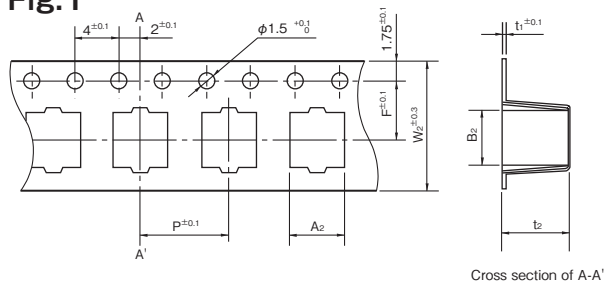
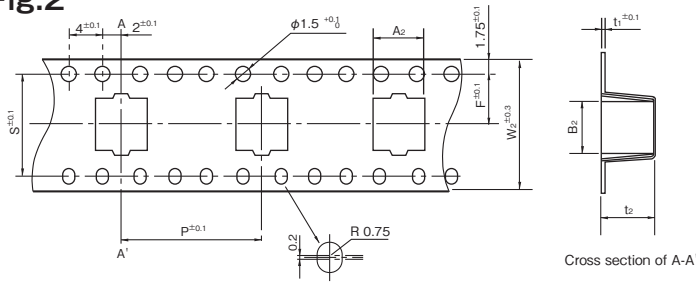
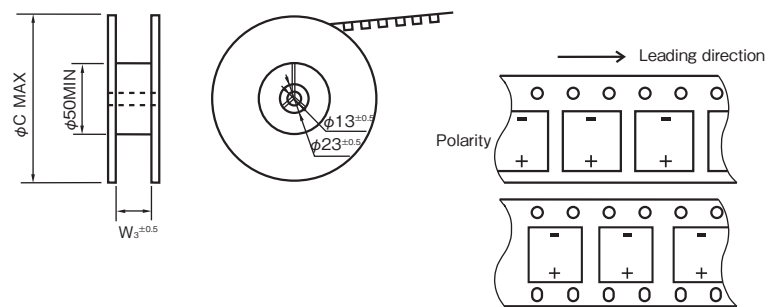


**Chip type capacitors**
**◆ TAPING DIMENSIONS**
**Fig.1**

**Fig.2**


| Size       | W <sub>2</sub><br>(mm) | A <sub>2</sub><br>(mm) | B <sub>2</sub><br>(mm) | P<br>(mm) | t <sub>2</sub><br>(mm) | F<br>(mm) | t <sub>1</sub><br>(mm) | S<br>(mm) | Applicable |
|------------|------------------------|------------------------|------------------------|-----------|------------------------|-----------|------------------------|-----------|------------|
| φ4×5.5     | 12.0                   | 4.7                    | 4.7                    | 8         | 5.7                    | 5.5       | 0.4                    | —         | Fig.1      |
| φ5×5.5     | 12.0                   | 5.7                    | 5.7                    | 12        | 5.7                    | 5.5       | 0.4                    | —         |            |
| φ6.3×5.5   | 16.0                   | 7.0                    | 7.0                    | 12        | 5.7                    | 7.5       | 0.4                    | —         |            |
| φ4×6.1     | 12.0                   | 4.7                    | 4.7                    | 8         | 6.2                    | 5.5       | 0.4                    | —         |            |
| φ5×6.1     | 12.0                   | 5.7                    | 5.7                    | 12        | 6.2                    | 5.5       | 0.4                    | —         |            |
| φ6.3×6.1   | 16.0                   | 7.0                    | 7.0                    | 12        | 6.2                    | 7.5       | 0.4                    | —         |            |
| φ6.3×8     | 16.0                   | 7.0                    | 7.0                    | 12        | 8.2                    | 7.5       | 0.4                    | —         |            |
| φ8×6.5     | 16.0                   | 8.7                    | 8.7                    | 12        | 6.8                    | 7.5       | 0.4                    | —         |            |
| φ8×10.5    | 24.0                   | 8.7                    | 8.7                    | 16        | 11.0                   | 11.5      | 0.4                    | —         |            |
| φ10×10.5   | 24.0                   | 10.7                   | 10.7                   | 16        | 11.0                   | 11.5      | 0.4                    | —         |            |
| φ12.5×13.5 | 32.0                   | 13.4                   | 13.4                   | 24        | 14.4                   | 14.2      | 0.5                    | 28.4      | Fig.2      |
| φ12.5×16   | 32.0                   | 13.4                   | 13.4                   | 24        | 16.3                   | 14.2      | 0.5                    | 28.4      |            |
| φ16×16.5   | 44.0                   | 17.5                   | 17.5                   | 28        | 17.4                   | 20.2      | 0.5                    | 40.4      |            |
| φ16×21.5   | 44.0                   | 17.5                   | 17.5                   | 28        | 22.4                   | 20.2      | 0.5                    | 40.4      |            |
| φ18×16.5   | 44.0                   | 19.5                   | 19.5                   | 32        | 17.4                   | 20.2      | 0.5                    | 40.4      |            |
| φ18×21.5   | 44.0                   | 19.5                   | 19.5                   | 32        | 22.4                   | 20.2      | 0.5                    | 40.4      |            |

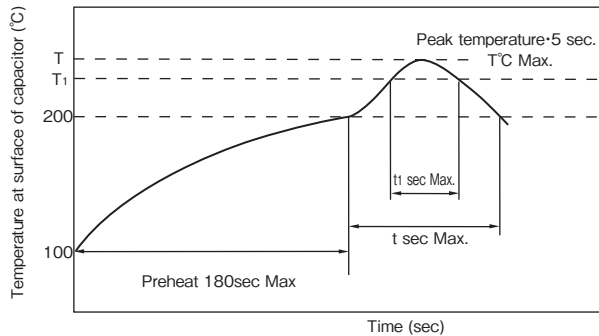
**◆ TAPING REEL AND PACKING QUANTITY**


| Size              | W <sub>3</sub><br>(mm) | φC<br>(mm) | Quantity/reel | Standard<br>Shipping<br>Carton<br>Quantity |
|-------------------|------------------------|------------|---------------|--|
| φ4×5.5,6.1        | 14                     | 382        | 2,000         | 10,000                                     |
| φ5×5.5,6.1        | 14                     | 382        | 1,000         | 5,000                                      |
| φ6.3×5.5,6.1      | 18                     | 382        | 1,000         | 5,000                                      |
| φ6.3×8            | 18                     | 382        | 900           | 4,500                                      |
| φ8×6.5            | 18                     | 382        | 1,000         | 5,000                                      |
| φ8×10.5           | 26                     | 382        | 500           | 2,000                                      |
| φ10×10.5          | 26                     | 382        | 500           | 2,000                                      |
| φ12.5×13.5        | 34                     | 332        | 200           | 600  |
| φ12.5×16          | 34                     | 332        | 150           | 450  |
| φ16×16.5,φ18×16.5 | 46                     | 332        | 125           | 250  |
| φ16×21.5,φ18×21.5 | 46                     | 332        | 75            | 150  |

Reusable reels are available according to your request.  
Please consult in regard to establishing supply and withdrawal system.

**◆ LEAD FREE TYPE REFLOW SOLDERING CONDITION**
**● Size  $\phi 4 \sim \phi 10$** 

- 1) Temperature at surface of capacitor shall not exceed  $T^{\circ}\text{C}$ .
- 2) Period that temperature at surface of capacitor becomes more than  $200^{\circ}\text{C}$  and  $T_1^{\circ}\text{C}$  shall not exceed  $t$  and  $t_1$  seconds, respectively.
- 3) Preheat shall be made at  $100^{\circ}\text{C} \sim 200^{\circ}\text{C}$  and for maximum 180 seconds.



| Series                   | Size                   | $T(^{\circ}\text{C})$<br>① | $T_1(^{\circ}\text{C})$ | $t(\text{sec})$<br>② | $t_1(\text{sec})$<br>③ | Reflow cycle |
|--------------------------|------------------------|----------------------------|-------------------------|----------------------|------------------------|--------------|
| SGV<br>TZV<br>TXV<br>TLV | $\phi 4 \sim \phi 6.3$ | 250                        | 230                     | 90                   | 40                     | 1            |
| THV<br>TKV               | $\phi 8$               | 240                        | 230                     | 90                   | 30                     | 1            |
|                          | $\phi 10$              | 235                        | 230                     | 60                   | 30                     | 1            |
| SJV<br>SLV               | $\phi 4 \sim \phi 6.3$ | 240                        | 220                     | 60                   | 40                     | 1            |
| JGV                      | $\phi 4 \sim \phi 6.3$ | 260                        | 217                     | —                    | 60                     | 2            |
| JZV                      | $\phi 8, \phi 10$      | 250                        | 217                     | —                    | 60                     | 2            |

① Peak temperature

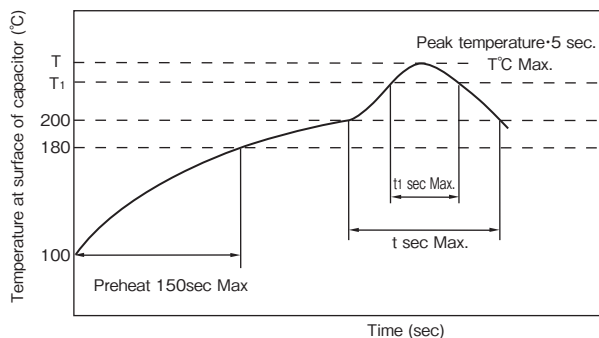
 ② (MAX) Time more than  $200^{\circ}\text{C}$ 

 ③ (MAX) Time more than  $T_1$ 

※ Please contact us if the condition is over the maximum.

**◆ LEAD FREE TYPE REFLOW SOLDERING CONDITION**
**● Size  $\phi 12.5 \sim \phi 18$** 

- 1) Temperature at surface of capacitor shall not exceed  $T^{\circ}\text{C}$ .
- 2) Period that temperature at surface of capacitor becomes more than  $200^{\circ}\text{C}$  and  $T_1^{\circ}\text{C}$  shall not exceed  $t$  and  $t_1$  seconds, respectively.
- 3) Preheat shall be made at  $100^{\circ}\text{C} \sim 180^{\circ}\text{C}$  and for maximum 150 seconds.



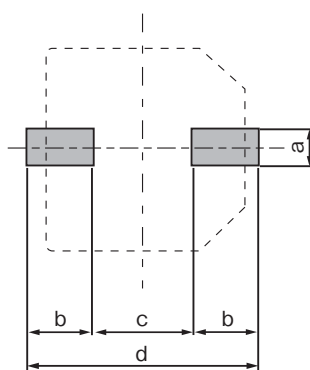
| Series     | Size                     | $T(^{\circ}\text{C})$<br>① | $T_1(^{\circ}\text{C})$ | $t(\text{sec})$<br>② | $t_1(\text{sec})$<br>③ | Reflow cycle |
|------------|--------------------------|----------------------------|-------------------------|----------------------|------------------------|--------------|
| SGV<br>TLV | $\phi 12.5 \sim \phi 18$ | 240                        | 230                     | 60                   | 30                     | 1            |

① Peak temperature

 ② (MAX) Time more than  $200^{\circ}\text{C}$ 

 ③ (MAX) Time more than  $T_1$ 

※ Please contact us if the condition is over the maximum.

**◆ RECOMMENDED LAND SIZE**


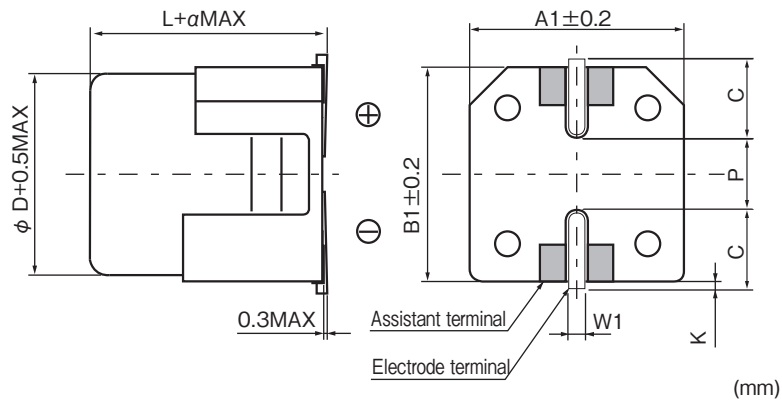
| Size                  | a   | b   | c   | d    |
|-----------------------|-----|-----|-----|------|
| $\phi 4$              | 1.6 | 2.6 | 1.0 | 6.2  |
| $\phi 5$              | 1.6 | 3.0 | 1.4 | 7.4  |
| $\phi 6.3$            | 1.6 | 3.5 | 2.1 | 9.1  |
| $\phi 8 \times 6.5$   | 1.6 | 4.5 | 2.1 | 11.1 |
| $\phi 8 \times 10.5$  | 2.2 | 4.1 | 3.0 | 11.2 |
| $\phi 10 \times 10.5$ | 2.2 | 4.3 | 4.5 | 13.1 |
| $\phi 12.5$           | 2.5 | 6.0 | 5.0 | 17   |
| $\phi 16$             | 3   | 6.5 | 8.0 | 21   |
| $\phi 18$             | 3   | 7.5 | 8.0 | 23   |

**◆Vibration proof packages with the supporting terminal**

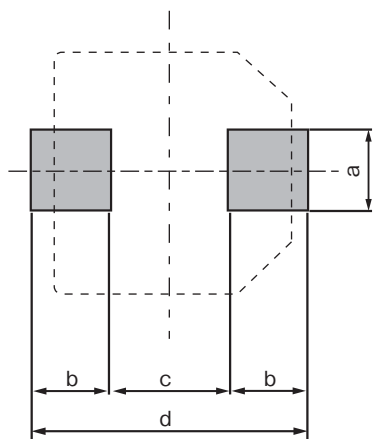
- For chip Aluminum electrolytic capacitors more than case size  $\phi 8$ , vibration proof packages supports.


**◆PART NUMBER**

□□□    □□□    □□□□□    □    □□□    VB    D×L  
 Rated Voltage    Series    Rated Capacitance    Capacitance Tolerance    Option    Vibration proof package No.    Case Size

**◆DIMENSIONS**


| Size( $\phi D \times L$ ) | A1   | B1   | C   | W1      | P   | K       | $\alpha$ |
|---------------------------|------|------|-----|---------|-----|---------|----------|
| 8×10.5                    | 8.3  | 8.3  | 3.1 | 0.9±0.2 | 3.1 | 0.5±0.4 | 0.5      |
| 10×10.5                   | 10.3 | 10.3 | 3.4 | 0.9±0.2 | 4.5 | 0.5±0.4 | 0.5      |
| 12.5×13.5                 | 13   | 13   | 4.9 | 1.1±0.3 | 4.5 | 0.7±0.4 | 1        |
| 12.5×16                   | 13   | 13   | 4.9 | 1.1±0.3 | 4.5 | 0.7±0.4 | 1        |
| 16×16.5                   | 17   | 17   | 6   | 1.1±0.3 | 6.8 | 0.7±0.4 | 1        |
| 16×21.5                   | 17   | 17   | 6   | 1.1±0.3 | 6.8 | 0.7±0.4 | 1        |
| 18×16.5                   | 19   | 19   | 7   | 1.1±0.3 | 6.8 | 0.7±0.4 | 1        |
| 18×21.5                   | 19   | 19   | 7   | 1.1±0.3 | 6.8 | 0.7±0.4 | 1        |

**◆RECOMMENDED LAND SIZE**


| Size( $\phi D \times L$ ) | a   | b   | c   | d    |
|---------------------------|-----|-----|-----|------|
| 8×10.5                    | 4.2 | 4.5 | 2.5 | 11.5 |
| 10×10.5                   | 4.2 | 4.8 | 3.9 | 13.5 |
| 12.5                      | 6.4 | 6.2 | 3.9 | 16.3 |
| 16                        | 7   | 7.8 | 4.7 | 20.3 |
| 18                        | 7   | 8.8 | 4.7 | 22.3 |