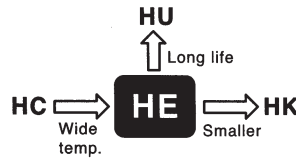


Алюминиевые электролитические конденсаторы с жесткими выводами

HE

Жесткие выводы.
Высокотемпературные, +105°C

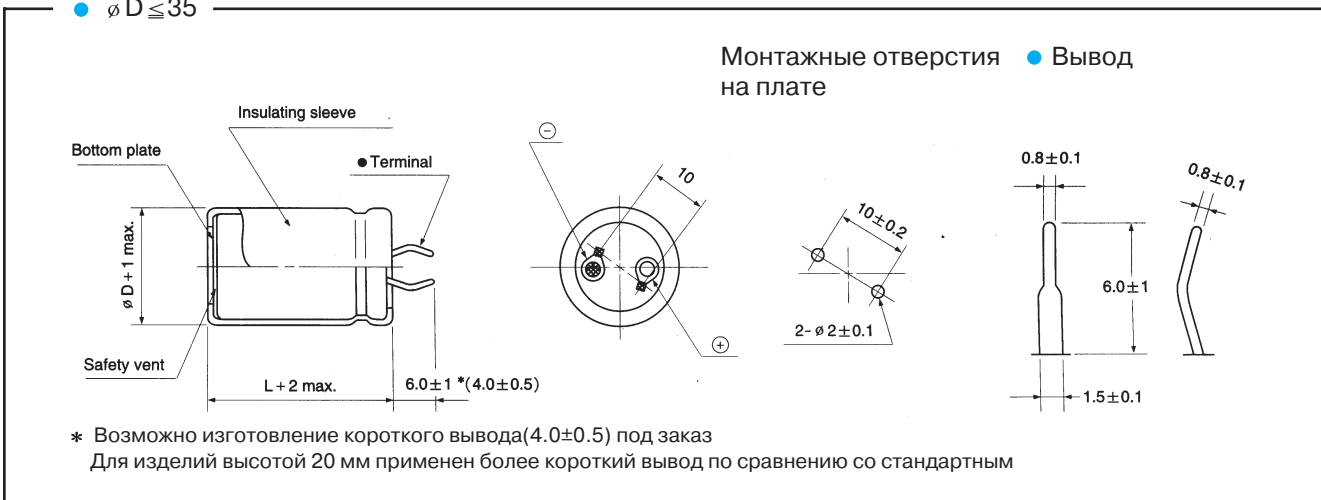
- широкий диапазон рабочей температуры -40(-25)~+105°C
- включены изделия высотой 20 мм, с низким профилем (диапазон напряжений 160~500V)



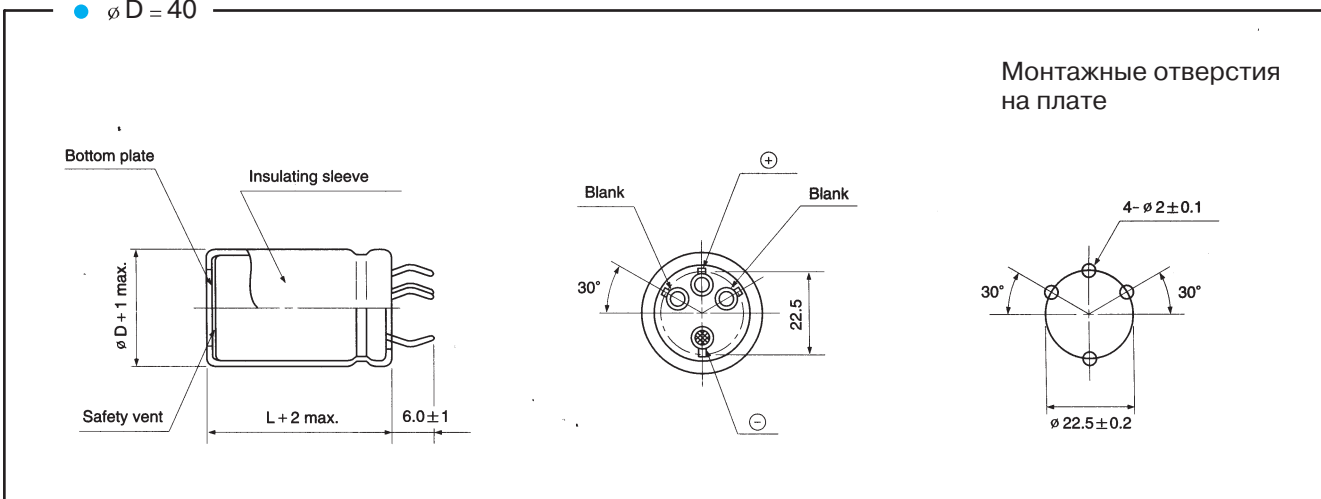
| Основные параметры | Характеристики | | | | | | | | | | | | | | | |
|---|--|--|---------|--------|---------|---------|----------|---------|----------|---------------|------|------|------|------|------|------|
| Интервал рабочих температур | $U, B \leq 400$: -40 ~ +105°C, $U, B \geq 450$: -25 ~ +105°C | | | | | | | | | | | | | | | |
| Допустимое отклонение емкости | ±20% при 120Hz, 20°C | | | | | | | | | | | | | | | |
| Ток утечки, max. | $I = 3\sqrt{CV}$ (µA) (после 5 минут) | | | | | | | | | | | | | | | |
| Тангенс угла потерь, max. (при 120 Гц, 20°C) | При емкости > 1000 µF. $\tan \delta$ возрастает на 0,01 на каждые 1000 µF от значений ниже | | | | | | | | | | | | | | | |
| | <table border="1"> <thead> <tr> <th>U, B</th> <th>6.3, 10</th> <th>16</th> <th>25, 35</th> <th>50, 63</th> <th>80, 100</th> <th>160~400</th> <th>450, 500</th> </tr> </thead> <tbody> <tr> <td>$\tan \delta$</td> <td>0.50</td> <td>0.40</td> <td>0.35</td> <td>0.25</td> <td>0.20</td> <td>0.15</td> <td>0.20</td> </tr> </tbody> </table> | U, B | 6.3, 10 | 16 | 25, 35 | 50, 63 | 80, 100 | 160~400 | 450, 500 | $\tan \delta$ | 0.50 | 0.40 | 0.35 | 0.25 | 0.20 | 0.15 |
| U, B | 6.3, 10 | 16 | 25, 35 | 50, 63 | 80, 100 | 160~400 | 450, 500 | | | | | | | | | |
| $\tan \delta$ | 0.50 | 0.40 | 0.35 | 0.25 | 0.20 | 0.15 | 0.20 | | | | | | | | | |
| Изменение параметров после 2000 ч работы (при номинальном напряжении и 105°C) | Ток утечки | меньше начального значения | | | | | | | | | | | | | | |
| | Изменение емкости | в пределах ±20% от начального значения | | | | | | | | | | | | | | |
| | $\tan \delta$ | менее чем 200% от начального значения | | | | | | | | | | | | | | |
| Сохраняемость (при 105°C) | после 1000 часов без нагрузки, ток утечки, емкость и $\tan \delta$ не изменяются | | | | | | | | | | | | | | | |

- Схематическое изображение (ед. изм. мм)

- $\phi D \leq 35$



- $\phi D = 40$



HE серия

- Габаритные размеры и максимальный ток пульсаций

| U, В μF ∅D | 6.3 | | | | | 10 | | | | | 16 | | | | |
|---------------|-----------------|-------------------|-----------------|-----------------|-----------------|-----------------|-------------------|-----------------|-----------------|-----------------|-----------------|-------------------|-----------------|-----------------|-----------------|
| | 22 | 25.4 | 30 | 35 | 40 | 22 | 25.4 | 30 | 35 | 40 | 22 | 25.4 | 30 | 35 | 40 |
| 8200 | | | | | | | | | | | 22 × 25 2.14 | | | | |
| 10000 | | | | | | 22 × 25 2.17 | | | | | 22 × 30 2.48 | 25.4 × 25 2.56 | | | |
| 12000 | 22 × 25 2.19 | | | | | 22 × 30 2.48 | | | | | 22 × 35 2.80 | 25.4 × 30 2.90 | 30 × 25 2.97 | | |
| 15000 | 22 × 30 2.53 | | | | | 22 × 35 2.83 | 25.4 × 25 2.75 | | | | 22 × 40 3.17 | 25.4 × 35 3.29 | 30 × 30 3.38 | | |
| 18000 | 22 × 35 2.85 | 25.4 × 25 2.77 | | | | 22 × 35 3.00 | 25.4 × 30 3.11 | | | | 22 × 45 3.50 | 25.4 × 40 3.65 | 30 × 30 3.57 | | |
| 22000 | 22 × 35 3.04 | 25.4 × 30 3.15 | | | | 22 × 40 3.35 | 25.4 × 35 3.48 | 30 × 25 3.38 | | | | 25.4 × 45 4.03 | 30 × 35 3.98 | | |
| 27000 | 22 × 40 3.40 | 25.4 × 35 3.53 | 30 × 25 3.42 | | | 22 × 50 3.88 | 25.4 × 40 3.87 | 30 × 30 3.79 | | | | 25.4 × 50 4.42 | 30 × 40 4.39 | 35 × 30 4.29 | |
| 33000 | 22 × 50 3.92 | 25.4 × 40 3.91 | 30 × 30 3.83 | | | | 25.4 × 45 4.26 | 30 × 35 4.20 | | | | | 30 × 45 4.79 | 35 × 35 4.71 | |
| 39000 | | 25.4 × 45 4.26 | 30 × 35 4.20 | | | | 25.4 × 50 4.60 | 30 × 40 4.57 | 35 × 30 4.46 | | | | 30 × 50 5.16 | 35 × 40 5.10 | |
| 47000 | | 25.4 × 50 4.63 | 30 × 40 4.60 | 35 × 30 4.50 | | | | 30 × 45 4.95 | 35 × 35 4.87 | | | | | 35 × 45 5.50 | 40 × 40 5.60 |
| 56000 | | | 30 × 50 5.17 | 35 × 40 5.12 | | | | | 35 × 45 5.49 | 40 × 40 5.59 | | | | | 40 × 50 6.22 |
| 68000 | | | | 35 × 45 5.52 | 40 × 40 5.62 | | | | | | | | | | 40 × 60 6.83 |

| U, В μF ∅D | 25 | | | | | 35 | | | | | 50 | | | | |
|---------------|-----------------|-------------------|-----------------|-----------------|-----------------|-----------------|-------------------|-----------------|-----------------|-----------------|-----------------|-------------------|-----------------|-----------------|-----------------|
| | 22 | 25.4 | 30 | 35 | 40 | 22 | 25.4 | 30 | 35 | 40 | 22 | 25.4 | 30 | 35 | 40 |
| 2700 | | | | | | | | | | | 22 × 30 1.94 | | | | |
| 3300 | | | | | | 22 × 25 1.62 | | | | | 22 × 35 2.20 | | | | |
| 3900 | | | | | | 22 × 30 1.88 | | | | | 22 × 40 2.52 | 25.4 × 35 2.62 | 30 × 25 2.54 | | |
| 4700 | 22 × 25 1.73 | | | | | 22 × 35 2.14 | 25.4 × 25 2.09 | | | | 22 × 45 2.81 | 25.4 × 40 2.93 | 30 × 30 2.87 | | |
| 5600 | 22 × 30 1.98 | | | | | 22 × 35 2.29 | 25.4 × 30 2.37 | 30 × 25 2.43 | | | 22 × 50 3.11 | 25.4 × 40 3.11 | 30 × 35 3.21 | | |
| 6800 | 22 × 30 2.14 | | | | | 22 × 40 2.61 | 25.4 × 35 2.71 | 30 × 30 2.79 | | | | 25.4 × 50 3.64 | 30 × 40 3.61 | 35 × 30 3.53 | |
| 8200 | 22 × 35 2.42 | 25.4 × 30 2.50 | | | | 22 × 50 3.02 | 25.4 × 40 3.02 | 30 × 30 2.95 | | | | | 30 × 45 3.94 | 35 × 35 3.87 | |
| 10000 | 22 × 40 2.77 | 25.4 × 35 2.88 | | | | | 25.4 × 45 3.43 | 30 × 35 3.38 | | | | | 30 × 50 4.42 | 35 × 40 4.37 | |
| 12000 | 22 × 45 3.09 | 25.4 × 40 3.22 | 30 × 30 3.15 | | | | 25.4 × 50 3.78 | 30 × 40 3.75 | 35 × 30 3.67 | | | | | 35 × 45 4.78 | |
| 15000 | | 25.4 × 45 3.62 | 30 × 35 3.57 | 35 × 30 3.65 | | | | 30 × 45 4.19 | 35 × 35 4.12 | | | | | 35 × 50 5.24 | 40 × 40 5.13 |
| 18000 | | 25.4 × 50 3.98 | 30 × 40 3.95 | 35 × 35 4.06 | | | | | 35 × 40 4.52 | | | | | | 40 × 50 5.76 |
| 22000 | | | 30 × 45 4.36 | 35 × 35 4.28 | | | | | 35 × 45 4.95 | 40 × 40 5.04 | | | | | 40 × 50 5.98 |
| 27000 | | | | 35 × 45 4.92 | 40 × 40 5.01 | | | | | 40 × 50 5.92 | | | | | 40 × 60 6.61 |

| U, В μF ∅D | 63 | | | | | 80 | | | | | 100 | | | | |
|---------------|-----------------|-------------------|-----------------|-----------------|-----------------|-----------------|-------------------|-----------------|-----------------|-----------------|--------------------------------------|-------------------|-----------------|-----------------|-----------------|
| | 22 | 25.4 | 30 | 35 | 40 | 22 | 25.4 | 30 | 35 | 40 | 22 | 25.4 | 30 | 35 | 40 |
| 820 | | | | | | 22 × 25 1.37 | | | | | 22 × 30 1.46 | 25.4 × 25 1.51 | | | |
| 1000 | | | | | | 22 × 30 1.62 | 25.4 × 25 1.67 | | | | 22 × 35 1.71 | 25.4 × 30 1.77 | | | |
| 1200 | 22 × 25 1.37 | | | | | 22 × 30 1.67 | 25.4 × 25 1.72 | | | | 22 × 40 1.86 | 25.4 × 35 1.94 | 30 × 25 1.88 | | |
| 1500 | 22 × 30 1.50 | 25.4 × 25 1.54 | | | | 22 × 35 1.98 | 25.4 × 30 2.05 | | | | 22 × 45 2.18 | 25.4 × 40 2.28 | 30 × 30 2.23 | | |
| 1800 | 22 × 30 1.64 | 25.4 × 25 1.69 | | | | 22 × 40 2.28 | 25.4 × 35 2.37 | 30 × 25 2.30 | | | | 25.4 × 45 2.61 | 30 × 35 2.57 | | |
| 2200 | 22 × 35 1.86 | 25.4 × 30 1.92 | | | | 22 × 45 2.51 | 25.4 × 35 2.49 | 30 × 30 2.56 | | | | 25.4 × 50 2.85 | 30 × 40 2.83 | 35 × 30 2.76 | |
| 2700 | 22 × 40 2.17 | 25.4 × 30 2.13 | 30 × 25 2.18 | | | | 25.4 × 45 3.03 | 30 × 35 2.99 | | | | | 30 × 45 3.27 | 35 × 35 3.22 | |
| 3300 | 22 × 50 2.53 | 25.4 × 40 2.53 | 30 × 30 2.48 | | | | 25.4 × 50 3.33 | 30 × 40 3.30 | 35 × 30 3.23 | | | | 30 × 50 3.59 | 35 × 40 3.55 | |
| 3900 | | 25.4 × 45 2.88 | 30 × 35 2.84 | | | | | 30 × 45 3.75 | 35 × 35 3.69 | | | | | 35 × 45 4.03 | |
| 4700 | | 25.4 × 40 3.20 | 30 × 40 3.17 | 35 × 30 3.10 | | | | 30 × 50 4.10 | 35 × 40 4.06 | | | | | 35 × 50 4.40 | 40 × 40 4.31 |
| 5600 | | | 30 × 45 3.51 | 35 × 35 3.46 | | | | | 35 × 45 4.44 | | | | | | 40 × 50 4.88 |
| 6800 | | | 30 × 50 3.92 | 35 × 40 3.88 | | | | | 35 × 50 4.90 | 40 × 40 4.80 | | | | | 40 × 50 5.18 |
| 8200 | | | | 35 × 45 4.22 | | | | | | 40 × 50 5.32 | ← размер корпуса ∅ D × L (мм) | | | | |
| 10000 | | | | 35 × 50 4.74 | 40 × 40 4.64 | | | | | | ← ток пульсации (А) при 105°C, 120Hz | | | | |

Алюминиевые электролитические конденсаторы с жесткими выводами

HE серия

- Габаритные размеры и максимальный ток пульсаций

| U, В μF / ∅ D | 160 | | | | | 200 | | | | | 250 | | | | |
|------------------|-----------------|-------------------|-----------------|-----------------|-----------------|-----------------|-------------------|-----------------|-----------------|-----------------|-----------------|-------------------|-----------------|-----------------|-----------------|
| | 22 | 25.4 | 30 | 35 | 40 | 22 | 25.4 | 30 | 35 | 40 | 22 | 25.4 | 30 | 35 | 40 |
| 150 | | | | | | 22 × 20 0.63 | | | | | 22 × 25 0.68 | 25.4 × 20 0.69 | | | |
| 180 | 22 × 20 0.69 | | | | | 22 × 20 0.69 | | | | | 22 × 25 0.74 | 25.4 × 20 0.76 | 30 × 20 0.83 | | |
| 220 | 22 × 20 0.76 | | | | | 22 × 25 0.82 | 25.4 × 20 0.84 | | | | 22 × 30 0.88 | 25.4 × 25 0.90 | 30 × 20 0.92 | | |
| 270 | 22 × 25 0.91 | 25.4 × 20 0.93 | | | | 22 × 30 0.91 | 25.4 × 25 1.00 | 30 × 20 1.02 | | | 22 × 35 1.03 | 25.4 × 30 1.06 | 30 × 25 1.09 | 35 × 20 1.11 | |
| 330 | 22 × 25 1.01 | 25.4 × 25 1.10 | 30 × 20 1.13 | | | 22 × 30 1.07 | 25.4 × 25 1.11 | 30 × 20 1.13 | | | 22 × 40 1.20 | 25.4 × 30 1.18 | 30 × 25 1.21 | 35 × 20 1.23 | |
| 390 | 22 × 30 1.17 | 25.4 × 25 1.20 | 30 × 20 1.23 | | | 22 × 35 1.24 | 25.4 × 30 1.28 | 30 × 25 1.31 | 35 × 20 1.34 | | 22 × 45 1.36 | 25.4 × 40 1.42 | 30 × 30 1.39 | 35 × 25 1.42 | |
| 470 | 22 × 35 1.36 | 25.4 × 25 1.32 | 30 × 25 1.44 | 35 × 20 1.47 | | 22 × 40 1.43 | 25.4 × 35 1.40 | 30 × 25 1.44 | 35 × 25 1.56 | | 22 × 50 1.56 | 25.4 × 40 1.56 | 30 × 30 1.53 | 35 × 25 1.56 | |
| 560 | 22 × 40 1.56 | 25.4 × 30 1.53 | 30 × 25 1.57 | 35 × 25 1.70 | | 22 × 45 1.63 | 25.4 × 40 1.62 | 30 × 30 1.67 | 35 × 25 1.70 | | | 25.4 × 50 1.86 | 30 × 35 1.76 | 35 × 30 1.80 | |
| 680 | 22 × 45 1.80 | 25.4 × 35 1.79 | 30 × 25 1.73 | 35 × 25 1.88 | | 22 × 50 1.88 | 25.4 × 45 1.96 | 30 × 30 1.84 | 35 × 25 1.88 | | | | 30 × 45 2.12 | 35 × 35 2.09 | |
| 820 | 22 × 50 2.06 | 25.4 × 40 2.06 | 30 × 30 2.02 | 35 × 25 2.06 | | | 25.4 × 50 2.25 | 30 × 35 2.13 | 35 × 30 2.18 | | | | | 35 × 40 2.40 | |
| 1000 | | 25.4 × 45 2.38 | 30 × 35 2.40 | 35 × 30 2.41 | | | | 30 × 45 2.57 | 35 × 35 2.53 | | | | | 35 × 45 2.76 | 40 × 40 2.81 |
| 1200 | | 25.4 × 50 2.52 | 30 × 40 2.50 | 35 × 30 2.44 | | | | 30 × 50 2.72 | 35 × 35 2.57 | 40 × 40 2.85 | | | | 35 × 50 2.91 | 40 × 50 3.08 |
| 1500 | | | | 35 × 40 3.00 | 40 × 40 3.19 | | | | 35 × 45 3.13 | 40 × 50 3.44 | | | | | 40 × 60 3.68 |

| U, В μF / ∅ D | 315 | | | | | 350 | | | | | 400 | | | | |
|------------------|-----------------|-------------------|-----------------|-----------------|-----------------|-----------------|-------------------|-----------------|-----------------|-----------------|-----------------|-------------------|-----------------|-----------------|-----------------|
| | 22 | 25.4 | 30 | 35 | 40 | 22 | 25.4 | 30 | 35 | 40 | 22 | 25.4 | 30 | 35 | 40 |
| 56 | | | | | | | | | | | 22 × 20 0.37 | | | | |
| 68 | | | | | | 22 × 20 0.41 | | | | | 22 × 25 0.44 | 25.4 × 20 0.45 | | | |
| 82 | 22 × 20 0.45 | | | | | 22 × 25 0.48 | 25.4 × 20 0.49 | | | | 22 × 30 0.51 | 25.4 × 25 0.53 | 30 × 20 0.54 | | |
| 100 | 22 × 25 0.53 | 25.4 × 20 0.55 | | | | 22 × 25 0.53 | 25.4 × 25 0.59 | 30 × 20 0.60 | | | 22 × 35 0.60 | 25.4 × 30 0.62 | 30 × 20 0.60 | | |
| 120 | 22 × 30 0.62 | 25.4 × 25 0.64 | 30 × 20 0.65 | | | 22 × 30 0.62 | 25.4 × 25 0.64 | 30 × 20 0.65 | | | 22 × 40 0.69 | 25.4 × 30 0.68 | 30 × 25 0.70 | 35 × 20 0.71 | |
| 150 | 22 × 35 0.74 | 25.4 × 30 0.76 | 30 × 20 0.73 | | | 22 × 40 0.78 | 25.4 × 30 0.76 | 30 × 25 0.78 | 35 × 20 0.80 | | 22 × 45 0.81 | 25.4 × 35 0.81 | 30 × 30 0.83 | 35 × 20 0.80 | |
| 180 | 22 × 40 0.85 | 25.4 × 35 0.88 | 30 × 25 0.86 | 35 × 20 0.87 | | 22 × 45 0.89 | 25.4 × 35 0.88 | 30 × 30 0.91 | 35 × 20 0.87 | | 22 × 50 0.93 | 25.4 × 40 0.93 | 30 × 30 0.91 | 35 × 25 0.93 | |
| 220 | 22 × 45 0.98 | 25.4 × 35 0.98 | 30 × 30 1.00 | 35 × 20 0.96 | | 22 × 50 1.03 | 25.4 × 40 1.03 | 30 × 30 1.00 | 35 × 25 1.03 | | | 25.4 × 45 1.07 | 30 × 35 1.06 | 35 × 30 1.08 | |
| 270 | | 25.4 × 45 1.19 | 30 × 35 1.17 | 35 × 25 1.14 | | | 25.4 × 45 1.19 | 30 × 35 1.17 | 35 × 30 1.20 | | | 25.4 × 50 1.24 | 30 × 40 1.23 | 35 × 30 1.20 | |
| 330 | | 25.4 × 50 1.37 | 30 × 40 1.36 | 35 × 30 1.33 | | | | 30 × 40 1.36 | 35 × 35 1.40 | | | | 30 × 45 1.42 | 35 × 35 1.40 | |
| 390 | | | 30 × 45 1.54 | 35 × 35 1.52 | | | | 30 × 45 1.54 | 35 × 40 1.59 | | | | 30 × 50 1.61 | 35 × 40 1.59 | |
| 470 | | | 30 × 50 1.76 | 35 × 40 1.74 | | | | | 35 × 45 1.82 | | | | | 35 × 45 1.82 | 40 × 40 1.85 |
| 560 | | | | 35 × 40 1.90 | | | | | 35 × 50 2.06 | 40 × 40 2.02 | | | | 35 × 50 2.06 | 40 × 50 2.18 |
| 680 | | | | 35 × 50 2.27 | 40 × 40 2.23 | | | | | 40 × 50 2.40 | | | | | 40 × 60 2.57 |

| U, В μF / ∅ D | 450 | | | | | 500 | | | | |
|------------------|-----------------|-------------------|-----------------|-----------------|-----------------|-----------------|-------------------|-----------------|-----------------|-----------------|
| | 22 | 25.4 | 30 | 35 | 40 | 22 | 25.4 | 30 | 35 | 40 |
| 47 | 22 × 20 0.34 | | | | | 22 × 25 0.25 | 25.4 × 20 0.30 | | | |
| 56 | 22 × 25 0.40 | 25.4 × 20 0.41 | | | | 22 × 30 0.29 | 25.4 × 30 0.30 | 30 × 20 0.36 | | |
| 68 | 22 × 30 0.47 | 25.4 × 25 0.48 | 30 × 20 0.49 | | | 22 × 40 0.34 | 25.4 × 35 0.35 | 30 × 25 0.36 | 35 × 20 0.48 | |
| 82 | 22 × 35 0.54 | 25.4 × 30 0.86 | 30 × 20 0.54 | | | 22 × 45 0.40 | 25.4 × 40 0.41 | 30 × 30 0.48 | 35 × 25 0.48 | |
| 100 | 22 × 40 0.63 | 25.4 × 30 0.62 | 30 × 25 0.64 | 35 × 20 0.65 | | 22 × 50 0.47 | 25.4 × 45 0.46 | 30 × 35 0.47 | 35 × 30 0.48 | |
| 120 | 22 × 45 0.73 | 25.4 × 35 0.72 | 30 × 30 0.74 | 35 × 25 0.76 | | | 25.4 × 50 0.53 | 30 × 40 0.55 | 35 × 30 0.56 | |
| 150 | 22 × 50 0.85 | 25.4 × 40 0.85 | 30 × 30 0.83 | 35 × 25 0.85 | | | | 30 × 45 0.61 | 35 × 35 0.62 | |
| 180 | | 25.4 × 45 0.97 | 30 × 35 0.96 | 35 × 30 0.98 | | | | 30 × 50 0.70 | 35 × 40 0.78 | |
| 220 | | 25.4 × 50 1.12 | 30 × 40 1.11 | 35 × 30 1.08 | | | | | 35 × 45 0.80 | |
| 270 | | | 30 × 45 1.28 | 35 × 35 1.26 | | | | | 35 × 50 0.93 | 40 × 40 1.36 |
| 330 | | | 30 × 50 1.48 | 35 × 40 1.46 | | | | | | 40 × 50 1.61 |
| 390 | | | | 35 × 45 1.66 | | | | | | |
| 470 | | | | 35 × 50 1.89 | 40 × 40 1.85 | | | | | |
| 560 | | | | 40 × 50 2.18 | | | | | | |

← размер корпуса ∅ D × L (мм)
← ток пульсации (А) при 105°C, 120Hz