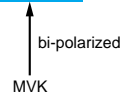


Alchip® **MVK-BP** Series

- Bi-polarized chip type for the circuit, of which polarity is frequently reversed
- Solvent-proof type (see PRECAUTIONS AND GUIDELINES)
- Pb-free design

**MVK-BP**

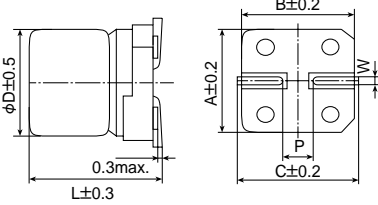


◆ **SPECIFICATIONS**

| Items  | Characteristics  |                                      |      |      |      |      |      |
|--|--|--------------------------------------|------|------|------|------|------|
| Category   | -40 to +105°C  |                                      |      |      |      |      |      |
| Temperature Range                                      | -40 to +105°C  |                                      |      |      |      |      |      |
| Rated Voltage Range                                    | 6.3 to 50V <sub>dc</sub>   |                                      |      |      |      |      |      |
| Capacitance Tolerance                                  | ±20% (M) (at 20°C, 120Hz)  |                                      |      |      |      |      |      |
| Leakage Current  | I = 0.05CV or 10μA, whichever is greater.<br>Where, I : Max. leakage current (μA), C : Nominal capacitance (μF), V : Rated voltage (V) (at 20°C after 2 minutes)   |                                      |      |      |      |      |      |
| Dissipation Factor (tanδ)                              | Rated voltage (V <sub>dc</sub> )   | 6.3V                                 | 10V  | 16V  | 25V  | 35V  | 50V  |
|  | tanδ (Max.)  | 0.35                                 | 0.26 | 0.24 | 0.20 | 0.18 | 0.18 |
| Low Temperature Characteristics (Max. Impedance Ratio) | Rated voltage (V <sub>dc</sub> )   | 6.3V                                 | 10V  | 16V  | 25V  | 35V  | 50V  |
|  | Z(-25°C)/Z(+20°C)  | 4                                    | 3    | 2    | 2    | 2    | 2    |
|  | Z(-40°C)/Z(+20°C)  | 10                                   | 8    | 6    | 4    | 3    | 3    |
| Endurance  | The following specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage is applied for 1000 hours at 105°C, however the polarization shall be reversed every 250 hours. |                                      |      |      |      |      |      |
|  | Capacitance change   | ≤±30% of the initial value           |      |      |      |      |      |
|  | D.F. (tanδ)  | ≤300% of the initial specified value |      |      |      |      |      |
|  | Leakage current  | ≤The initial specified value         |      |      |      |      |      |
| Shelf Life   | The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 500 hours at 105°C without voltage applied.   |                                      |      |      |      |      |      |
|  | Capacitance change   | ≤±25% of the initial value           |      |      |      |      |      |
|  | D.F. (tanδ)  | ≤200% of the initial specified value |      |      |      |      |      |
|  | Leakage current  | ≤The initial specified value         |      |      |      |      |      |

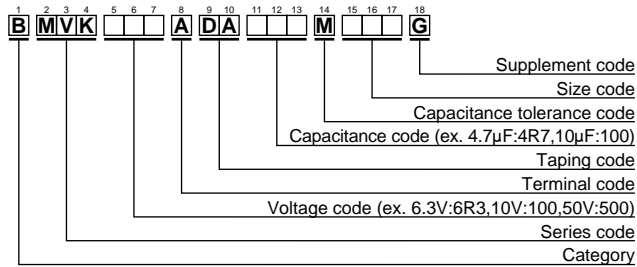
◆ **DIMENSIONS [mm]**

● Terminal Code : A



| Size code | D   | L   | A   | B   | C   | W          | P   |
|-----------|-----|-----|-----|-----|-----|------------|-----|
| D60       | 4   | 5.7 | 4.3 | 4.3 | 5.1 | 0.5 to 0.8 | 1.0 |
| E60       | 5   | 5.7 | 5.3 | 5.3 | 5.9 | 0.5 to 0.8 | 1.4 |
| F60       | 6.3 | 5.7 | 6.6 | 6.6 | 7.2 | 0.5 to 0.8 | 1.9 |

◆ **PART NUMBERING SYSTEM**



Please refer to "A guide to global code (surface mount type)"

◆ **MARKING**

EX) 35V4.7μF



◆ **STANDARD RATINGS**

| WV (V <sub>dc</sub> ) | Cap (μF) | Size code | tanδ | Rated ripple current (mArms/105°C, 120Hz) | Part No.           | WV (V <sub>dc</sub> ) | Cap (μF) | Size code | tanδ | Rated ripple current (mArms/105°C, 120Hz) | Part No.           |  |
|-----------------------|----------|-----------|------|---|--------------------|-----------------------|----------|-----------|------|---|--------------------|--|
| 6.3                   | 10       | D60       | 0.35 | 14  | BMVK6R3ADA100MD60G | 50                    | 0.10     | D60       | 0.18 | 1.3                                       | BMVK500ADAR10MD60G |  |
|                       | 22       | E60       | 0.35 | 25  | BMVK6R3ADA220ME60G |                       | 0.15     | D60       | 0.18 | 1.9                                       | BMVK500ADAR15MD60G |  |
|                       | 47       | F60       | 0.35 | 39  | BMVK6R3ADA470MF60G |                       | 0.22     | D60       | 0.18 | 2.3                                       | BMVK500ADAR22MD60G |  |
| 10                    | 6.8      | D60       | 0.26 | 13  | BMVK100ADA6R8MD60G |                       | 0.33     | D60       | 0.18 | 2.8                                       | BMVK500ADAR33MD60G |  |
|                       | 15       | E60       | 0.26 | 22  | BMVK100ADA150ME60G |                       | 0.47     | D60       | 0.18 | 3.4                                       | BMVK500ADAR47MD60G |  |
|                       | 33       | F60       | 0.26 | 35  | BMVK100ADA330MF60G |                       | 0.68     | D60       | 0.18 | 4.1                                       | BMVK500ADAR68MD60G |  |
| 16                    | 4.7      | D60       | 0.24 | 12  | BMVK160ADA4R7MD60G |                       | 1.0      | D60       | 0.18 | 5.5                                       | BMVK500ADA1R0MD60G |  |
|                       | 10       | E60       | 0.24 | 20  | BMVK160ADA100ME60G |                       | 1.5      | D60       | 0.18 | 7.5                                       | BMVK500ADA1R5MD60G |  |
|                       | 22       | F60       | 0.24 | 32  | BMVK160ADA220MF60G |                       | 2.2      | E60       | 0.18 | 10  | BMVK500ADA2R2ME60G |  |
| 25                    | 3.3      | D60       | 0.20 | 10  | BMVK250ADA3R3MD60G |                       | 3.3      | E60       | 0.18 | 13  | BMVK500ADA3R3ME60G |  |
|                       | 6.8      | E60       | 0.20 | 17  | BMVK250ADA6R8ME60G |                       | 4.7      | F60       | 0.18 | 16  | BMVK500ADA4R7MF60G |  |
|                       | 15       | F60       | 0.20 | 28  | BMVK250ADA150MF60G |                       | 6.8      | F60       | 0.18 | 20  | BMVK500ADA6R8MF60G |  |
| 35                    | 2.2      | D60       | 0.18 | 8.8                                       | BMVK350ADA2R2MD60G |                       |          |           |      |   |                    |  |
|                       | 4.7      | E60       | 0.18 | 15  | BMVK350ADA4R7ME60G |                       |          |           |      |   |                    |  |
|                       | 10       | F60       | 0.18 | 23  | BMVK350ADA100MF60G |                       |          |           |      |   |                    |  |