

## OVH Series

### Features

- 105°C, 2,000 hours assured
- Ultra low ESR, solid capacitors of SMD type
- RoHS Compliance



Marking color: Blue

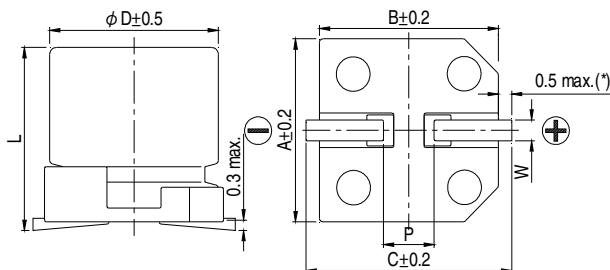
### Specifications

|                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                  |                                   |              |                |                    |                              |              |                |                    |                              |      |     |      |                                   |  |  |                 |                                   |  |  |                 |                        |  |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|--------------|----------------|--------------------|------------------------------|--------------|----------------|--------------------|------------------------------|------|-----|------|-----------------------------------|--|--|-----------------|-----------------------------------|--|--|-----------------|------------------------|--|--|
| Items                                                                                                                                                                                                        | Performance                                                                                                                                                                                                                                                                                                                                                                                      |                                   |              |                |                    |                              |              |                |                    |                              |      |     |      |                                   |  |  |                 |                                   |  |  |                 |                        |  |  |
| Category Temperature Range                                                                                                                                                                                   | -55℃ ~ +105℃                                                                                                                                                                                                                                                                                                                                                                                     |                                   |              |                |                    |                              |              |                |                    |                              |      |     |      |                                   |  |  |                 |                                   |  |  |                 |                        |  |  |
| Capacitance Tolerance                                                                                                                                                                                        | ±20% (at 120Hz, 20℃)                                                                                                                                                                                                                                                                                                                                                                             |                                   |              |                |                    |                              |              |                |                    |                              |      |     |      |                                   |  |  |                 |                                   |  |  |                 |                        |  |  |
| Leakage Current (at 20℃)*                                                                                                                                                                                    | Rated voltage applied, after 2 minutes at 20℃.<br>See Standard Ratings                                                                                                                                                                                                                                                                                                                           |                                   |              |                |                    |                              |              |                |                    |                              |      |     |      |                                   |  |  |                 |                                   |  |  |                 |                        |  |  |
| Tanδ (at 120Hz, 20℃)                                                                                                                                                                                         | See Standard Ratings                                                                                                                                                                                                                                                                                                                                                                             |                                   |              |                |                    |                              |              |                |                    |                              |      |     |      |                                   |  |  |                 |                                   |  |  |                 |                        |  |  |
| ESR (at 100k ~ 300k Hz, 20℃)                                                                                                                                                                                 | See Standard Ratings                                                                                                                                                                                                                                                                                                                                                                             |                                   |              |                |                    |                              |              |                |                    |                              |      |     |      |                                   |  |  |                 |                                   |  |  |                 |                        |  |  |
| Endurance                                                                                                                                                                                                    | <table><tr><td>Test Time</td><td colspan="3">2,000 Hrs</td></tr><tr><td>Capacitance Change</td><td colspan="3">Within ±20% of initial value</td></tr><tr><td>Tanδ</td><td colspan="3">Less than 150% of specified value</td></tr><tr><td>ESR</td><td colspan="3">Less than 150% of specified value</td></tr><tr><td>Leakage Current</td><td colspan="3">Within specified value</td></tr></table> |                                   |              |                | Test Time          | 2,000 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 |  |  |
|                                                                                                                                                                                                              | Test Time                                                                                                                                                                                                                                                                                                                                                                                        | 2,000 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            |              |                |                    |                              |              |                |                    |                              |      |     |      |                                   |  |  |                 |                                   |  |  |                 |                        |  |  |
| * The above specifications shall be satisfied when the capacitors are restored to 20℃ after the rated voltage applied for 2,000 hours at 105℃.                                                               |                                                                                                                                                                                                                                                                                                                                                                                                  |                                   |              |                |                    |                              |              |                |                    |                              |      |     |      |                                   |  |  |                 |                                   |  |  |                 |                        |  |  |
| Moisture Resistance                                                                                                                                                                                          | <table><tr><td>Test Time</td><td colspan="3">1,000 Hrs</td></tr><tr><td>Capacitance Change</td><td colspan="3">Within ±20% of initial value</td></tr><tr><td>Tanδ</td><td colspan="3">Less than 150% of specified value</td></tr><tr><td>ESR</td><td colspan="3">Less than 150% of specified value</td></tr><tr><td>Leakage Current</td><td colspan="3">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 |  |  |
|                                                                                                                                                                                                              | 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            |              |                |                    |                              |              |                |                    |                              |      |     |      |                                   |  |  |                 |                                   |  |  |                 |                        |  |  |
| * The above specifications shall be satisfied when the capacitors are restored to 20℃ after subjecting them at 60℃, 90 to 95% RH for 1,000 hours. Leakage current should be tested after voltage treatment*. |                                                                                                                                                                                                                                                                                                                                                                                                  |                                   |              |                |                    |                              |              |                |                    |                              |      |     |      |                                   |  |  |                 |                                   |  |  |                 |                        |  |  |
| Resistance to Soldering Heat *<br>(Please refer to page 25 for reflow soldering conditions)                                                                                                                  | <table><tr><td>Capacitance Change</td><td colspan="3">Within ±10% of initial value</td></tr><tr><td>Tanδ</td><td colspan="3">Within specified value</td></tr><tr><td>ESR</td><td colspan="3">Within specified value</td></tr><tr><td>Leakage Current</td><td colspan="3">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            |              |                |                    |                              |              |                |                    |                              |      |     |      |                                   |  |  |                 |                                   |  |  |                 |                        |  |  |
|                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                  |                                   |              |                |                    |                              |              |                |                    |                              |      |     |      |                                   |  |  |                 |                                   |  |  |                 |                        |  |  |
| Ripple Current and Frequency Multipliers                                                                                                                                                                     | <table><tr><td>Frequency (Hz)</td><td>120 ≤ f &lt; 1k</td><td>1k ≤ f &lt; 10k</td><td>10k ≤ f &lt; 100k</td><td>100k ≤ f &lt; 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

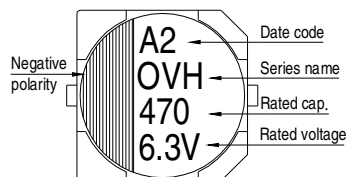
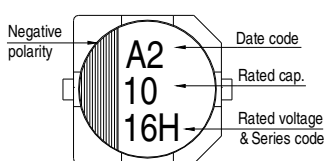
| φ D | L                 | A    | B    | C    | W         | P ± 0.2 |
|-----|-------------------|------|------|------|-----------|---------|
| 6.3 | 4.4 ± 0.2         | 6.6  | 6.6  | 7.2  | 0.5 ~ 0.8 | 2.0     |
| 6.3 | 5.9 + 0.1 / - 0.3 | 6.6  | 6.6  | 7.2  | 0.5 ~ 0.8 | 2.0     |
| 8   | 6.7 ± 0.3         | 8.3  | 8.3  | 9.0  | 0.7 ~ 1.1 | 3.1     |
| 10  | 7.7 ± 0.3         | 10.3 | 10.3 | 11.0 | 0.7 ~ 1.3 | 4.7     |
| 10  | 9.9 + 0.1 / - 0.3 | 10.3 | 10.3 | 11.0 | 0.7 ~ 1.3 | 4.7     |

(\*): For 6.3φ is 0.4 max.

### Marking

φ D = 6.3

φ D = 8 ~ 10



Dimension:  $\phi$  D×L(mm)

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

## Standard Ratings

| Rated Volt.<br>(V) | Surge Voltage<br>(V) | Capacitance<br>( $\mu$ F) | Size<br>$\phi$ D×L(mm) | Tan $\delta$<br>(120Hz, 20°C) | L C<br>( $\mu$ A) | E S R<br>(m $\Omega$ /at 100k ~ 300k Hz, 20°C max.) | Rated R. C.<br>(mA/rms at 100k Hz, 105°C) |
|--------------------|----------------------|---------------------------|------------------------|-------------------------------|-------------------|-----------------------------------------------------|-------------------------------------------|
| 2.5V (0E)          | 2.9                  | 330                       | 6.3 × 4.4              | 0.12                          | 500               | 14                                                  | 3,180                                     |
|                    |                      | 390                       | 6.3 × 5.9              | 0.12                          | 293               | 10                                                  | 3,900                                     |
|                    |                      | 560                       | 6.3 × 5.9              | 0.12                          | 700               | 10                                                  | 3,900                                     |
|                    |                      |                           | 8 × 6.7                | 0.12                          | 420               | 9                                                   | 4,200                                     |
|                    |                      | 680                       | 8 × 6.7                | 0.12                          | 510               | 9                                                   | 4,500                                     |
|                    |                      | 1,200                     | 10 × 7.7               | 0.12                          | 900               | 9                                                   | 5,000                                     |
|                    |                      | 2,200                     | 10 × 9.9               | 0.12                          | 1,650             | 8                                                   | 6,000                                     |
| 4V (0G)            | 4.6                  | 330                       | 6.3 × 5.9              | 0.12                          | 396               | 10                                                  | 3,900                                     |
|                    |                      | 470                       | 8 × 6.7                | 0.12                          | 564               | 9                                                   | 4,500                                     |
|                    |                      | 560                       | 8 × 6.7                | 0.12                          | 894               | 9                                                   | 4,500                                     |
|                    |                      | 1,000                     | 10 × 7.7               | 0.12                          | 1,200             | 9                                                   | 5,000                                     |
|                    |                      | 1,800                     | 10 × 9.9               | 0.12                          | 2,160             | 8                                                   | 6,000                                     |
| 6.3V (0J)          | 7.2                  | 220                       | 6.3 × 4.4              | 0.12                          | 500               | 15                                                  | 3,180                                     |
|                    |                      |                           | 6.3 × 5.9              | 0.12                          | 416               | 10                                                  | 3,900                                     |
|                    |                      | 330                       | 8 × 6.7                | 0.12                          | 624               | 9                                                   | 4,500                                     |
|                    |                      | 390                       | 8 × 6.7                | 0.12                          | 737               | 9                                                   | 4,500                                     |
|                    |                      | 820                       | 10 × 7.7               | 0.12                          | 1,550             | 9                                                   | 5,000                                     |
|                    |                      | 1,500                     | 10 × 9.9               | 0.12                          | 2,835             | 8                                                   | 6,000                                     |

## Part Numbering System

|             |             |                       |               |              |               |                  |                              |
|-------------|-------------|-----------------------|---------------|--------------|---------------|------------------|------------------------------|
| OVH Series  | 820 $\mu$ F | ±20%                  | 6.3V          | Carrier Tape |               | 10 $\phi$ × 7.7L | Pb-free and PET coating case |
| <b>OVH</b>  | <b>821</b>  | <b>M</b>              | <b>0J</b>     | <b>TR</b>    | -             | <b>1008</b>      |                              |
| 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.

## Данный компонент на территории Российской Федерации

**Вы можете приобрести в компании MosChip.**

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

### Офис по работе с юридическими лицами:

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