000 | 13×20 | 0.16 | 0.058 | 1080 |
| | 2200 | 16×25 | 0.18 | 0.031 | 1620 |
| | 3300 | 16×30 | 0.20 | 0.025 | 1860 |
| 25 | 100 | 8×12 | 0.14 | 0.32 | 340 |
| | 220 | 10×12 | 0.14 | 0.15 | 620 |
| | 330 | 10×16 | 0.14 | 0.094 | 790 |
| | 470 | 10×20 | 0.14 | 0.075 | 950 |
| | 1000 | 13×25 | 0.14 | 0.040 | 1350 |
| | 2200 | 16×30 | 0.16 | 0.025 | 1860 |
| 35 | 100 | 8×12 | 0.12 | 0.32 | 340 |
| | 100 | 10×12 | 0.12 | 0.15 | 620 |
| | 220 | 10×16 | 0.12 | 0.094 | 790 |
| | 330 | 10×20 | 0.12 | 0.075 | 950 |
| | 470 | 13×20 | 0.12 | 0.058 | 1080 |
| | 1000 | 16×25 | 0.12 | 0.031 | 1620 |
| 50 | 10 | 8×12 | 0.10 | 0.75 | 180 |
| | 22 | 8×12 | 0.10 | 0.50 | 250 |
| | 33 | 8×12 | 0.10 | 0.50 | 280 |

| Voltage (V) | Capacitance (μ F) | Size $\Phi D \times L$ (mm) | $\tan\delta$ | Z (Ω , 25°C, 100KHz) | I_R (mArms, 125°C, 100KHz) |
|-------------|------------------------|-----------------------------|--------------|--------------------------------|------------------------------|
| 50 | 47 | 8×12 | 0.10 | 0.50 | 280 |
| | 100 | 10×12 | 0.10 | 0.20 | 520 |
| | 220 | 10×20 | 0.10 | 0.098 | 880 |
| | 330 | 13×20 | 0.10 | 0.081 | 990 |
| | 470 | 13×25 | 0.10 | 0.059 | 1150 |
| | 1000 | 16×30 | 0.10 | 0.032 | 1590 |
| | 33 | 8×12 | 0.10 | 1.5 | 150 |
| 63 | 47 | 10×12 | 0.10 | 0.59 | 530 |
| | 100 | 10×16 | 0.10 | 0.41 | 690 |
| | 220 | 13×20 | 0.10 | 0.16 | 1050 |
| | 330 | 13×25 | 0.10 | 0.12 | 1290 |
| | 470 | 13×30 | 0.10 | 0.097 | 1460 |
| | 1000 | 16×30 | 0.10 | 0.059 | 1850 |
| | 22 | 8×12 | 0.10 | 1.5 | 150 |
| 80 | 33 | 10×12 | 0.10 | 0.80 | 480 |
| | 47 | 10×12 | 0.10 | 0.80 | 480 |
| | 100 | 10×20 | 0.10 | 0.39 | 790 |
| | 220 | 13×25 | 0.10 | 0.18 | 1240 |
| | 330 | 13×30 | 0.10 | 0.16 | 1390 |
| | 470 | 16×25 | 0.10 | 0.11 | 1500 |
| | 4.7 | 8×12 | 0.10 | 2.0 | 130 |
| 100 | 10 | 8×12 | 0.10 | 1.5 | 150 |
| | 22 | 10×12 | 0.10 | 0.80 | 480 |
| | 33 | 10×12 | 0.10 | 0.80 | 480 |
| | 47 | 10×16 | 0.10 | 0.55 | 630 |
| | 100 | 13×20 | 0.10 | 0.25 | 990 |
| | 220 | 16×25 | 0.10 | 0.11 | 1500 |
| | 330 | 16×30 | 0.10 | 0.079 | 1790 |

◆ Size and Max Ripple Current

| Voltage (V) | Capacitance (μF) | Size $\Phi\text{D} \times \text{L}$ (mm) | $\tan\delta$ | I_R (mAmps, 125°C, 120Hz) |
|-------------|-------------------------------|--|--------------|-----------------------------|
| 160 | 22 | 10×20 | 0.12 | 115 |
| | 33 | 10×25 | 0.12 | 154 |
| | 47 | 13×20 | 0.12 | 187 |
| | 68 | 13×25 | 0.12 | 245 |
| | 100 | 16×25 | 0.12 | 329 |
| | 150 | 16×30 | 0.12 | 434 |
| 200 | 10 | 10×20 | 0.12 | 78 |
| | 22 | 10×25 | 0.12 | 126 |
| | 33 | 13×20 | 0.12 | 157 |
| | 47 | 13×25 | 0.12 | 204 |
| | 68 | 16×20 | 0.12 | 250 |
| | 100 | 16×25 | 0.12 | 329 |
| 250 | 10 | 10×20 | 0.12 | 78 |
| | 22 | 13×20 | 0.12 | 128 |
| | 33 | 13×25 | 0.12 | 171 |
| | 47 | 16×25 | 0.12 | 225 |
| | 68 | 16×30 | 0.12 | 292 |

| Voltage (V) | Capacitance (μF) | Size $\Phi\text{D} \times \text{L}$ (mm) | $\tan\delta$ | I_R (mAmps, 125°C, 120Hz) |
|-------------|-------------------------------|--|--------------|-----------------------------|
| 350 | 4.7 | 10×20 | 0.15 | 53 |
| | 10 | 10×25 | 0.15 | 85 |
| | 22 | 13×25 | 0.15 | 139 |
| | 33 | 16×25 | 0.15 | 189 |
| | 47 | 16×30 | 0.15 | 243 |
| 400 | 4.7 | 10×20 | 0.15 | 53 |
| | 10 | 10×25 | 0.15 | 86 |
| | 22 | 13×30 | 0.15 | 142 |
| | 33 | 16×25 | 0.15 | 189 |
| | 47 | 16×30 | 0.15 | 243 |
| 450 | 4.7 | 10×25 | 0.15 | 58 |
| | 10 | 13×20 | 0.15 | 86 |
| | 22 | 16×25 | 0.15 | 154 |
| | 33 | 16×30 | 0.15 | 203 |
| | | | | |
| | | | | |

◆ Ripple Current Multiplier

Frequency Coefficient

10V~100V:

| Frequency (Hz) | 50/60 | 100/120 | 1K | 10K | 100K |
|--|-------|---------|------|------|------|
| 4.7 μF ~100 μF | 0.35 | 0.40 | 0.75 | 0.90 | 1.00 |
| 220 μF ~470 μF | 0.45 | 0.50 | 0.85 | 0.94 | 1.00 |
| 1000 μF | 0.50 | 0.60 | 0.87 | 0.95 | 1.00 |
| 2200 μF ~3300 μF | 0.55 | 0.75 | 0.90 | 0.95 | 1.00 |
| 4700 μF | 0.60 | 0.85 | 0.95 | 0.98 | 1.00 |

160V~450V:

| Frequency (Hz) | 50/60 | 100/120 | 1K | 10K | 100K |
|-------------------------------------|-------|---------|------|------|------|
| 4.7 μF ~33 μF | 0.75 | 1.00 | 1.50 | 1.75 | 1.80 |
| 47 μF ~150 μF | 0.80 | 1.00 | 1.30 | 1.40 | 1.50 |