

HBV Series

Features

- 105°C, 10,000 hours assured
- Low ESR and High ripple current
- RoHS Compliance

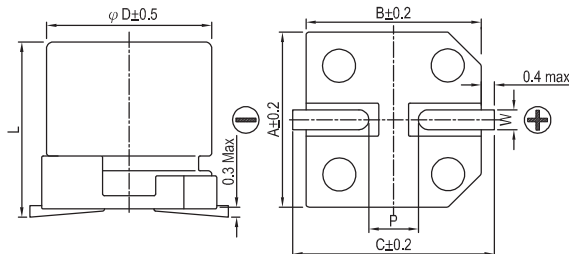


Marking color: Dark Green

Specifications

| Items | Performance | | | | | | | | | | |
|---|---|-----------------------------------|------------------------------|--------------------|------------------------------|-----------------|-----------------------------------|-----------------|-----------------------------------|-----------------|------------------------|
| Category Temperature Range | -55°C ~ +105°C | | | | | | | | | | |
| Capacitance Tolerance | ±20% (at 120Hz, 20°C) | | | | | | | | | | |
| Leakage Current (at 20°C) | I = 0.01CV or 3 (μA) whichever is greater (after 2 minutes) Where, C = rated capacitance in μF, V = rated DC working voltage in V | | | | | | | | | | |
| Tanδ (at 120Hz, 20°C) | See Standard Ratings | | | | | | | | | | |
| Endurance | <table border="1"> <tr> <td>Test Time</td> <td>10,000 Hrs</td> </tr> <tr> <td>Capacitance Change</td> <td>Within ±30% of initial value</td> </tr> <tr> <td>Tanδ</td> <td>Less than 200% of specified value</td> </tr> <tr> <td>ESR</td> <td>Less than 200% of specified value</td> </tr> <tr> <td>Leakage Current</td> <td>Within specified value</td> </tr> </table> | Test Time | 10,000 Hrs | Capacitance Change | Within ±30% of initial value | Tanδ | Less than 200% of specified value | ESR | Less than 200% of specified value | Leakage Current | Within specified value |
| | Test Time | 10,000 Hrs | | | | | | | | | |
| | Capacitance Change | Within ±30% of initial value | | | | | | | | | |
| | Tanδ | Less than 200% of specified value | | | | | | | | | |
| | ESR | Less than 200% of specified value | | | | | | | | | |
| Leakage Current | Within specified value | | | | | | | | | | |
| * The above specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage applied with rated ripple current for 10,000 hours at 105°C. | | | | | | | | | | | |
| Shelf Life Test | * After storage for 1,000 hours at 105 ± 2°C with no voltage applied and then being stabilized at 20°C, capacitors shall meet the limits specified in Endurance. (With voltage treatment) | | | | | | | | | | |
| Resistance to Soldering Heat (Please refer to page 25 for reflowsoldering conditions) | <table border="1"> <tr> <td>Capacitance Change</td> <td>Within ±10% of initial value</td> </tr> <tr> <td>Tanδ</td> <td>Within specified value</td> </tr> <tr> <td>ESR</td> <td>Within specified value</td> </tr> <tr> <td>Leakage Current</td> <td>Within specified value</td> </tr> </table> | Capacitance Change | Within ±10% of initial value | Tanδ | Within specified value | ESR | Within specified value | Leakage Current | Within specified value | | |
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| Leakage Current | Within specified value | | | | | | | | | | |
| Ripple Current and Frequency Multipliers | | | | | | | | | | | |
| | <table border="1"> <tr> <th>Frequency (Hz)</th> <th>120 ≤ f < 1k</th> <th>1k ≤ f < 10k</th> <th>10k ≤ f < 100k</th> <th>100k ≤ f < 500k</th> </tr> <tr> <td>Multiplier</td> <td>0.1</td> <td>0.3</td> <td>0.6</td> <td>1.0</td> </tr> </table> | Frequency (Hz) | 120 ≤ f < 1k | 1k ≤ f < 10k | 10k ≤ f < 100k | 100k ≤ f < 500k | Multiplier | 0.1 | 0.3 | 0.6 | 1.0 |
| Frequency (Hz) | 120 ≤ f < 1k | 1k ≤ f < 10k | 10k ≤ f < 100k | 100k ≤ f < 500k | | | | | | | |
| Multiplier | 0.1 | 0.3 | 0.6 | 1.0 | | | | | | | |

Diagram of Dimensions



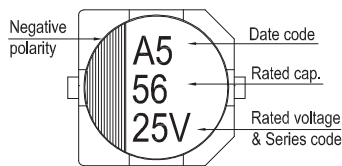
Lead Spacing and Diameter

Unit: mm

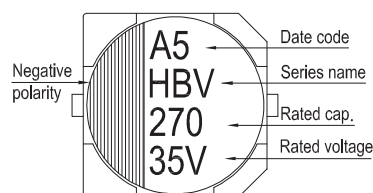
| φ D | L | A | B | C | W | P ± 0.2 |
|-----|------------|------|------|------|-----------|---------|
| 6.3 | 5.8 ± 0.3 | 6.6 | 6.6 | 7.2 | 0.5 ~ 0.8 | 2.0 |
| 6.3 | 7.7 ± 0.3 | 6.6 | 6.6 | 7.2 | 0.5 ~ 0.8 | 2.0 |
| 8 | 10.0 ± 0.5 | 8.4 | 8.4 | 9.0 | 0.7 ~ 1.1 | 3.1 |
| 8 | 12.0 ± 0.5 | 8.4 | 8.4 | 9.0 | 0.7 ~ 1.1 | 3.1 |
| 10 | 10.0 ± 0.5 | 10.4 | 10.4 | 11.0 | 0.7 ~ 1.3 | 4.7 |
| 10 | 12.5 ± 0.5 | 10.4 | 10.4 | 11.0 | 0.7 ~ 1.3 | 4.7 |

Marking

φ D = 6.3 mm



φ D = 8 ~ 10 mm



Dimension: $\phi D \times L$ (mm)
Ripple Current: mA/rms at 100k Hz, 105°C

Standard Ratings

| W. V. (V) | Surge Voltage (V) | Capacitance (μ F) | Size $\phi D \times L$ (mm) | Tan δ (120Hz, 20°C) | L C (μ A) | E S R (m Ω /at 100kHz, 20°C Max) | Rated R. C. (mA/rms at 100k Hz, 105°C) |
|-----------|-------------------|------------------------|-----------------------------|----------------------------|----------------|---|--|
| 16V (1C) | 18.4 | 82 | 6.3 × 5.8 | 0.16 | 13.1 | 50 | 1,300 |
| | | 150 | 6.3 × 7.7 | 0.16 | 24 | 30 | 2,000 |
| | | 270 | 8 × 10 | 0.16 | 43.2 | 27 | 2,300 |
| | | 470 | 10 × 10 | 0.16 | 75.2 | 20 | 2,500 |
| 25V (1E) | 28.8 | 56 | 6.3 × 5.8 | 0.14 | 14 | 50 | 1,300 |
| | | 100 | 6.3 × 7.7 | 0.14 | 25 | 30 | 2,000 |
| | | 220 | 8 × 10 | 0.14 | 55 | 27 | 2,300 |
| | | 330 | 10 × 10 | 0.14 | 82.5 | 20 | 2,500 |
| | | 330 | 10 × 12.5 | 0.14 | 82.5 | 16 | 2,900 |
| 35V (1V) | 40.3 | 27 | 6.3 × 5.8 | 0.12 | 9.5 | 60 | 1,300 |
| | | 68 | 6.3 × 7.7 | 0.12 | 23.8 | 35 | 2,000 |
| | | 150 | 8 × 10 | 0.12 | 52.5 | 27 | 2,300 |
| | | 270 | 10 × 10 | 0.12 | 94.5 | 20 | 2,500 |
| 50V(1H) | 57.5 | 22 | 6.3 × 5.8 | 0.10 | 11 | 80 | 1,100 |
| | | 33 | 6.3 × 7.7 | 0.10 | 16.5 | 40 | 1,600 |
| | | 68 | 8 × 10 | 0.10 | 34 | 30 | 1,800 |
| | | 100 | 10 × 10 | 0.10 | 50 | 28 | 2,000 |
| 63V(1J) | 72.5 | 10 | 6.3 × 5.8 | 0.08 | 6.3 | 120 | 1,000 |
| | | 22 | 6.3 × 7.7 | 0.08 | 13.9 | 80 | 1,500 |
| | | 27 | 8 × 12 | 0.08 | 17 | 40 | 1,700 |
| | | 33 | 8 × 10 | 0.08 | 20.8 | 40 | 1,700 |
| | | 56 | 10 × 10 | 0.08 | 35.3 | 30 | 1,800 |
| 80V(1K) | 92.0 | 22 | 8 × 10 | 0.08 | 17.6 | 45 | 1,550 |
| | | 33 | 10 × 10 | 0.08 | 26.4 | 36 | 1,700 |

Hybrid

Part Numbering System

| | | | | | | | |
|-------------|-------------|-----------------------|---------------|--------------|---------------|----------------|------------------------------|
| HBV Series | 220 μ F | \pm 20% | 25V | Carrier Tape | | 8 ϕ × 10L | Pb-free and PET coating case |
| HBV | 221 | M | 1E | TR | - | 0810 | |
| Series Name | Capacitance | Capacitance Tolerance | Rated Voltage | Package Type | Terminal Type | Case size | Lead Wire and Coating Type |

Note: For more details, please refer to "Part Numbering System (SMD Type)" on page 15.



Стандарт Электрон Связь

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Благодаря сотрудничеству с мировыми поставщиками мы осуществляем комплексные и плановые поставки широчайшего спектра электронных компонентов.

Собственная эффективная логистика и склад в обеспечивает надежную поставку продукции в точно указанные сроки по всей России.

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