

OVF Series

Features

- 105°C, 15,000 hours assured
- Ultra low ESR, solid capacitors of SMD type
- RoHS Compliant



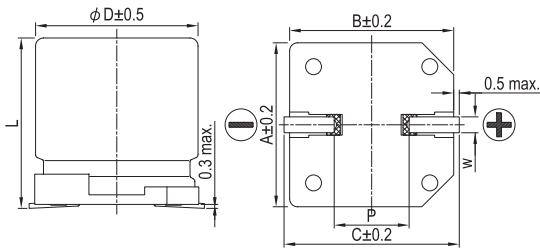
Marking color: Blue

Specifications

| Items | Performance | | | | | | | | | | |
|---|--|--|--|--------------------|------------------------------|-----------------|-----------------------------------|-----------------|-----------------------------------|-----------------|------------------------|
| Category Temperature Range | -55°C ~ +105°C | | | | | | | | | | |
| Capacitance Tolerance | ±20% (at 120 Hz, 20°C) | | | | | | | | | | |
| Leakage Current (at 20°C)* | Rated voltage applied, after 2 minutes at 20°C. See Standard Ratings | | | | | | | | | | |
| Tanδ (at 120 Hz, 20°C) | See Standard Ratings | | | | | | | | | | |
| ESR (at 100k ~ 300k Hz, 20°C) | See Standard Ratings | | | | | | | | | | |
| Endurance | <table border="1"> <tr> <td>Test Time</td> <td>15,000 Hrs For 5 ~ 6.3φ × 4.4L: 3,000 Hrs</td> </tr> <tr> <td>Capacitance Change</td> <td>Within ±20% of initial value</td> </tr> <tr> <td>Tanδ</td> <td>Less than 150% of specified value</td> </tr> <tr> <td>ESR</td> <td>Less than 150% of specified value</td> </tr> <tr> <td>Leakage Current</td> <td>Within specified value</td> </tr> </table> | Test Time | 15,000 Hrs For 5 ~ 6.3φ × 4.4L: 3,000 Hrs | Capacitance Change | Within ±20% of initial value | Tanδ | Less than 150% of specified value | ESR | Less than 150% of specified value | Leakage Current | Within specified value |
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| | Capacitance Change | Within ±20% of initial value | | | | | | | | | |
| | Tanδ | Less than 150% of specified value | | | | | | | | | |
| | ESR | Less than 150% 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 for 15,000 hours at 105°C. | | | | | | | | | | | |
| Moisture Resistance | <table border="1"> <tr> <td>Test Time</td> <td>1,000 Hrs</td> </tr> <tr> <td>Capacitance Change</td> <td>Within ±20% of initial value</td> </tr> <tr> <td>Tanδ</td> <td>Less than 150% of specified value</td> </tr> <tr> <td>ESR</td> <td>Less than 150% of specified value</td> </tr> <tr> <td>Leakage Current</td> <td>Within specified value</td> </tr> </table> | Test Time | 1,000 Hrs | Capacitance Change | Within ±20% of initial value | Tanδ | Less than 150% of specified value | ESR | Less than 150% of specified value | Leakage Current | Within specified value |
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| | Capacitance Change | Within ±20% of initial value | | | | | | | | | |
| | Tanδ | Less than 150% of specified value | | | | | | | | | |
| | ESR | Less than 150% of specified value | | | | | | | | | |
| Leakage Current | Within specified value | | | | | | | | | | |
| * The above specifications shall be satisfied when the capacitors are restored to 20°C after subjecting them at 60°C, 90 ~ 95% RH for 1,000 hours. Leakage current should be tested after voltage treatment*. | | | | | | | | | | | |
| Resistance to Soldering Heat * (Please refer to page 15 for reflow soldering 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 | | |
| | Capacitance Change | Within ±10% of initial value | | | | | | | | | |
| | Tanδ | Within specified value | | | | | | | | | |
| | ESR | Within specified value | | | | | | | | | |
| | Leakage Current | Within specified value | | | | | | | | | |
| * For any doubt about measured values, measure the leakage current again after the following voltage treatment. Voltage treatment: DC rated voltage is applied to the capacitors for 2 hours at 105°C. | | | | | | | | | | | |
| Ripple Current and Frequency Multipliers | <table border="1"> <tr> <td>Frequency (Hz)</td> <td>120 ≤ f < 1k</td> <td>1k ≤ f < 10k</td> <td>10k ≤ f < 100k</td> <td>100k ≤ f < 500k</td> </tr> <tr> <td>Multiplier</td> <td>0.05</td> <td>0.3</td> <td>0.7</td> <td>1.0</td> </tr> </table> | Frequency (Hz) | 120 ≤ f < 1k | 1k ≤ f < 10k | 10k ≤ f < 100k | 100k ≤ f < 500k | Multiplier | 0.05 | 0.3 | 0.7 | 1.0 |
| | Frequency (Hz) | 120 ≤ f < 1k | 1k ≤ f < 10k | 10k ≤ f < 100k | 100k ≤ f < 500k | | | | | | |
| Multiplier | 0.05 | 0.3 | 0.7 | 1.0 | | | | | | | |

* For any doubt about measured values, measure the leakage current again after the following voltage treatment.
Voltage treatment: DC rated voltage is applied to the capacitors for 2 hours at 105°C.

Diagram of Dimensions



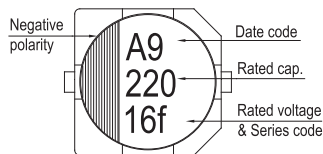
Lead Spacing and Diameter

Unit: mm

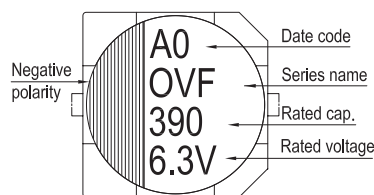
| φD | L | A | B | C | W | P ± 0.2 |
|-----|-----------|-----|-----|-----|-----------|---------|
| 5 | 4.4 ± 0.2 | 5.3 | 5.3 | 5.9 | 0.5 ~ 0.8 | 1.5 |
| 5 | 5.8 ± 0.3 | 5.3 | 5.3 | 5.9 | 0.5 ~ 0.8 | 1.5 |
| 6.3 | 4.4 ± 0.2 | 6.6 | 6.6 | 7.2 | 0.5 ~ 0.8 | 2.0 |
| 6.3 | 5.8 ± 0.3 | 6.6 | 6.6 | 7.2 | 0.5 ~ 0.8 | 2.0 |
| 6.3 | 7.7 ± 0.3 | 6.6 | 6.6 | 7.2 | 0.5 ~ 0.8 | 2.0 |
| 8 | 6.7 ± 0.3 | 8.3 | 8.3 | 9.0 | 0.7 ~ 1.1 | 3.1 |
| 8 | 7.7 ± 0.3 | 8.3 | 8.3 | 9.0 | 0.7 ~ 1.1 | 3.1 |

Marking

φD = 5 ~ 6.3



φD = 8





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

Standard Ratings

| Rated Volt. (V) | Surge Voltage (V) | Capacitance (μF) | Size $\phi D \times L$ (mm) | Tan δ (120 Hz, 20°C) | L C (μA) | E S R (m Ω /at 100k ~ 300k Hz, 20°C max.) | Rated R. C. (mA/rms at 100k Hz, 105°C) |
|-----------------|-------------------|-------------------------|-----------------------------|-----------------------------|-----------------|--|--|
| 2.0 (0D) | 2.3 | 680 | 6.3 \times 5.8 | 0.12 | 700 | 12 | 3,500 |
| 2.5V (0E) | 2.9 | 220 | 5 \times 4.4 | 0.12 | 700 | 25 | 2,100 |
| | | | 5 \times 5.8 | | | 10 | 3,900 |
| | | 330 | 6.3 \times 4.4 | | | 12 | 3,500 |
| | | | 5 \times 5.8 | | | 10 | 3,900 |
| | | 390 | 6.3 \times 5.8 | | 292 | 10 | 3,900 |
| | | | 6.3 \times 7.7 | | 352 | 9 | 4,200 |
| | | 560 | 6.3 \times 5.8 | | 700 | 10 | 3,900 |
| | | | 6.3 \times 7.7 | | 420 | 9 | 4,200 |
| | | | 8 \times 6.7 | | 420 | 10 | 4,500 |
| | | 680 | 8 \times 6.7 | | 510 | 10 | |
| 1,000 | 8 \times 7.7 | 750 | 9 | | | | |
| 4V (0G) | 4.6 | 330 | 6.3 \times 5.8 | 0.12 | 396 | 10 | 3,900 |
| | | 390 | 6.3 \times 7.7 | | 468 | 9 | 4,200 |
| | | 470 | 8 \times 6.7 | | 564 | 10 | 4,500 |
| | | 560 | 8 \times 6.7 | | 672 | 10 | |
| | | 680 | 8 \times 7.7 | | 816 | 9 | |
| 6.3V (0J) | 7.2 | 150 | 5 \times 4.4 | 0.12 | 700 | 25 | 2,100 |
| | | | 5 \times 5.8 | | | 12 | 3,500 |
| | | 220 | 5 \times 5.8 | | | 12 | 3,500 |
| | | | 6.3 \times 5.8 | | 416 | 10 | 3,900 |
| | | 270 | 6.3 \times 7.7 | | 510 | 9 | 4,200 |
| | | 330 | 6.3 \times 5.8 | | 700 | 10 | 3,900 |
| | | | 6.3 \times 7.7 | | 623 | 9 | 4,200 |
| | | | 8 \times 6.7 | | 624 | 10 | 4,500 |
| | | 390 | 8 \times 6.7 | | 737 | 10 | 4,500 |
| | | 470 | 8 \times 7.7 | | 888 | 9 | 4,500 |
| | | 560 | 8 \times 7.7 | | 1,050 | 9 | 4,500 |
| | | 10V (1A) | 12.0 | | 120 | 5 \times 5.8 | 0.12 |

OP-CAP

Part Numbering System

OVF Series 560 μF $\pm 20\%$ 2.5V Carrier Tape 6.3 $\phi \times 7.7L$ General Purpose

OVF **561** **M** **0E** **TR** - **0608**

Series Name Capacitance Capacitance Tolerance Rated Voltage Package Type Terminal Type Case Size Application

Note: For more details, please refer to "Part Numbering System" on page 20.