

LU Series 85°C 3000H



Features

Standard capacitors

Applications

- ◆ Switch-mode power supplies in industrial and entertainment electronics
- ◆ Uninterruptible power supplies

Features

- ◆ High reliability
- ◆ Long useful life
- ◆ High ripple current capability
- ◆ Aluminum case designed explosion-proof vent
- ◆ RoHS-compatible

Construction

- ◆ Charge-discharge proof, polar
- ◆ Aluminum case with insulating sleeve
- ◆ Aluminum case designed explosion-proof vent
- ◆ Snap-in solder pins to hold component in place on PC-board

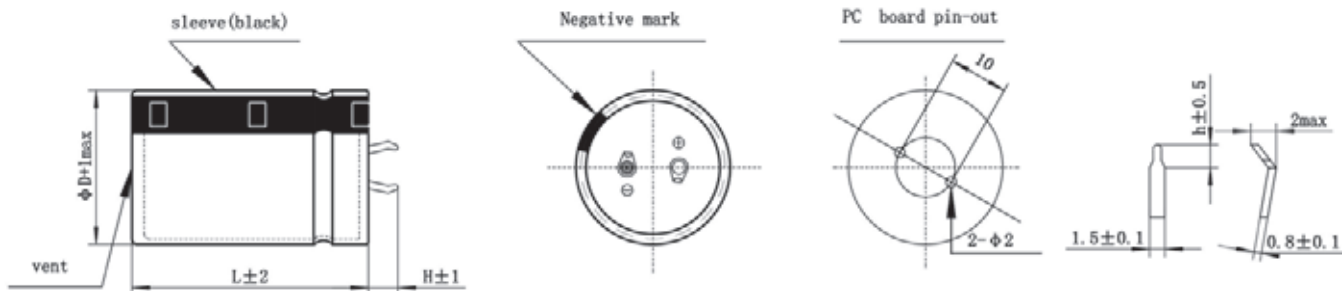
Specifications

| Item | Performance Characteristics | | | | | | | | | | | |
|--|---|---|----|----|----|--------|---------|---------|---------|-----|---------|--|
| Operating Temperature Range | -40 to +85°C | -25 to +85°C | | | | | | | | | | |
| Rated voltage V_R | 10 to 350 V DC | 400 to 600 V DC | | | | | | | | | | |
| Surge voltage V_S | $V_R \leq 315V$ 1.15 V_R $V_R > 315V$ 1.10 V_R | | | | | | | | | | | |
| Rated capacitance C_R | 82 to 82000 μF | 47 to 2200 μF | | | | | | | | | | |
| Capacitance tolerance | $\pm 20\%$ (120Hz, +20°C) | | | | | | | | | | | |
| Leakage Current I_{leak} (+20°C, max.) | $I \leq 3 \sqrt{CV}$ (μA) After 5 minutes with rated working voltage applied | | | | | | | | | | | |
| Dissipation Factor ($\tan \delta$, at 20°C, 120Hz) | Less than the value under table(%) | | | | | | | | | | | |
| | $\mu F/Vdc$ | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 80 | 100 | 160~420 | 450~600 |
| | ≤ 8200 | - | 35 | 35 | 30 | 25 | 20 | 20 | 15 | 15 | 15 | 20 |
| | 10000 to 22000 | 55 | 40 | 40 | 35 | 30 | 30 | 25 | 15 | - | - | - |
| ≥ 27000 | 60 | 50 | 40 | 35 | 35 | 30 | 25 | - | - | - | - | |
| Self-inductance ESL | approx. 20 nH | | | | | | | | | | | |
| Useful life 85°C; $V_R, I_{AC, R}$ | $V_R \leq 100V$: >4000 h | Requirements: | | | | | | | | | | $V_R > 100V$ $\Delta C/C \leq \pm 20\%$ of initial value $\tan \delta \leq 2$ times initial specified limit $I_{leak} \leq$ initial specified limit |
| | | $V_R \leq 100V$ $\Delta C/C \leq \pm 30\%$ of initial value $\tan \delta \leq 3$ times initial specified limit $I_{leak} \leq$ initial specified limit | | | | | | | | | | |
| Voltage Endurance test 85°C; V_R | 3000 h | Post test requirements: | | | | | | | | | | $V_R > 100V$ $\Delta C/C \leq \pm 10\%$ of initial value $\tan \delta \leq 1.3$ times initial specified limit $I_{leak} \leq$ initial specified limit |
| | | $V_R \leq 100V$ $\Delta C/C \leq \pm 15\%$ of initial value $\tan \delta \leq 1.3$ times initial specified limit $I_{leak} \leq$ initial specified limit | | | | | | | | | | |
| Shelf Life 85°C | 1000 h | Post test requirements: | | | | | | | | | | $V_R > 100V$ $\Delta C/C \leq \pm 10\%$ of initial value $\tan \delta \leq 1.3$ times initial specified limit $I_{leak} \leq$ initial specified limit |
| | | $V_R \leq 100V$ $\Delta C/C \leq \pm 15\%$ of initial value $\tan \delta \leq 1.3$ times initial specified limit $I_{leak} \leq$ initial specified limit | | | | | | | | | | |
| Vibration Resistance test | To IEC 60068-2-6, test Fc: Displacement amplitude 0.75 mm, frequency range 10 ... 55 Hz, acceleration max. 10 g, duration 3x2 h. Capacitor mounted by its body which is rigidly clamped to the work surface. | | | | | | | | | | | |
| Characteristics at low temperature | Max. impedance ratio at 120 Hz | | | | | | | | | | | |
| | $V_R(V)$ | 6.3 | 10 | 16 | 25 | 35~100 | 160~250 | 300~350 | 400~600 | | | |
| | $Z_{25^\circ C} / Z_{20^\circ C}$ | 5 | 5 | 5 | 4 | 4 | 4 | 8 | 8 | | | |
| $Z_{-40^\circ C} / Z_{20^\circ C}$ | 15 | 15 | 15 | 15 | 12 | 8 | 12 | - | | | | |
| Sectional specification | IEC 60384-4 and JIS-C-5101 | | | | | | | | | | | |

Multiplier for Ripple Current vs. Frequency

| $V_R(V)/$ Frequency(Hz) | 50(60) | 120 | 300 | 1K | 10K | 50K-100K |
|-------------------------|--------|-----|------|------|------|----------|
| $10 \leq V_R \leq 100$ | 0.88 | 1 | 1.07 | 1.15 | 1.15 | 1.15 |
| $160 \leq V_R \leq 250$ | 0.81 | 1 | 1.17 | 1.32 | 1.45 | 1.5 |
| $315 \leq V_R \leq 600$ | 0.77 | 1 | 1.16 | 1.30 | 1.41 | 1.43 |

Dimensional drawings



Standard snap-in terminals: length (6.0 ± 1) mm
 Also available with length of (4.0 ± 1) mm

| H | h |
|---|-----|
| 6 | 2.5 |
| 4 | 1.5 |

Packing

| Capacitor diameter D(mm) | Length L(mm) | Terminal length H(mm) | Each carton packing Qty units(pcs.) | Box/carton units(pcs.) | Each box packing Qty units(pcs.) |
|--------------------------|---------------------|-----------------------|-------------------------------------|------------------------|----------------------------------|
| 20 | all | / | 720 | 6 | 120 |
| 22 | < 55 | / | 600 | 6 | 100 |
| 22 | ≥ 55 | / | 400 | 4 | 100 |
| 25 | < 65 | / | 500 | 5 | 100 |
| 25 | ≥ 65 | / | 400 | 4 | 100 |
| 30 | ≤ 36 | < 6(L=35、36) | 400 | 8 | 50 |
| 30 | $35 \leq L \leq 65$ | ≥ 6 (L=35、36) | 300 | 6 | 50 |
| 30 | > 65 | / | 200 | 4 | 50 |
| 35 | ≤ 25 | / | 400 | 8 | 50 |
| 35 | $25 < L < 45$ | / | 300 | 6 | 50 |
| 35 | $45 \leq L \leq 85$ | / | 200 | 4 | 50 |
| 35 | > 85 | / | 100 | 2 | 50 |
| 40 | 35 | < 6 | 200 | 5 | 40 |
| 40 | 35 | ≥ 6 | 160 | 4 | 40 |
| 40 | $40 \leq L \leq 45$ | / | 160 | 4 | 40 |
| 40 | $45 < L \leq 75$ | / | 120 | 3 | 40 |
| 40 | > 75 | / | 80 | 2 | 40 |
| 45 | $40 \leq L \leq 65$ | / | 140 | 4 | 35 |
| 45 | $65 < L \leq 100$ | / | 70 | 2 | 35 |

Packing of snap-in



Case Size

| VV (Vdc) | Cap (uF) | Size (mm) | Rated Ripple current (Arms/85°C /120Hz) | Typ. ESR 20°C 120Hz (mΩ) | MAX ESR 20°C 120Hz (mΩ) |
|----------|----------|-----------|---|--------------------------|-------------------------|
| 10 | 10000 | 20x25 | 2.23 | 36 | 46 |
| 10 | 12000 | 22x25 | 2.90 | 34 | 44 |
| 10 | 15000 | 22x30 | 3.20 | 27 | 35 |
| 10 | 15000 | 25x25 | 3.21 | 27 | 35 |
| 10 | 18000 | 22x35 | 3.22 | 23 | 29 |
| 10 | 18000 | 25x30 | 3.65 | 23 | 29 |
| 10 | 22000 | 22x40 | 3.79 | 19 | 24 |
| 10 | 22000 | 25x30 | 3.75 | 19 | 24 |
| 10 | 22000 | 30x25 | 4.10 | 19 | 24 |
| 10 | 27000 | 25x35 | 4.04 | 19 | 25 |
| 10 | 27000 | 30x30 | 4.06 | 19 | 25 |
| 10 | 33000 | 25x40 | 4.60 | 15 | 20 |
| 10 | 33000 | 30x30 | 4.80 | 15 | 20 |
| 10 | 39000 | 25x45 | 5.29 | 13 | 17 |
| 10 | 39000 | 35x30 | 5.30 | 13 | 17 |
| 10 | 47000 | 25x50 | 5.80 | 11 | 14 |
| 10 | 47000 | 30x40 | 5.82 | 11 | 14 |
| 10 | 47000 | 35x30 | 6.00 | 11 | 14 |
| 10 | 56000 | 30x45 | 6.70 | 9 | 12 |
| 10 | 56000 | 35x35 | 6.80 | 9 | 12 |
| 10 | 68000 | 30x50 | 7.50 | 8 | 10 |
| 10 | 68000 | 35x40 | 7.55 | 8 | 10 |
| 10 | 82000 | 35x45 | 8.70 | 6 | 8 |
| 16 | 8200 | 20x25 | 2.57 | 44 | 57 |
| 16 | 10000 | 22x25 | 2.86 | 36 | 46 |
| 16 | 12000 | 22x25 | 2.89 | 34 | 44 |
| 16 | 15000 | 22x30 | 3.45 | 27 | 35 |
| 16 | 18000 | 25x25 | 3.47 | 23 | 29 |
| 16 | 22000 | 25x30 | 3.94 | 19 | 24 |
| 16 | 27000 | 30x30 | 4.99 | 15 | 20 |
| 16 | 33000 | 30x35 | 5.49 | 12 | 16 |
| 16 | 33000 | 35x25 | 5.21 | 12 | 16 |
| 16 | 39000 | 30x40 | 6.11 | 10 | 14 |
| 16 | 39000 | 35x30 | 6.13 | 10 | 14 |
| 16 | 47000 | 30x45 | 6.95 | 9 | 11 |
| 16 | 56000 | 30x50 | 7.63 | 7 | 10 |
| 16 | 56000 | 35x40 | 7.69 | 7 | 10 |
| 16 | 68000 | 35x45 | 8.45 | 6 | 8 |
| 16 | 82000 | 35x50 | 9.15 | 5 | 7 |
| 25 | 5600 | 20x25 | 2.33 | 55 | 71 |
| 25 | 5600 | 22x25 | 2.40 | 55 | 71 |
| 25 | 6800 | 22x25 | 2.62 | 45 | 59 |
| 25 | 6800 | 25x25 | 2.68 | 45 | 59 |
| 25 | 8200 | 22x30 | 2.91 | 37 | 49 |
| 25 | 8200 | 25x25 | 2.95 | 37 | 49 |
| 25 | 10000 | 22x35 | 3.31 | 31 | 40 |
| 25 | 10000 | 25x25 | 3.18 | 31 | 40 |
| 25 | 12000 | 22x40 | 3.77 | 30 | 39 |
| 25 | 12000 | 25x30 | 3.65 | 30 | 39 |
| 25 | 15000 | 22x45 | 4.08 | 24 | 31 |
| 25 | 15000 | 25x35 | 4.10 | 24 | 31 |
| 25 | 18000 | 25x40 | 4.68 | 20 | 26 |
| 25 | 18000 | 30x30 | 4.71 | 20 | 26 |
| 25 | 22000 | 25x45 | 4.72 | 16 | 21 |
| 25 | 22000 | 30x35 | 4.75 | 16 | 21 |
| 25 | 27000 | 25x50 | 6.02 | 13 | 17 |
| 25 | 27000 | 30x40 | 6.10 | 13 | 17 |
| 25 | 27000 | 35x35 | 6.12 | 13 | 17 |

| VV (Vdc) | Cap (uF) | Size (mm) | Rated Ripple current (Arms/85°C /120Hz) | Typ. ESR 20°C 120Hz (mΩ) | MAX ESR 20°C 120Hz (mΩ) |
|----------|----------|-----------|---|--------------------------|-------------------------|
| 25 | 33000 | 30x45 | 6.75 | 11 | 14 |
| 25 | 33000 | 35x40 | 6.80 | 11 | 14 |
| 25 | 39000 | 30x50 | 7.40 | 9 | 12 |
| 25 | 39000 | 35x45 | 7.61 | 9 | 12 |
| 25 | 47000 | 35x50 | 8.30 | 8 | 10 |
| 35 | 3300 | 20x25 | 2.14 | 77 | 100 |
| 35 | 3900 | 20x30 | 2.28 | 65 | 85 |
| 35 | 3900 | 22x25 | 2.22 | 65 | 85 |
| 35 | 4700 | 20x35 | 2.46 | 54 | 71 |
| 35 | 4700 | 22x25 | 2.47 | 54 | 71 |
| 35 | 5600 | 22x30 | 2.80 | 46 | 59 |
| 35 | 5600 | 25x25 | 2.82 | 46 | 59 |
| 35 | 6800 | 22x35 | 2.89 | 38 | 49 |
| 35 | 6800 | 25x30 | 2.92 | 38 | 49 |
| 35 | 6800 | 30x25 | 3.09 | 38 | 49 |
| 35 | 8200 | 22x40 | 3.47 | 31 | 40 |
| 35 | 8200 | 25x35 | 3.50 | 31 | 40 |
| 35 | 8200 | 30x25 | 3.51 | 31 | 40 |
| 35 | 10000 | 22x45 | 3.60 | 26 | 33 |
| 35 | 10000 | 25x40 | 3.65 | 26 | 33 |
| 35 | 10000 | 30x30 | 3.67 | 26 | 33 |
| 35 | 10000 | 35x25 | 3.71 | 26 | 33 |
| 35 | 12000 | 25x40 | 4.51 | 26 | 33 |
| 35 | 12000 | 30x35 | 4.55 | 26 | 33 |
| 35 | 12000 | 35x25 | 4.52 | 26 | 33 |
| 35 | 15000 | 25x45 | 4.55 | 20 | 27 |
| 35 | 15000 | 30x40 | 4.80 | 20 | 27 |
| 35 | 15000 | 35x30 | 4.82 | 20 | 27 |
| 35 | 18000 | 25x50 | 4.84 | 17 | 22 |
| 35 | 18000 | 30x40 | 4.87 | 17 | 22 |
| 35 | 18000 | 35x35 | 5.70 | 17 | 22 |
| 35 | 22000 | 30x45 | 6.38 | 14 | 18 |
| 35 | 22000 | 35x40 | 6.40 | 14 | 18 |
| 35 | 27000 | 35x45 | 6.90 | 13 | 17 |
| 35 | 33000 | 35x50 | 7.49 | 11 | 14 |
| 50 | 2200 | 20x25 | 2.07 | 92 | 120 |
| 50 | 2200 | 22x25 | 2.19 | 92 | 120 |
| 50 | 2700 | 20x30 | 2.21 | 76 | 98 |
| 50 | 2700 | 22x25 | 2.21 | 76 | 98 |
| 50 | 3300 | 20x35 | 2.41 | 62 | 80 |
| 50 | 3300 | 22x30 | 2.41 | 62 | 80 |
| 50 | 3300 | 25x25 | 2.41 | 62 | 80 |
| 50 | 3900 | 20x40 | 2.72 | 52 | 68 |
| 50 | 3900 | 22x30 | 2.61 | 52 | 68 |
| 50 | 3900 | 25x25 | 2.56 | 52 | 68 |
| 50 | 4700 | 22x35 | 2.93 | 43 | 56 |
| 50 | 4700 | 25x30 | 3.07 | 43 | 56 |
| 50 | 4700 | 30x25 | 3.01 | 43 | 56 |
| 50 | 5600 | 22x40 | 3.41 | 36 | 47 |
| 50 | 5600 | 25x35 | 3.47 | 36 | 47 |
| 50 | 5600 | 30x25 | 3.37 | 36 | 47 |
| 50 | 6800 | 22x45 | 3.94 | 30 | 39 |
| 50 | 6800 | 25x35 | 3.89 | 30 | 39 |
| 50 | 6800 | 30x30 | 3.86 | 30 | 39 |
| 50 | 6800 | 35x25 | 3.84 | 30 | 39 |
| 50 | 8200 | 25x45 | 4.44 | 25 | 32 |
| 50 | 8200 | 30x35 | 4.47 | 25 | 32 |
| 50 | 8200 | 35x30 | 4.47 | 25 | 32 |

| VV (Vdc) | Cap (uF) | Size (mm) | Rated Ripple current (Arms/85°C /120Hz) | Typ. ESR 20°C 120Hz (mΩ) | MAX ESR 20°C 120Hz (mΩ) |
|----------|----------|-----------|---|--------------------------|-------------------------|
| 50 | 10000 | 25x50 | 5.02 | 20 | 27 |
| 50 | 10000 | 30x40 | 5.08 | 20 | 27 |
| 50 | 10000 | 35x30 | 5.02 | 20 | 27 |
| 50 | 12000 | 30x45 | 5.60 | 26 | 33 |
| 50 | 12000 | 35x35 | 5.60 | 26 | 33 |
| 50 | 15000 | 30x50 | 6.44 | 20 | 27 |
| 50 | 15000 | 35x45 | 6.56 | 20 | 27 |
| 50 | 18000 | 35x45 | 7.18 | 17 | 22 |
| 63 | 1500 | 20x25 | 1.70 | 140 | 180 |
| 63 | 1500 | 22x25 | 1.75 | 140 | 180 |
| 63 | 1800 | 20x30 | 2.05 | 120 | 150 |
| 63 | 1800 | 22x25 | 2.04 | 120 | 150 |
| 63 | 2200 | 20x35 | 2.40 | 92 | 120 |
| 63 | 2200 | 22x30 | 2.41 | 92 | 120 |
| 63 | 2200 | 25x25 | 2.43 | 92 | 120 |
| 63 | 2700 | 20x40 | 2.53 | 76 | 98 |
| 63 | 2700 | 22x35 | 2.54 | 76 | 98 |
| 63 | 2700 | 25x30 | 2.58 | 76 | 98 |
| 63 | 3300 | 22x35 | 2.72 | 62 | 80 |
| 63 | 3300 | 25x30 | 2.74 | 62 | 80 |
| 63 | 3300 | 30x25 | 2.84 | 62 | 80 |
| 63 | 3900 | 22x40 | 2.95 | 52 | 68 |
| 63 | 3900 | 25x35 | 3.16 | 52 | 68 |
| 63 | 3900 | 30x30 | 3.17 | 52 | 68 |
| 63 | 3900 | 35x25 | 3.19 | 52 | 68 |
| 63 | 4700 | 22x50 | 3.69 | 43 | 56 |
| 63 | 4700 | 25x40 | 3.59 | 43 | 56 |
| 63 | 4700 | 30x30 | 3.70 | 43 | 56 |
| 63 | 4700 | 35x25 | 3.71 | 43 | 56 |
| 63 | 5600 | 25x45 | 3.81 | 36 | 47 |
| 63 | 5600 | 30x35 | 3.85 | 36 | 47 |
| 63 | 5600 | 35x30 | 3.91 | 36 | 47 |
| 63 | 6800 | 25x50 | 4.53 | 30 | 39 |
| 63 | 6800 | 30x40 | 4.61 | 30 | 39 |
| 63 | 6800 | 35x30 | 4.95 | 30 | 39 |
| 63 | 8200 | 30x45 | 5.15 | 25 | 32 |
| 63 | 8200 | 35x35 | 5.18 | 25 | 32 |
| 63 | 10000 | 30x50 | 5.80 | 20 | 27 |
| 63 | 10000 | 35x40 | 5.83 | 20 | 27 |
| 63 | 12000 | 35x45 | 6.47 | 21 | 28 |
| 63 | 15000 | 35x50 | 6.61 | 17 | 22 |
| 80 | 1000 | 20x25 | 1.57 | 150 | 200 |
| 80 | 1200 | 20x30 | 1.80 | 130 | 170 |
| 80 | 1200 | 22x25 | 1.77 | 130 | 170 |
| 80 | 1500 | 20x30 | 2.10 | 100 | 130 |
| 80 | 1500 | 22x30 | 2.12 | 100 | 130 |
| 80 | 1500 | 25x25 | 2.16 | 100 | 130 |
| 80 | 1800 | 20x35 | 2.30 | 85 | 110 |
| 80 | 1800 | 22x30 | 2.31 | 85 | 110 |
| 80 | 1800 | 25x25 | 2.35 | 85 | 110 |
| 80 | 2200 | 20x40 | 2.53 | 70 | 90 |
| 80 | 2200 | 22x35 | 2.56 | 70 | 90 |
| 80 | 2200 | 25x30 | 2.58 | 70 | 90 |
| 80 | 2200 | 30x25 | 2.62 | 70 | 90 |
| 80 | 2700 | 22x40 | 2.93 | 57 | 74 |
| 80 | 2700 | 25x35 | 2.95 | 57 | 74 |
| 80 | 2700 | 30x25 | 2.99 | 57 | 74 |
| 80 | 2700 | 35x25 | 3.02 | 57 | 74 |
| 80 | 3300 | 22x45 | 3.25 | 46 | 60 |
| 80 | 3300 | 25x40 | 3.29 | 46 | 60 |

| VV (Vdc) | Cap (uF) | Size (mm) | Rated Ripple current (Arms/85°C /120Hz) | Typ. ESR 20°C 120Hz (mΩ) | MAX ESR 20°C 120Hz (mΩ) |
|----------|----------|-----------|---|--------------------------|-------------------------|
| 80 | 3300 | 30x30 | 3.31 | 46 | 60 |
| 80 | 3300 | 35x25 | 3.35 | 46 | 60 |
| 80 | 3900 | 22x50 | 3.62 | 39 | 51 |
| 80 | 3900 | 25x45 | 3.71 | 39 | 51 |
| 80 | 3900 | 30x35 | 3.78 | 39 | 51 |
| 80 | 3900 | 35x30 | 3.91 | 39 | 51 |
| 80 | 4700 | 25x50 | 4.28 | 33 | 42 |
| 80 | 4700 | 30x40 | 4.31 | 33 | 42 |
| 80 | 4700 | 35x30 | 4.45 | 33 | 42 |
| 80 | 5600 | 30x45 | 4.70 | 27 | 36 |
| 80 | 5600 | 35x35 | 4.75 | 27 | 36 |
| 80 | 6800 | 30x50 | 5.27 | 23 | 29 |
| 80 | 6800 | 35x40 | 5.35 | 23 | 29 |
| 80 | 8200 | 35x45 | 5.90 | 19 | 24 |
| 80 | 10000 | 35x50 | 7.05 | 15 | 20 |
| 100 | 680 | 20x25 | 1.68 | 220 | 290 |
| 100 | 680 | 22x25 | 1.71 | 220 | 290 |
| 100 | 820 | 20x30 | 1.91 | 180 | 240 |
| 100 | 820 | 22x25 | 1.90 | 180 | 240 |
| 100 | 1000 | 20x30 | 2.02 | 150 | 200 |
| 100 | 1000 | 22x30 | 2.04 | 150 | 200 |
| 100 | 1000 | 25x25 | 2.10 | 150 | 200 |
| 100 | 1200 | 20x35 | 2.12 | 130 | 170 |
| 100 | 1200 | 22x30 | 2.15 | 130 | 170 |
| 100 | 1200 | 25x25 | 2.18 | 130 | 170 |
| 100 | 1500 | 20x40 | 2.45 | 100 | 130 |
| 100 | 1500 | 22x35 | 2.47 | 100 | 130 |
| 100 | 1500 | 25x30 | 2.50 | 100 | 130 |
| 100 | 1500 | 30x25 | 2.56 | 100 | 130 |
| 100 | 1800 | 22x40 | 2.77 | 85 | 110 |
| 100 | 1800 | 25x35 | 2.81 | 85 | 110 |
| 100 | 1800 | 30x25 | 2.85 | 85 | 110 |
| 100 | 1800 | 35x25 | 2.89 | 85 | 110 |
| 100 | 2200 | 22x45 | 3.15 | 70 | 90 |
| 100 | 2200 | 25x40 | 3.21 | 70 | 90 |
| 100 | 2200 | 30x30 | 3.25 | 70 | 90 |
| 100 | 2200 | 35x25 | 3.28 | 70 | 90 |
| 100 | 2700 | 25x45 | 3.66 | 57 | 74 |
| 100 | 2700 | 30x35 | 3.70 | 57 | 74 |
| 100 | 2700 | 35x30 | 3.77 | 57 | 74 |
| 100 | 3300 | 25x50 | 4.15 | 46 | 60 |
| 100 | 3300 | 30x40 | 4.18 | 46 | 60 |
| 100 | 3300 | 35x35 | 4.21 | 46 | 60 |
| 100 | 3900 | 30x45 | 4.67 | 39 | 51 |
| 100 | 3900 | 35x35 | 4.69 | 39 | 51 |
| 100 | 4700 | 30x50 | 5.26 | 33 | 42 |
| 100 | 4700 | 35x40 | 5.31 | 33 | 42 |
| 100 | 5600 | 35x45 | 5.89 | 27 | 36 |
| 100 | 6800 | 35x50 | 6.01 | 23 | 29 |
| 160 | 220 | 20x25 | 1.11 | 510 | 900 |
| 160 | 270 | 20x25 | 1.12 | 420 | 740 |
| 160 | 270 | 22x25 | 1.27 | 420 | 740 |
| 160 | 330 | 20x30 | 1.28 | 340 | 600 |
| 160 | 330 | 22x25 | 1.55 | 340 | 600 |
| 160 | 390 | 20x30 | 1.63 | 290 | 510 |
| 160 | 390 | 22x25 | 1.65 | 290 | 510 |
| 160 | 390 | 25x20 | 1.67 | 290 | 510 |
| 160 | 470 | 22x30 | 1.90 | 240 | 420 |
| 160 | 470 | 25x25 | 1.92 | 240 | 420 |
| 160 | 560 | 22x30 | 2.15 | 210 | 360 |

| VV (Vdc) | Cap (uF) | Size (mm) | Rated Ripple current (Arms/85°C /120Hz) | Typ. ESR 20°C 120Hz (mΩ) | MAX ESR 20°C 120Hz (mΩ) |
|----------|----------|-----------|---|--------------------------|-------------------------|
| 160 | 560 | 25x25 | 2.18 | 210 | 360 |
| 160 | 560 | 30x20 | 2.21 | 210 | 360 |
| 160 | 680 | 22x35 | 2.35 | 170 | 290 |
| 160 | 680 | 25x30 | 2.38 | 170 | 290 |
| 160 | 680 | 30x25 | 2.42 | 170 | 290 |
| 160 | 680 | 35x20 | 2.51 | 170 | 290 |
| 160 | 820 | 22x40 | 2.68 | 140 | 240 |
| 160 | 820 | 25x30 | 2.71 | 140 | 240 |
| 160 | 820 | 30x25 | 2.76 | 140 | 240 |
| 160 | 820 | 35x20 | 2.79 | 140 | 240 |
| 160 | 1000 | 22x45 | 3.02 | 110 | 200 |
| 160 | 1000 | 25x35 | 3.03 | 110 | 200 |
| 160 | 1000 | 30x30 | 3.05 | 110 | 200 |
| 160 | 1000 | 35x25 | 3.13 | 110 | 200 |
| 160 | 1200 | 22x45 | 3.25 | 97 | 170 |
| 160 | 1200 | 25x40 | 3.43 | 97 | 170 |
| 160 | 1200 | 30x30 | 3.45 | 97 | 170 |
| 160 | 1200 | 35x25 | 3.48 | 97 | 170 |
| 160 | 1500 | 25x50 | 3.96 | 74 | 130 |
| 160 | 1500 | 30x35 | 4.01 | 74 | 130 |
| 160 | 1500 | 35x30 | 4.03 | 74 | 130 |
| 160 | 1800 | 25x50 | 4.20 | 63 | 110 |
| 160 | 1800 | 30x40 | 4.31 | 63 | 110 |
| 160 | 1800 | 35x35 | 4.38 | 63 | 110 |
| 160 | 2200 | 30x45 | 4.85 | 52 | 90 |
| 160 | 2200 | 35x40 | 4.90 | 52 | 90 |
| 160 | 2700 | 30x50 | 5.45 | 42 | 74 |
| 160 | 2700 | 35x45 | 5.57 | 42 | 74 |
| 160 | 3300 | 35x50 | 6.21 | 34 | 60 |
| 160 | 3300 | 40x50 | 6.34 | 34 | 60 |
| 160 | 3900 | 35x80 | 7.84 | 29 | 51 |
| 160 | 3900 | 40x60 | 7.45 | 29 | 51 |
| 160 | 4700 | 40x80 | 8.79 | 24 | 42 |
| 180 | 220 | 22x20 | 1.18 | 510 | 900 |
| 180 | 270 | 20x25 | 1.29 | 420 | 740 |
| 180 | 330 | 20x30 | 1.77 | 340 | 600 |
| 180 | 330 | 22x25 | 1.79 | 340 | 600 |
| 180 | 330 | 25x20 | 1.81 | 340 | 600 |
| 180 | 390 | 20x30 | 1.84 | 290 | 510 |
| 180 | 470 | 20x30 | 2.08 | 240 | 420 |
| 180 | 470 | 22x25 | 2.08 | 240 | 420 |
| 180 | 470 | 30x20 | 1.88 | 240 | 420 |
| 180 | 560 | 20x35 | 2.25 | 210 | 360 |
| 180 | 560 | 22x30 | 2.26 | 210 | 360 |
| 180 | 560 | 25x25 | 2.27 | 210 | 360 |
| 180 | 680 | 20x40 | 2.50 | 170 | 290 |
| 180 | 680 | 22x35 | 2.51 | 170 | 290 |
| 180 | 680 | 25x30 | 2.53 | 170 | 290 |
| 180 | 680 | 30x25 | 2.55 | 170 | 290 |
| 180 | 680 | 35x20 | 2.57 | 170 | 290 |
| 180 | 820 | 20x45 | 2.75 | 140 | 240 |
| 180 | 820 | 22x40 | 2.86 | 140 | 240 |
| 180 | 820 | 25x35 | 2.87 | 140 | 240 |
| 180 | 820 | 30x25 | 2.89 | 140 | 240 |
| 180 | 1000 | 22x50 | 3.10 | 110 | 200 |
| 180 | 1000 | 25x40 | 3.06 | 110 | 200 |
| 180 | 1000 | 30x30 | 3.11 | 110 | 200 |
| 180 | 1200 | 22x50 | 3.31 | 97 | 170 |
| 180 | 1200 | 25x45 | 3.65 | 97 | 170 |
| 180 | 1200 | 30x35 | 3.67 | 97 | 170 |

| VV (Vdc) | Cap (uF) | Size (mm) | Rated Ripple current (Arms/85°C /120Hz) | Typ. ESR 20°C 120Hz (mΩ) | MAX ESR 20°C 120Hz (mΩ) |
|----------|----------|-----------|---|--------------------------|-------------------------|
| 180 | 1200 | 35x30 | 3.71 | 97 | 170 |
| 180 | 1500 | 25x50 | 3.83 | 74 | 130 |
| 180 | 1500 | 30x40 | 4.10 | 74 | 130 |
| 180 | 1500 | 35x35 | 4.21 | 74 | 130 |
| 180 | 1800 | 30x45 | 4.55 | 63 | 110 |
| 180 | 1800 | 35x35 | 4.58 | 63 | 110 |
| 180 | 2200 | 30x50 | 4.92 | 52 | 90 |
| 180 | 2200 | 35x40 | 4.96 | 52 | 90 |
| 180 | 2700 | 35x50 | 5.30 | 42 | 74 |
| 200 | 120 | 22x20 | 1.05 | 950 | 1660 |
| 200 | 220 | 22x20 | 1.19 | 510 | 900 |
| 200 | 220 | 22x25 | 1.25 | 510 | 900 |
| 200 | 270 | 22x25 | 1.39 | 420 | 740 |
| 200 | 270 | 25x20 | 1.40 | 420 | 740 |
| 200 | 330 | 22x25 | 1.52 | 340 | 600 |
| 200 | 330 | 25x20 | 1.56 | 340 | 600 |
| 200 | 390 | 22x30 | 1.73 | 290 | 510 |
| 200 | 390 | 25x25 | 1.74 | 290 | 510 |
| 200 | 470 | 22x30 | 1.97 | 240 | 420 |
| 200 | 470 | 25x25 | 1.99 | 240 | 420 |
| 200 | 560 | 22x35 | 2.45 | 210 | 360 |
| 200 | 560 | 25x30 | 2.48 | 210 | 360 |
| 200 | 560 | 30x25 | 2.51 | 210 | 360 |
| 200 | 680 | 22x40 | 2.70 | 170 | 290 |
| 200 | 680 | 25x30 | 2.68 | 170 | 290 |
| 200 | 680 | 30x25 | 2.72 | 170 | 290 |
| 200 | 820 | 22x45 | 2.94 | 140 | 240 |
| 200 | 820 | 25x35 | 2.93 | 140 | 240 |
| 200 | 820 | 30x30 | 2.96 | 140 | 240 |
| 200 | 1000 | 22x50 | 3.28 | 110 | 200 |
| 200 | 1000 | 25x40 | 3.28 | 110 | 200 |
| 200 | 1000 | 30x35 | 3.29 | 110 | 200 |
| 200 | 1000 | 35x30 | 3.30 | 110 | 200 |
| 200 | 1200 | 30x35 | 3.61 | 97 | 170 |
| 200 | 1200 | 35x30 | 3.63 | 97 | 170 |
| 200 | 1500 | 30x45 | 4.13 | 74 | 130 |
| 200 | 1500 | 35x35 | 4.14 | 74 | 130 |
| 200 | 1800 | 30x50 | 4.60 | 63 | 110 |
| 200 | 1800 | 35x40 | 4.61 | 63 | 110 |
| 200 | 2200 | 35x45 | 4.98 | 52 | 90 |
| 200 | 2700 | 35x50 | 5.46 | 42 | 74 |
| 200 | 3300 | 35x60 | 6.30 | 34 | 60 |
| 200 | 3900 | 40x60 | 7.40 | 29 | 51 |
| 200 | 4700 | 40x70 | 6.78 | 24 | 42 |
| 200 | 5600 | 35x100 | 7.37 | 20 | 36 |
| 200 | 6800 | 40x100 | 8.66 | 17 | 29 |
| 220 | 180 | 22x20 | 1.07 | 630 | 1110 |
| 220 | 270 | 25x20 | 1.35 | 420 | 740 |
| 220 | 330 | 22x30 | 1.70 | 340 | 600 |
| 220 | 330 | 25x25 | 1.71 | 340 | 600 |
| 220 | 390 | 22x30 | 1.89 | 290 | 510 |
| 220 | 390 | 25x25 | 1.91 | 290 | 510 |
| 220 | 470 | 22x35 | 2.08 | 240 | 420 |
| 220 | 470 | 25x30 | 2.10 | 240 | 420 |
| 220 | 470 | 30x25 | 2.13 | 240 | 420 |
| 220 | 560 | 22x40 | 2.33 | 210 | 360 |
| 220 | 560 | 25x35 | 2.39 | 210 | 360 |
| 220 | 560 | 30x25 | 2.35 | 210 | 360 |
| 220 | 680 | 22x45 | 2.68 | 170 | 290 |
| 220 | 680 | 25x35 | 2.68 | 170 | 290 |

| VV (Vdc) | Cap (uF) | Size (mm) | Rated Ripple current (Arms/85°C /120Hz) | Typ. ESR 20°C 120Hz (mΩ) | MAX ESR 20°C 120Hz (mΩ) |
|----------|----------|-----------|---|--------------------------|-------------------------|
| 220 | 680 | 30x30 | 2.69 | 170 | 290 |
| 220 | 820 | 25x45 | 3.01 | 140 | 240 |
| 220 | 820 | 30x35 | 3.02 | 140 | 240 |
| 220 | 820 | 35x30 | 3.03 | 140 | 240 |
| 220 | 1000 | 25x50 | 3.43 | 110 | 200 |
| 220 | 1000 | 30x35 | 3.42 | 110 | 200 |
| 220 | 1200 | 30x40 | 3.88 | 97 | 170 |
| 220 | 1200 | 35x35 | 3.89 | 97 | 170 |
| 220 | 1500 | 30x50 | 4.44 | 74 | 130 |
| 220 | 1500 | 35x40 | 4.45 | 74 | 130 |
| 220 | 1800 | 35x45 | 4.53 | 63 | 110 |
| 220 | 2200 | 35x50 | 4.98 | 52 | 90 |
| 250 | 100 | 22x25 | 0.69 | 1140 | 1990 |
| 250 | 150 | 22x20 | 0.98 | 760 | 1330 |
| 250 | 180 | 22x20 | 1.07 | 630 | 1110 |
| 250 | 220 | 22x25 | 1.26 | 510 | 900 |
| 250 | 220 | 25x20 | 1.27 | 510 | 900 |
| 250 | 270 | 22x25 | 1.51 | 420 | 740 |
| 250 | 330 | 22x30 | 1.75 | 340 | 600 |
| 250 | 330 | 25x25 | 1.76 | 340 | 600 |
| 250 | 390 | 22x35 | 1.91 | 290 | 510 |
| 250 | 390 | 25x30 | 1.92 | 290 | 510 |
| 250 | 390 | 30x25 | 1.93 | 290 | 510 |
| 250 | 470 | 22x35 | 2.15 | 240 | 420 |
| 250 | 470 | 25x35 | 2.16 | 240 | 420 |
| 250 | 470 | 30x25 | 2.16 | 240 | 420 |
| 250 | 560 | 22x40 | 2.48 | 210 | 360 |
| 250 | 560 | 25x35 | 2.49 | 210 | 360 |
| 250 | 560 | 30x25 | 2.49 | 210 | 360 |
| 250 | 680 | 22x50 | 2.71 | 170 | 290 |
| 250 | 680 | 25x40 | 2.71 | 170 | 290 |
| 250 | 680 | 30x30 | 2.71 | 170 | 290 |
| 250 | 820 | 25x45 | 3.01 | 140 | 240 |
| 250 | 820 | 30x35 | 3.02 | 140 | 240 |
| 250 | 820 | 35x30 | 3.03 | 140 | 240 |
| 250 | 1000 | 30x40 | 3.56 | 110 | 200 |
| 250 | 1000 | 35x35 | 3.57 | 110 | 200 |
| 250 | 1200 | 30x45 | 3.99 | 97 | 170 |
| 250 | 1200 | 35x35 | 4.01 | 97 | 170 |
| 250 | 1500 | 35x40 | 4.34 | 74 | 130 |
| 250 | 1800 | 35x50 | 4.56 | 63 | 110 |
| 250 | 2200 | 35x50 | 5.01 | 52 | 90 |
| 250 | 2700 | 40x80 | 6.31 | 42 | 74 |
| 250 | 3300 | 40x80 | 7.01 | 34 | 60 |
| 250 | 3900 | 35x100 | 7.48 | 29 | 51 |
| 250 | 4700 | 40x100 | 8.89 | 24 | 42 |
| 315 | 100 | 22x20 | 0.80 | 1140 | 1990 |
| 315 | 120 | 25x20 | 0.91 | 950 | 1660 |
| 315 | 150 | 22x25 | 1.07 | 760 | 1330 |
| 315 | 150 | 25x20 | 1.08 | 760 | 1330 |
| 315 | 180 | 22x30 | 1.38 | 630 | 1110 |
| 315 | 180 | 25x25 | 1.39 | 630 | 1110 |
| 315 | 220 | 22x30 | 1.47 | 510 | 900 |
| 315 | 220 | 25x25 | 1.47 | 510 | 900 |
| 315 | 220 | 30x20 | 1.48 | 510 | 900 |
| 315 | 270 | 22x35 | 1.70 | 420 | 740 |
| 315 | 270 | 25x30 | 1.71 | 420 | 740 |
| 315 | 270 | 30x25 | 1.72 | 420 | 740 |
| 315 | 270 | 35x20 | 1.73 | 420 | 740 |
| 315 | 330 | 22x40 | 1.99 | 340 | 600 |

| VV (Vdc) | Cap (uF) | Size (mm) | Rated Ripple current (Arms/85°C /120Hz) | Typ. ESR 20°C 120Hz (mΩ) | MAX ESR 20°C 120Hz (mΩ) |
|----------|----------|-----------|---|--------------------------|-------------------------|
| 315 | 330 | 25x35 | 2.00 | 340 | 600 |
| 315 | 330 | 30x25 | 1.99 | 340 | 600 |
| 315 | 390 | 22x45 | 2.15 | 290 | 510 |
| 315 | 390 | 25x40 | 2.16 | 290 | 510 |
| 315 | 390 | 30x30 | 2.16 | 290 | 510 |
| 315 | 390 | 35x25 | 2.17 | 290 | 510 |
| 315 | 470 | 25x45 | 2.46 | 240 | 420 |
| 315 | 470 | 30x35 | 2.47 | 240 | 420 |
| 315 | 470 | 35x30 | 2.48 | 240 | 420 |
| 315 | 560 | 25x50 | 2.71 | 210 | 360 |
| 315 | 560 | 30x35 | 2.70 | 210 | 360 |
| 315 | 560 | 35x30 | 2.72 | 210 | 360 |
| 315 | 680 | 30x45 | 3.06 | 170 | 290 |
| 315 | 680 | 35x35 | 3.06 | 170 | 290 |
| 315 | 820 | 30x50 | 3.45 | 140 | 240 |
| 315 | 820 | 35x40 | 3.46 | 140 | 240 |
| 315 | 1000 | 35x45 | 3.60 | 110 | 200 |
| 350 | 82 | 22x20 | 0.73 | 1390 | 2430 |
| 350 | 100 | 22x25 | 0.81 | 1140 | 1990 |
| 350 | 120 | 22x25 | 1.05 | 950 | 1660 |
| 350 | 120 | 25x20 | 1.07 | 950 | 1660 |
| 350 | 150 | 22x30 | 1.24 | 760 | 1330 |
| 350 | 150 | 25x25 | 1.25 | 760 | 1330 |
| 350 | 180 | 22x30 | 1.37 | 630 | 1110 |
| 350 | 180 | 25x25 | 1.38 | 630 | 1110 |
| 350 | 180 | 30x20 | 1.39 | 630 | 1110 |
| 350 | 220 | 22x35 | 1.54 | 510 | 900 |
| 350 | 220 | 25x30 | 1.55 | 510 | 900 |
| 350 | 220 | 30x25 | 1.56 | 510 | 900 |
| 350 | 220 | 35x20 | 1.57 | 510 | 900 |
| 350 | 270 | 22x40 | 1.80 | 420 | 740 |
| 350 | 270 | 25x35 | 1.81 | 420 | 740 |
| 350 | 270 | 30x25 | 1.81 | 420 | 740 |
| 350 | 330 | 22x45 | 2.03 | 340 | 600 |
| 350 | 330 | 25x35 | 2.03 | 340 | 600 |
| 350 | 330 | 30x30 | 2.04 | 340 | 600 |
| 350 | 330 | 35x25 | 2.05 | 340 | 600 |
| 350 | 390 | 25x40 | 2.24 | 290 | 510 |
| 350 | 390 | 30x35 | 2.25 | 290 | 510 |
| 350 | 390 | 35x30 | 2.26 | 290 | 510 |
| 350 | 470 | 25x50 | 2.57 | 240 | 420 |
| 350 | 470 | 30x35 | 2.56 | 240 | 420 |
| 350 | 470 | 35x30 | 2.56 | 240 | 420 |
| 350 | 560 | 30x40 | 2.76 | 210 | 360 |
| 350 | 560 | 35x35 | 2.77 | 210 | 360 |
| 350 | 680 | 30x50 | 3.21 | 170 | 290 |
| 350 | 680 | 35x40 | 3.22 | 170 | 290 |
| 350 | 820 | 35x45 | 3.52 | 140 | 240 |
| 350 | 1000 | 35x50 | 3.66 | 110 | 200 |
| 350 | 1200 | 40x65 | 5.71 | 97 | 170 |
| 350 | 1500 | 45x60 | 6.48 | 74 | 130 |
| 350 | 1800 | 45x70 | 7.40 | 63 | 110 |
| 350 | 2200 | 45x80 | 8.08 | 52 | 90 |
| 350 | 2700 | 45x100 | 9.49 | 42 | 74 |
| 400 | 68 | 20x25 | 0.65 | 1670 | 2930 |
| 400 | 68 | 22x20 | 0.65 | 1670 | 2930 |
| 400 | 82 | 22x25 | 0.85 | 1390 | 2430 |
| 400 | 82 | 25x20 | 0.86 | 1390 | 2430 |
| 400 | 100 | 22x25 | 0.99 | 1140 | 1990 |
| 400 | 100 | 25x20 | 1.00 | 1140 | 1990 |

| VV (Vdc) | Cap (uF) | Size (mm) | Rated Ripple current (Arms/85°C /120Hz) | Typ. ESR 20°C 120Hz (mΩ) | MAX ESR 20°C 120Hz (mΩ) |
|----------|----------|-----------|---|--------------------------|-------------------------|
| 400 | 120 | 22x25 | 1.10 | 950 | 1660 |
| 400 | 120 | 25x25 | 1.14 | 950 | 1660 |
| 400 | 150 | 22x30 | 1.25 | 760 | 1330 |
| 400 | 150 | 22x35 | 1.38 | 760 | 1330 |
| 400 | 150 | 25x25 | 1.30 | 760 | 1330 |
| 400 | 150 | 25x30 | 1.40 | 760 | 1330 |
| 400 | 150 | 30x25 | 1.42 | 760 | 1330 |
| 400 | 180 | 22x30 | 1.50 | 630 | 1110 |
| 400 | 180 | 22x35 | 1.55 | 630 | 1110 |
| 400 | 180 | 25x25 | 1.52 | 630 | 1110 |
| 400 | 180 | 25x30 | 1.58 | 630 | 1110 |
| 400 | 180 | 30x25 | 1.60 | 630 | 1110 |
| 400 | 180 | 35x20 | 1.63 | 630 | 1110 |
| 400 | 220 | 22x30 | 1.54 | 510 | 900 |
| 400 | 220 | 22x45 | 1.62 | 510 | 900 |
| 400 | 220 | 25x25 | 1.56 | 510 | 900 |
| 400 | 220 | 25x30 | 1.60 | 510 | 900 |
| 400 | 220 | 25x35 | 1.64 | 510 | 900 |
| 400 | 220 | 30x25 | 1.62 | 510 | 900 |
| 400 | 220 | 30x30 | 1.65 | 510 | 900 |
| 400 | 270 | 22x35 | 1.60 | 420 | 740 |
| 400 | 270 | 22x45 | 1.70 | 420 | 740 |
| 400 | 270 | 25x30 | 1.65 | 420 | 740 |
| 400 | 270 | 25x40 | 1.82 | 420 | 740 |
| 400 | 270 | 30x25 | 1.68 | 420 | 740 |
| 400 | 270 | 30x30 | 1.82 | 420 | 740 |
| 400 | 330 | 22x40 | 1.98 | 340 | 600 |
| 400 | 330 | 22x50 | 2.27 | 340 | 600 |
| 400 | 330 | 25x35 | 2.05 | 340 | 600 |
| 400 | 330 | 25x45 | 2.29 | 340 | 600 |
| 400 | 330 | 30x25 | 2.06 | 340 | 600 |
| 400 | 330 | 30x35 | 2.31 | 340 | 600 |
| 400 | 330 | 35x25 | 2.30 | 340 | 600 |
| 400 | 330 | 35x30 | 2.40 | 340 | 600 |
| 400 | 390 | 22x50 | 2.29 | 290 | 510 |
| 400 | 390 | 25x45 | 2.36 | 290 | 510 |
| 400 | 390 | 30x30 | 2.30 | 290 | 510 |
| 400 | 390 | 30x40 | 2.46 | 290 | 510 |
| 400 | 390 | 35x25 | 2.38 | 290 | 510 |
| 400 | 390 | 35x35 | 2.50 | 290 | 510 |
| 400 | 470 | 25x50 | 2.45 | 240 | 420 |
| 400 | 470 | 30x35 | 2.42 | 240 | 420 |
| 400 | 470 | 30x45 | 2.66 | 240 | 420 |
| 400 | 470 | 35x25 | 2.40 | 240 | 420 |
| 400 | 470 | 35x30 | 2.60 | 240 | 420 |
| 400 | 470 | 35x35 | 2.71 | 240 | 420 |
| 400 | 560 | 25x55 | 3.08 | 210 | 360 |
| 400 | 560 | 30x50 | 3.19 | 210 | 360 |
| 400 | 560 | 35x30 | 3.03 | 210 | 360 |
| 400 | 560 | 35x40 | 3.44 | 210 | 360 |
| 400 | 680 | 25x60 | 3.28 | 170 | 290 |
| 400 | 680 | 30x45 | 3.25 | 170 | 290 |
| 400 | 680 | 30x55 | 3.28 | 170 | 290 |
| 400 | 680 | 35x50 | 3.45 | 170 | 290 |
| 400 | 820 | 30x60 | 3.42 | 140 | 240 |
| 400 | 820 | 35x45 | 3.42 | 140 | 240 |
| 400 | 820 | 35x50 | 3.50 | 140 | 240 |
| 400 | 1000 | 35x50 | 3.60 | 110 | 200 |
| 400 | 1000 | 35x55 | 3.85 | 110 | 200 |
| 400 | 1000 | 40x65 | 5.15 | 110 | 200 |

| VV (Vdc) | Cap (uF) | Size (mm) | Rated Ripple current (Arms/85°C /120Hz) | Typ. ESR 20°C 120Hz (mΩ) | MAX ESR 20°C 120Hz (mΩ) |
|----------|----------|-----------|---|--------------------------|-------------------------|
| 400 | 1200 | 35x65 | 4.68 | 97 | 170 |
| 400 | 1200 | 40x60 | 4.71 | 97 | 170 |
| 400 | 1500 | 35x80 | 5.55 | 74 | 130 |
| 400 | 1500 | 40x70 | 4.61 | 74 | 130 |
| 400 | 1800 | 40x80 | 6.60 | 63 | 110 |
| 400 | 2200 | 45x95 | 8.70 | 52 | 90 |
| 420 | 47 | 22x20 | 0.54 | 3220 | 5640 |
| 420 | 56 | 22x20 | 0.60 | 2710 | 4740 |
| 420 | 68 | 25x20 | 0.68 | 2230 | 3900 |
| 420 | 82 | 20x25 | 0.83 | 1850 | 3230 |
| 420 | 82 | 22x25 | 0.85 | 1850 | 3230 |
| 420 | 82 | 25x20 | 0.85 | 1850 | 3230 |
| 420 | 100 | 22x25 | 0.97 | 1510 | 2650 |
| 420 | 100 | 22x30 | 0.98 | 1510 | 2650 |
| 420 | 100 | 25x25 | 0.98 | 1510 | 2650 |
| 420 | 120 | 20x30 | 1.05 | 1260 | 2210 |
| 420 | 120 | 22x25 | 1.02 | 1260 | 2210 |
| 420 | 120 | 22x30 | 1.07 | 1260 | 2210 |
| 420 | 120 | 25x25 | 1.08 | 1260 | 2210 |
| 420 | 120 | 30x20 | 1.10 | 1260 | 2210 |
| 420 | 150 | 22x25 | 1.11 | 1010 | 1770 |
| 420 | 150 | 22x35 | 1.21 | 1010 | 1770 |
| 420 | 150 | 25x30 | 1.26 | 1010 | 1770 |
| 420 | 150 | 35x20 | 1.32 | 1010 | 1770 |
| 420 | 180 | 22x30 | 1.32 | 840 | 1470 |
| 420 | 180 | 22x40 | 1.33 | 840 | 1470 |
| 420 | 180 | 25x25 | 1.33 | 840 | 1470 |
| 420 | 180 | 25x35 | 1.46 | 840 | 1470 |
| 420 | 180 | 30x25 | 1.48 | 840 | 1470 |
| 420 | 180 | 35x20 | 1.48 | 840 | 1470 |
| 420 | 220 | 22x35 | 1.42 | 690 | 1210 |
| 420 | 220 | 22x45 | 1.60 | 690 | 1210 |
| 420 | 220 | 25x30 | 1.47 | 690 | 1210 |
| 420 | 220 | 25x35 | 1.58 | 690 | 1210 |
| 420 | 220 | 30x25 | 1.59 | 690 | 1210 |
| 420 | 220 | 30x30 | 1.65 | 690 | 1210 |
| 420 | 220 | 35x25 | 1.60 | 690 | 1210 |
| 420 | 270 | 22x45 | 1.75 | 560 | 980 |
| 420 | 270 | 25x30 | 1.68 | 560 | 980 |
| 420 | 270 | 25x40 | 1.98 | 560 | 980 |
| 420 | 270 | 30x25 | 1.70 | 560 | 980 |
| 420 | 270 | 30x35 | 1.92 | 560 | 980 |
| 420 | 270 | 35x30 | 1.94 | 560 | 980 |
| 420 | 330 | 25x40 | 1.95 | 460 | 800 |
| 420 | 330 | 25x50 | 2.28 | 460 | 800 |
| 420 | 330 | 30x30 | 1.98 | 460 | 800 |
| 420 | 330 | 30x35 | 2.20 | 460 | 800 |
| 420 | 330 | 35x25 | 2.17 | 460 | 800 |
| 420 | 330 | 35x35 | 2.37 | 460 | 800 |
| 420 | 390 | 25x50 | 2.30 | 390 | 680 |
| 420 | 390 | 30x30 | 2.10 | 390 | 680 |
| 420 | 390 | 30x40 | 2.32 | 390 | 680 |
| 420 | 390 | 35x25 | 2.20 | 390 | 680 |
| 420 | 390 | 35x35 | 2.68 | 390 | 680 |
| 420 | 470 | 30x35 | 2.47 | 320 | 560 |
| 420 | 470 | 30x45 | 2.72 | 320 | 560 |
| 420 | 470 | 35x30 | 2.63 | 320 | 560 |
| 420 | 470 | 35x40 | 2.75 | 320 | 560 |
| 420 | 560 | 25x55 | 2.82 | 270 | 470 |
| 420 | 560 | 30x40 | 2.70 | 270 | 470 |

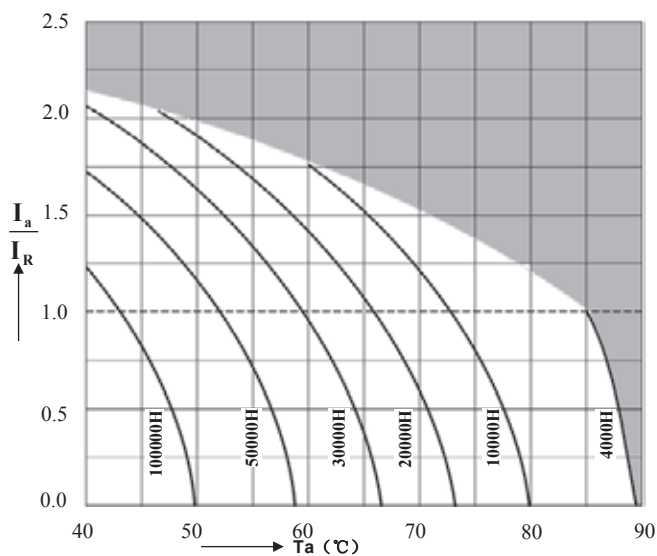
| VV (Vdc) | Cap (uF) | Size (mm) | Rated Ripple current (Arms/85°C /120Hz) | Typ. ESR 20°C 120Hz (mΩ) | MAX ESR 20°C 120Hz (mΩ) |
|----------|----------|-----------|---|--------------------------|-------------------------|
| 420 | 560 | 30x50 | 2.85 | 270 | 470 |
| 420 | 560 | 35x35 | 2.70 | 270 | 470 |
| 420 | 560 | 35x45 | 2.95 | 270 | 470 |
| 420 | 680 | 30x50 | 2.90 | 220 | 390 |
| 420 | 680 | 35x40 | 3.15 | 220 | 390 |
| 420 | 680 | 35x50 | 3.20 | 220 | 390 |
| 420 | 820 | 30x55 | 3.40 | 180 | 320 |
| 420 | 820 | 35x45 | 3.45 | 180 | 320 |
| 420 | 820 | 35x55 | 3.72 | 180 | 320 |
| 420 | 820 | 40x45 | 3.72 | 180 | 320 |
| 420 | 1000 | 35x50 | 3.78 | 150 | 270 |
| 420 | 1000 | 35x65 | 4.50 | 150 | 270 |
| 420 | 1000 | 40x50 | 4.30 | 150 | 270 |
| 420 | 1200 | 35x60 | 3.90 | 130 | 220 |
| 420 | 1200 | 35x70 | 4.95 | 130 | 220 |
| 420 | 1200 | 40x55 | 4.60 | 130 | 220 |
| 420 | 1500 | 40x70 | 5.98 | 100 | 180 |
| 420 | 1800 | 40x80 | 6.90 | 86 | 150 |
| 450 | 47 | 22x20 | 0.55 | 3220 | 5640 |
| 450 | 56 | 20x25 | 0.61 | 2710 | 4740 |
| 450 | 56 | 22x20 | 0.59 | 2710 | 4740 |
| 450 | 68 | 20x25 | 0.62 | 2230 | 3900 |
| 450 | 68 | 22x25 | 0.71 | 2230 | 3900 |
| 450 | 68 | 25x20 | 0.72 | 2230 | 3900 |
| 450 | 82 | 20x30 | 0.87 | 1850 | 3230 |
| 450 | 82 | 22x25 | 0.86 | 1850 | 3230 |
| 450 | 82 | 25x20 | 0.88 | 1850 | 3230 |
| 450 | 100 | 20x35 | 0.91 | 1510 | 2650 |
| 450 | 100 | 22x30 | 0.95 | 1510 | 2650 |
| 450 | 100 | 25x25 | 0.97 | 1510 | 2650 |
| 450 | 120 | 22x30 | 1.05 | 1260 | 2210 |
| 450 | 120 | 25x25 | 1.07 | 1260 | 2210 |
| 450 | 150 | 22x35 | 1.29 | 1010 | 1770 |
| 450 | 150 | 25x30 | 1.31 | 1010 | 1770 |
| 450 | 150 | 30x25 | 1.34 | 1010 | 1770 |
| 450 | 150 | 35x20 | 1.36 | 1010 | 1770 |
| 450 | 180 | 22x35 | 1.38 | 840 | 1470 |
| 450 | 180 | 25x30 | 1.40 | 840 | 1470 |
| 450 | 180 | 30x25 | 1.44 | 840 | 1470 |
| 450 | 180 | 30x30 | 1.45 | 840 | 1470 |
| 450 | 180 | 35x25 | 1.47 | 840 | 1470 |
| 450 | 220 | 22x40 | 1.87 | 690 | 1210 |
| 450 | 220 | 25x35 | 1.89 | 690 | 1210 |
| 450 | 220 | 30x30 | 1.91 | 690 | 1210 |
| 450 | 220 | 35x25 | 1.92 | 690 | 1210 |
| 450 | 270 | 25x35 | 2.12 | 560 | 980 |
| 450 | 270 | 30x30 | 2.15 | 560 | 980 |
| 450 | 270 | 35x25 | 2.19 | 560 | 980 |
| 450 | 330 | 25x40 | 2.41 | 460 | 800 |
| 450 | 330 | 30x35 | 2.48 | 460 | 800 |
| 450 | 330 | 35x30 | 2.53 | 460 | 800 |
| 450 | 330 | 35x35 | 2.63 | 460 | 800 |
| 450 | 390 | 25x45 | 2.67 | 390 | 680 |
| 450 | 390 | 30x35 | 2.70 | 390 | 680 |
| 450 | 390 | 35x30 | 2.75 | 390 | 680 |
| 450 | 470 | 25x50 | 2.78 | 320 | 560 |
| 450 | 470 | 30x40 | 2.82 | 320 | 560 |
| 450 | 470 | 30x45 | 2.88 | 320 | 560 |
| 450 | 470 | 35x35 | 2.93 | 320 | 560 |
| 450 | 560 | 30x45 | 3.13 | 270 | 470 |

| VV (Vdc) | Cap (uF) | Size (mm) | Rated Ripple current (Arms/85°C /120Hz) | Typ. ESR 20°C 120Hz (mΩ) | MAX ESR 20°C 120Hz (mΩ) |
|----------|----------|-----------|---|--------------------------|-------------------------|
| 450 | 560 | 30x50 | 3.17 | 270 | 470 |
| 450 | 560 | 35x40 | 3.21 | 270 | 470 |
| 450 | 560 | 40x50 | 3.46 | 270 | 470 |
| 450 | 560 | 45x40 | 3.48 | 270 | 470 |
| 450 | 680 | 30x50 | 3.46 | 220 | 390 |
| 450 | 680 | 35x40 | 3.51 | 220 | 390 |
| 450 | 680 | 35x45 | 3.65 | 220 | 390 |
| 450 | 680 | 40x60 | 3.98 | 220 | 390 |
| 450 | 680 | 45x45 | 4.01 | 220 | 390 |
| 450 | 820 | 30x60 | 3.97 | 180 | 320 |
| 450 | 820 | 35x45 | 3.90 | 180 | 320 |
| 450 | 820 | 35x50 | 4.01 | 180 | 320 |
| 450 | 820 | 45x55 | 4.47 | 180 | 320 |
| 450 | 1000 | 35x55 | 4.01 | 150 | 270 |
| 450 | 1000 | 35x60 | 4.11 | 150 | 270 |
| 450 | 1000 | 40x55 | 4.60 | 150 | 270 |
| 450 | 1000 | 45x60 | 5.08 | 150 | 270 |
| 450 | 1200 | 40x65 | 5.42 | 130 | 220 |
| 450 | 1200 | 45x60 | 5.79 | 130 | 220 |
| 450 | 1500 | 45x85 | 6.84 | 100 | 180 |
| 450 | 1800 | 45x100 | 7.86 | 86 | 150 |
| 450 | 2200 | 45x90 | 8.48 | 69 | 120 |
| 500 | 47 | 22x20 | 0.56 | 3220 | 5640 |
| 500 | 56 | 20x25 | 0.62 | 2710 | 4740 |
| 500 | 56 | 22x25 | 0.63 | 2710 | 4740 |
| 500 | 56 | 25x20 | 0.64 | 2710 | 4740 |
| 500 | 68 | 20x30 | 0.65 | 2230 | 3900 |
| 500 | 68 | 22x25 | 0.63 | 2230 | 3900 |
| 500 | 68 | 22x30 | 0.75 | 2230 | 3900 |
| 500 | 68 | 25x20 | 0.68 | 2230 | 3900 |
| 500 | 68 | 25x25 | 0.78 | 2230 | 3900 |
| 500 | 82 | 20x30 | 0.85 | 1850 | 3230 |
| 500 | 82 | 22x30 | 0.92 | 1850 | 3230 |
| 500 | 82 | 25x25 | 0.95 | 1850 | 3230 |
| 500 | 100 | 22x35 | 1.02 | 1510 | 2650 |
| 500 | 100 | 25x30 | 1.06 | 1510 | 2650 |
| 500 | 100 | 30x20 | 1.04 | 1510 | 2650 |
| 500 | 100 | 30x25 | 1.07 | 1510 | 2650 |
| 500 | 120 | 22x40 | 1.12 | 1260 | 2210 |
| 500 | 120 | 25x30 | 1.08 | 1260 | 2210 |
| 500 | 120 | 25x35 | 1.23 | 1260 | 2210 |
| 500 | 120 | 30x30 | 1.25 | 1260 | 2210 |
| 500 | 120 | 35x25 | 1.28 | 1260 | 2210 |
| 500 | 150 | 22x45 | 1.26 | 1010 | 1770 |
| 500 | 150 | 25x35 | 1.25 | 1010 | 1770 |
| 500 | 150 | 25x40 | 1.28 | 1010 | 1770 |
| 500 | 150 | 30x30 | 1.34 | 1010 | 1770 |
| 500 | 150 | 30x35 | 1.38 | 1010 | 1770 |
| 500 | 150 | 35x25 | 1.36 | 1010 | 1770 |
| 500 | 180 | 22x50 | 1.39 | 840 | 1470 |
| 500 | 180 | 25x40 | 1.30 | 840 | 1470 |
| 500 | 180 | 25x45 | 1.45 | 840 | 1470 |
| 500 | 180 | 30x30 | 1.28 | 840 | 1470 |
| 500 | 180 | 30x35 | 1.47 | 840 | 1470 |
| 500 | 180 | 35x20 | 1.21 | 840 | 1470 |
| 500 | 180 | 35x25 | 1.46 | 840 | 1470 |
| 500 | 220 | 25x50 | 1.52 | 690 | 1210 |
| 500 | 220 | 30x35 | 1.51 | 690 | 1210 |
| 500 | 220 | 30x40 | 1.60 | 690 | 1210 |
| 500 | 220 | 35x30 | 1.62 | 690 | 1210 |

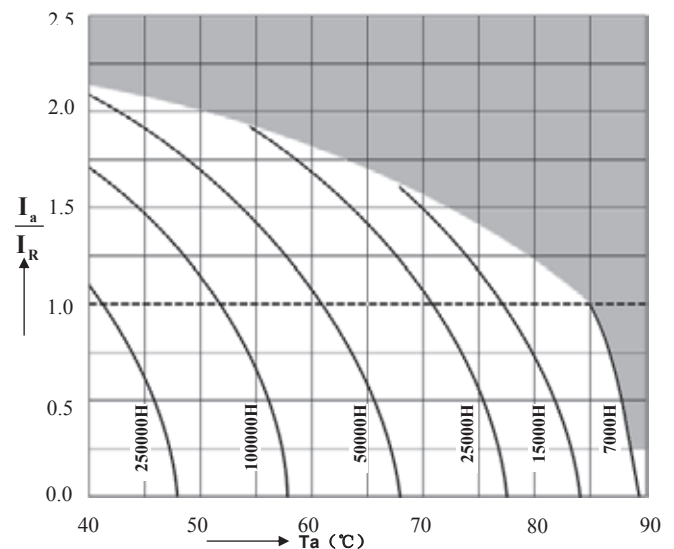
| WV (Vdc) | Cap (uF) | Size (mm) | Rated Ripple current (Arms/85°C /120Hz) | Typ. ESR 20°C 120Hz (mΩ) | MAX ESR 20°C 120Hz (mΩ) |
|----------|----------|-----------|---|--------------------------|-------------------------|
| 500 | 270 | 30x40 | 1.77 | 560 | 980 |
| 500 | 270 | 30x45 | 1.98 | 560 | 980 |
| 500 | 270 | 35x35 | 2.02 | 560 | 980 |
| 500 | 330 | 30x50 | 2.25 | 460 | 800 |
| 500 | 330 | 35x35 | 2.03 | 460 | 800 |
| 500 | 330 | 35x40 | 2.27 | 460 | 800 |
| 500 | 390 | 35x45 | 2.45 | 390 | 680 |
| 500 | 470 | 35x50 | 2.76 | 320 | 560 |
| 500 | 560 | 35x60 | 2.90 | 270 | 470 |
| 500 | 560 | 40x50 | 3.31 | 270 | 470 |
| 500 | 680 | 35x70 | 3.82 | 220 | 390 |
| 500 | 680 | 40x55 | 3.79 | 220 | 390 |
| 500 | 820 | 35x80 | 4.56 | 180 | 320 |
| 500 | 820 | 40x60 | 4.33 | 180 | 320 |
| 500 | 1000 | 35x90 | 5.31 | 150 | 270 |
| 500 | 1000 | 40x80 | 5.42 | 150 | 270 |

| WV (Vdc) | Cap (uF) | Size (mm) | Rated Ripple current (Arms/85°C /120Hz) | Typ. ESR 20°C 120Hz (mΩ) | MAX ESR 20°C 120Hz (mΩ) |
|----------|----------|-----------|---|--------------------------|-------------------------|
| 500 | 1500 | 40x100 | 6.56 | 100 | 180 |
| 600 | 150 | 30x45 | 0.95 | 1010 | 1770 |
| 600 | 180 | 30x50 | 1.10 | 840 | 1470 |
| 600 | 220 | 30x60 | 1.22 | 690 | 1210 |
| 600 | 270 | 30x70 | 1.25 | 560 | 980 |
| 600 | 330 | 30x80 | 1.36 | 460 | 800 |
| 600 | 330 | 40x50 | 1.35 | 460 | 800 |
| 600 | 390 | 40x60 | 1.48 | 390 | 680 |
| 600 | 470 | 40x70 | 1.67 | 320 | 560 |
| 600 | 470 | 45x55 | 1.65 | 320 | 560 |
| 600 | 560 | 40x80 | 1.78 | 270 | 470 |
| 600 | 560 | 45x60 | 1.75 | 270 | 470 |
| 600 | 680 | 40x90 | 1.85 | 220 | 390 |
| 600 | 680 | 45x70 | 1.83 | 220 | 390 |
| 600 | 820 | 45x85 | 2.01 | 180 | 320 |
| 600 | 1000 | 45x100 | 2.28 | 150 | 270 |

Useful life



depending on ambient temperature T_a versus under ripple current operating conditions $VR \leq 100V$



depending on ambient temperature T_a versus under ripple current operating conditions $VR \geq 160V$