



VLV Series

Features

- 12.5 φ ~ 16 φ, 105°C, 5,000 hours assured
- Suitable for automotive application
- Peak acceleration: 50G / 30G
- RoHS Compliance

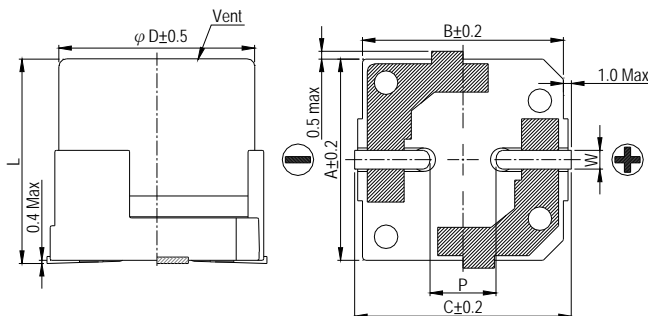


Marking color: Black

Specifications

| Items | Performance | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---------------|-----------|--------------------|------------------------------|--------------------|-----------------------------------|-----------------|------------------------|------|-----|-----------------|-------------------|------|------|------|------|------|------|------|------|--|-------------------|---|---|---|---|---|---|---|---|
| Category Temperature Range | -55 ~ +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 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Dissipation Factor (Tanδ at 120Hz, 20°C) | <table border="1"> <thead> <tr> <th>Rated Voltage</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63</th> <th>80</th> <th>100</th> </tr> </thead> <tbody> <tr> <td>Tanδ (max)</td> <td>0.30</td> <td>0.26</td> <td>0.22</td> <td>0.16</td> <td>0.13</td> <td>0.10</td> <td>0.08</td> <td>0.08</td> <td>0.07</td> </tr> </tbody> </table> <p>When the capacitance exceeds 1,000μF, 0.02 shall be added every 1,000μF increase.</p> | Rated Voltage | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 80 | 100 | Tanδ (max) | 0.30 | 0.26 | 0.22 | 0.16 | 0.13 | 0.10 | 0.08 | 0.08 | 0.07 | | | | | | | | | | |
| Rated Voltage | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 80 | 100 | | | | | | | | | | | | | | | | | | | | | | |
| Tanδ (max) | 0.30 | 0.26 | 0.22 | 0.16 | 0.13 | 0.10 | 0.08 | 0.08 | 0.07 | | | | | | | | | | | | | | | | | | | | | | |
| Low Temperature Characteristics (at 120Hz) | <p>Impedance ratio shall not exceed the values given in the table below.</p> <table border="1"> <thead> <tr> <th>Rated Voltage</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63</th> <th>80</th> <th>100</th> </tr> </thead> <tbody> <tr> <td>Impedance Ratio</td> <td>Z(-25°C)/Z(+20°C)</td> <td>4</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> </tr> <tr> <td></td> <td>Z(-55°C)/Z(+20°C)</td> <td>8</td> <td>5</td> <td>4</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> </tr> </tbody> </table> | Rated Voltage | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 80 | 100 | Impedance Ratio | Z(-25°C)/Z(+20°C) | 4 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | | Z(-55°C)/Z(+20°C) | 8 | 5 | 4 | 3 | 3 | 3 | 3 | 3 |
| Rated Voltage | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 80 | 100 | | | | | | | | | | | | | | | | | | | | | | |
| Impedance Ratio | Z(-25°C)/Z(+20°C) | 4 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | | | | | | | | | | | | | | | | | | | | | | |
| | Z(-55°C)/Z(+20°C) | 8 | 5 | 4 | 3 | 3 | 3 | 3 | 3 | | | | | | | | | | | | | | | | | | | | | | |
| Endurance | <table border="1"> <thead> <tr> <th>Test Time</th> <th>5,000 Hrs</th> </tr> </thead> <tbody> <tr> <td>Capacitance Change</td> <td>Within ±30% of initial value</td> </tr> <tr> <td>Dissipation Factor</td> <td>Less than 300% of specified value</td> </tr> <tr> <td>Leakage Current</td> <td>Within specified value</td> </tr> </tbody> </table> <p>* The above Specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage applied for 5,000 hours at 105°C.</p> | Test Time | 5,000 Hrs | Capacitance Change | Within ±30% of initial value | Dissipation Factor | Less than 300% of specified value | Leakage Current | Within specified value | | | | | | | | | | | | | | | | | | | | | | |
| Test Time | 5,000 Hrs | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Capacitance Change | Within ±30% of initial value | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Dissipation Factor | Less than 300% of specified value | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Leakage Current | Within specified value | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Shelf Life Test | <table border="1"> <thead> <tr> <th>Test Time</th> <th>1,000 Hrs</th> </tr> </thead> <tbody> <tr> <td>Capacitance Change</td> <td>Within ±30% of initial value</td> </tr> <tr> <td>Dissipation Factor</td> <td>Less than 300% of specified value</td> </tr> <tr> <td>Leakage Current</td> <td>Within specified value</td> </tr> </tbody> </table> <p>* The above Specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1,000 hours at 105°C without voltage applied.</p> | Test Time | 1,000 Hrs | Capacitance Change | Within ±30% of initial value | Dissipation Factor | Less than 300% of specified value | Leakage Current | Within specified value | | | | | | | | | | | | | | | | | | | | | | |
| Test Time | 1,000 Hrs | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Capacitance Change | Within ±30% of initial value | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Dissipation Factor | Less than 300% of specified value | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Leakage Current | Within specified value | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ripple Current & Frequency Multipliers | <table border="1"> <thead> <tr> <th>Frequency(Hz)</th> <th>50, 60</th> <th>120</th> <th>1k</th> <th>10k up</th> </tr> </thead> <tbody> <tr> <td>Multiplier</td> <td>0.60</td> <td>0.70</td> <td>0.85</td> <td>1.0</td> </tr> </tbody> </table> | Frequency(Hz) | 50, 60 | 120 | 1k | 10k up | Multiplier | 0.60 | 0.70 | 0.85 | 1.0 | | | | | | | | | | | | | | | | | | | | |
| Frequency(Hz) | 50, 60 | 120 | 1k | 10k up | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Multiplier | 0.60 | 0.70 | 0.85 | 1.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Vibration | <p>Peak acceleration: 50G Peak to peak amplitude: 1.5mm Frequency: 5 to 2,000 Hz reciprocation for 20 min. Direction and duration of vibration: 3 orthogonal directions mutually each for 4 Hrs.</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Diagram of Dimensions



| Lead Spacing and Diameter | | | | | | | Unit: mm |
|---------------------------|------------|------|------|------|-----------|---------|----------|
| φD | L | A | B | C | W | P ± 0.2 | |
| 12.5 | 13.5 ± 0.5 | 13.0 | 13.5 | 14.5 | 1.1 ~ 1.4 | 4.4 | |
| 12.5 | 16 ± 0.5 | 13.0 | 13.5 | 14.5 | 1.1 ~ 1.4 | 4.4 | |
| 16 | 16.5 ± 0.5 | 16.5 | 17.0 | 18.2 | 1.1 ~ 1.4 | 6.4 | |

Marking

$\phi D \geq 12.5\text{mm}$



Dimension: $\phi D \times L(\text{mm})$

Ripple Current: mA/rms at 100k Hz, 105°C

Impedance: Ω at 100k Hz, 20°C

Dimension & Permissible Ripple Current

| V. DC | | 6.3V (0J) | | | 10V (1A) | | | 16V (1C) | | | 25V (1E) | | | 35V (1V) | | | 50V (1H) | | |
|---------------|----------|-------------------|-------|-------|-------------------|-------|-------|-------------------|-------|-------|-------------------|-------|-------|-------------------|-------|-------|-------------------|-------|-------|
| μF | Contents | $\phi D \times L$ | Imp. | mA | $\phi D \times L$ | Imp. | mA | $\phi D \times L$ | Imp. | mA | $\phi D \times L$ | Imp. | mA | $\phi D \times L$ | Imp. | mA | $\phi D \times L$ | Imp. | mA |
| 330 | 331 | | | | | | | | | | | | | 12.5×13.5 | 0.066 | 850 | 12.5×13.5 | 0.11 | 700 |
| 470 | 471 | | | | | | | | | | | | | 12.5×16 | 0.058 | 950 | 16×16.5 | 0.070 | 1,100 |
| 680 | 681 | | | | | | | | | | 12.5×13.5 | 0.066 | 850 | 12.5×16 | 0.058 | 950 | 16×16.5 | 0.070 | 1,100 |
| 1,000 | 102 | | | | | | | 12.5×13.5 | 0.066 | 850 | 12.5×16 | 0.058 | 950 | 16×16.5 | 0.052 | 1,300 | | | |
| 1,500 | 152 | | | | 12.5×13.5 | 0.066 | 850 | 12.5×16 | 0.058 | 950 | 16×16.5 | 0.052 | 1,300 | | | | | | |
| 2,200 | 222 | 12.5×13.5 | 0.066 | 850 | 12.5×16 | 0.058 | 950 | 16×16.5 | 0.052 | 1,300 | 16×16.5 | 0.052 | 1,300 | | | | | | |
| 3,300 | 332 | 12.5×16 | 0.058 | 950 | 16×16.5 | 0.052 | 1,300 | 16×16.5 | 0.052 | 1,300 | | | | | | | | | |
| 4,700 | 472 | 16×16.5 | 0.052 | 1,300 | 16×16.5 | 0.052 | 1,300 | | | | | | | | | | | | |

| V. DC | | 63V (1J) | | | 80V (1K) | | | 100V (2A) | | |
|---------------|----------|-------------------|-------|-----|-------------------|------|-----|-------------------|------|-----|
| μF | Contents | $\phi D \times L$ | Imp. | mA | $\phi D \times L$ | Imp. | mA | $\phi D \times L$ | Imp. | mA |
| 100 | 101 | | | | | | | 12.5×13.5 | 0.32 | 450 |
| 150 | 151 | 12.5×13.5 | 0.140 | 700 | 12.5×13.5 | 0.32 | 450 | 12.5×16 | 0.26 | 550 |
| 220 | 221 | 12.5×13.5 | 0.140 | 700 | 12.5×16 | 0.26 | 550 | 16×16.5 | 0.17 | 650 |
| 330 | 331 | 16×16.5 | 0.080 | 900 | 16×16.5 | 0.17 | 650 | | | |
| 470 | 471 | 16×16.5 | 0.080 | 900 | | | | | | |



Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

Телефон: 8 (812) 309 58 32 (многоканальный)

Факс: 8 (812) 320-02-42

Электронная почта: org@eplast1.ru

Адрес: 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.