



SEA Series

Features

- 85°C, 2,000 hours assured, standard miniature type with 7 ~ 9mm height for compact circuits
- RoHS Compliance

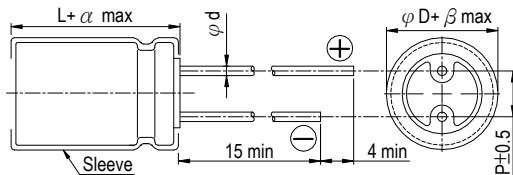


Sleeve & Marking Color: Blue & Black

Specifications

| Items | Performance | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---------------|------------|--------------------|------------------------------|------|-----------------------------------|-----------------|------------------------|-----|------------|-----------------|-------------------|------|----------|------|------|------|------|------|---|-------------------|------|------|------|------|------|---|---|---|
| Category Temperature Range | -40°C ~ +85°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) | <table border="1"> <thead> <tr> <th>Rated Voltage</th> <th>4</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63</th> </tr> </thead> <tbody> <tr> <td>Tanδ (max)</td> <td>0.35</td> <td>0.23</td> <td>0.20</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.10</td> <td>0.10</td> </tr> </tbody> </table> | Rated Voltage | 4 | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | Tanδ (max) | 0.35 | 0.23 | 0.20 | 0.16 | 0.14 | 0.12 | 0.10 | 0.10 | | | | | | | | | | | |
| Rated Voltage | 4 | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | | | | | | | | | | | | | | | | | | | | | | |
| Tanδ (max) | 0.35 | 0.23 | 0.20 | 0.16 | 0.14 | 0.12 | 0.10 | 0.10 | | | | | | | | | | | | | | | | | | | | | | |
| 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 colspan="2">Rated Voltage</th> <th>4</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63</th> </tr> </thead> <tbody> <tr> <td rowspan="2">Impedance Ratio</td> <td>Z(-25°C)/Z(+20°C)</td> <td>7</td> <td>4</td> <td>3</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> </tr> <tr> <td>Z(-40°C)/Z(+20°C)</td> <td>14</td> <td>10</td> <td>8</td> <td>6</td> <td>4</td> <td>4</td> <td>4</td> <td>4</td> </tr> </tbody> </table> | Rated Voltage | | 4 | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | Impedance Ratio | Z(-25°C)/Z(+20°C) | 7 | 4 | 3 | 3 | 2 | 2 | 2 | 2 | Z(-40°C)/Z(+20°C) | 14 | 10 | 8 | 6 | 4 | 4 | 4 | 4 |
| Rated Voltage | | 4 | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | | | | | | | | | | | | | | | | | | | | | |
| Impedance Ratio | Z(-25°C)/Z(+20°C) | 7 | 4 | 3 | 3 | 2 | 2 | 2 | 2 | | | | | | | | | | | | | | | | | | | | | |
| | Z(-40°C)/Z(+20°C) | 14 | 10 | 8 | 6 | 4 | 4 | 4 | 4 | | | | | | | | | | | | | | | | | | | | | |
| Endurance | <table border="1"> <thead> <tr> <th>Test Time</th> <th>2,000 Hrs</th> </tr> </thead> <tbody> <tr> <td>Capacitance Change</td> <td>Within ±20% of initial value</td> </tr> <tr> <td>Tanδ</td> <td>Less than 200% 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 with rated ripple current for 2,000 hours at 85°C.</p> | Test Time | 2,000 Hrs | Capacitance Change | Within ±20% of initial value | Tanδ | Less than 200% of specified value | Leakage Current | Within specified value | | | | | | | | | | | | | | | | | | | | | |
| Test Time | 2,000 Hrs | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Capacitance Change | Within ±20% of initial value | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Tanδ | Less than 200% of specified value | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Leakage Current | Within specified value | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Shelf Life Test | Test time: 500 hours; other items are the same as those for the Endurance. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ripple Current & Frequency Multipliers | <table border="1"> <thead> <tr> <th rowspan="2">Cap. (µF)</th> <th colspan="6">Freq. (Hz)</th> </tr> <tr> <th>60 (50)</th> <th>120</th> <th>500</th> <th>1k</th> <th colspan="2">10k up</th> </tr> </thead> <tbody> <tr> <td>Under 47</td> <td>0.70</td> <td>1.00</td> <td>1.20</td> <td>1.30</td> <td colspan="2">1.45</td> </tr> <tr> <td>100 to 1,000</td> <td>0.80</td> <td>1.00</td> <td>1.10</td> <td>1.15</td> <td colspan="2">1.20</td> </tr> </tbody> </table> | Cap. (µF) | Freq. (Hz) | | | | | | 60 (50) | 120 | 500 | 1k | 10k up | | Under 47 | 0.70 | 1.00 | 1.20 | 1.30 | 1.45 | | 100 to 1,000 | 0.80 | 1.00 | 1.10 | 1.15 | 1.20 | | | |
| Cap. (µF) | Freq. (Hz) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 60 (50) | 120 | 500 | 1k | 10k up | | | | | | | | | | | | | | | | | | | | | | | | | |
| Under 47 | 0.70 | 1.00 | 1.20 | 1.30 | 1.45 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 100 to 1,000 | 0.80 | 1.00 | 1.10 | 1.15 | 1.20 | | | | | | | | | | | | | | | | | | | | | | | | | |

Diagram of Dimensions



Lead Spacing and Diameter

Unit: mm

| φD | 4 | 5 | 6.3 | 8 | 10 |
|----|------|-----|-----|-----|-----|
| P | 1.5 | 2.0 | 2.5 | 3.5 | 5.0 |
| φd | 0.45 | 0.5 | | 0.6 | |
| α | 1.0 | | | 1.5 | |
| β | 0.5 | | | | |

Dimension: φD × L(mm)

Ripple Current: mA/rms at 120 Hz, 85°C

Dimension & Permissible Ripple Current

| µF | V. DC Contents | 4V (0G) | | 6.3V (0J) | | 10V (1A) | | 16V (1C) | | 25V (1E) | | 35V (1V) | | 50V (1H) | | 63V (1J) | |
|-------|----------------|---------|-----|-----------|-----|----------|-----|----------|-----|----------|------|----------|--------|----------|--------|----------|-----|
| | | φD×L | mA | φD×L | mA | φD×L | mA | φD×L | mA | φD×L | mA | φD×L | mA | φD×L | mA | φD×L | mA |
| 1 | 010 | | | | | | | | | | | | | 4×7 | 10 | 4×7 | 11 |
| 2.2 | 2R2 | | | | | | | | | | | | | 4×7 | 15 | 4×7 | 17 |
| 3.3 | 3R3 | | | | | | | | | | | | | 4×7 | 18 | 4×7 | 21 |
| 4.7 | 4R7 | | | | | | | | | | | 4×7 | 22 | 5×7* | 23 | 5×7* | 26 |
| 10 | 100 | | | | | | 4×7 | 25 | 4×7 | 26 | 5×7* | 30 | 6.3×7* | 34 | 6.3×7* | 40 | |
| 22 | 220 | | | 4×7 | 31 | 4×7 | 32 | 5×7* | 39 | 5×7* | 41 | 6.3×7* | 47 | 6.3×7 | 53 | 8×7* | 70 |
| 33 | 330 | 4×7 | 32 | 4×7 | 32 | 4×7 | 35 | 5×7 | 43 | 6.3×7 | 53 | 8×7* | 71 | 8×7* | 76 | 8×7 | 80 |
| 47 | 470 | 4×7 | 38 | 4×7 | 38 | 5×7* | 47 | 6.3×7* | 59 | 6.3×7 | 65 | 8×7* | 83 | 8×7 | 85 | 8×7 | 95 |
| 100 | 101 | 5×7 | 61 | 6.3×7* | 75 | 6.3×7 | 80 | 6.3×7 | 90 | 8×7 | 125 | 8×7 | 115 | 8×9 | 130 | 10×9 | 170 |
| 220 | 221 | 6.3×7 | 90 | 6.3×7 | 99 | 8×7 | 140 | 8×7 | 146 | 8×9 | 190 | 10×9 | 215 | | | | |
| 330 | 331 | 8×7 | 129 | 8×7 | 156 | 8×7 | 165 | 8×9 | 185 | 10×9 | 265 | | | | | | |
| 470 | 471 | 8×7 | 154 | 8×7 | 175 | 8×9 | 215 | 10×9 | 255 | | | | | | | | |
| 1,000 | 102 | 8×9 | 200 | 10×9 | 205 | | | | | | | | | | | | |

Note: Case size in mark of " * " is available to product down size.

Part Numbering System

| | | | | | | | |
|------------|-------------|-----------------------|---------------|------------------------------|-------------|-------------|---------------------------|
| SEA series | 470µF | ±20% | 6.3V | Bulk Package | Gas Type | 8φ×7L | Pb-free and PET sleeve |
| SEA | 471 | M | 0J | BK | - | 0807 | |
| Series | Capacitance | Capacitance Tolerance | Rated Voltage | Lead Configuration & Package | Rubber Type | Case Size | Lead Wire and Sleeve type |

Note: For more details, please refer to "Part Numbering System (Radial Type)" on page 10.



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

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