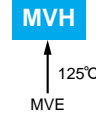


**Alchip™ - MVH Series**

- Lower ESR, Higher ripple current
- Endurance : 1,000 to 5,000 hours at 125°C
- Suitable to fit for automotive equipment
- Solvent resistant type (10 to 50V)
- RoHS Compliant

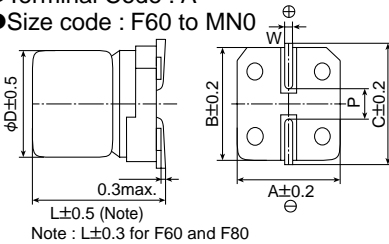


◆ **SPECIFICATIONS**

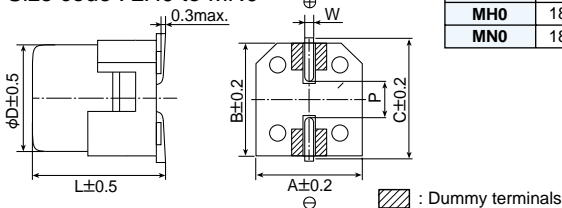
| Items  | Characteristics  |   |      |      |      |      |      |                                      |      |             |            |      |            |  |
|--|--|---|------|------|------|------|------|--------------------------------------|------|-------------|------------|------|------------|--|
| <b>Category</b>  | -40 to +125°C  |   |      |      |      |      |      |                                      |      |             |            |      |            |  |
| <b>Temperature Range</b>   | -40 to +125°C  |   |      |      |      |      |      |                                      |      |             |            |      |            |  |
| <b>Rated Voltage Range</b>   | 10 to 450V <sub>dc</sub>   |   |      |      |      |      |      |                                      |      |             |            |      |            |  |
| <b>Capacitance Tolerance</b>   | ±20% (M) (at 20°C, 120Hz)  |   |      |      |      |      |      |                                      |      |             |            |      |            |  |
| <b>Leakage Current</b>   | Rated voltage (V <sub>dc</sub> )   | 10 to 100V <sub>dc</sub>  |      |      |      |      |      | 160 to 450V <sub>dc</sub>            |      |             |            |      |            |  |
|  | F60 to JA0   | I=0.01CV or 3μA, whichever is greater.  |      |      |      |      |      | I=0.04CV+100                         |      |             |            |      |            |  |
|  | KE0 to MN0   | I=0.03CV or 4μA, whichever is greater.  |      |      |      |      |      |                                      |      |             |            |      |            |  |
| Where, I : Max. leakage current (μA), C : Nominal capacitance (μF), V : Rated voltage (V) (at 20°C after 2 minutes)  |  |   |      |      |      |      |      |                                      |      |             |            |      |            |  |
| <b>Dissipation Factor (tanδ)</b>   | Rated voltage (V <sub>dc</sub> )   | 10V   | 16V  | 25V  | 35V  | 50V  | 63V  | 80V                                  | 100V | 160 to 250V | 400 & 450V |      |            |  |
|  | tanδ (Max.)  | F60 to JA0  | 0.24 | 0.20 | 0.16 | 0.14 | 0.14 | 0.12                                 | 0.12 | 0.10        | —          | —    |            |  |
|  |  | KE0 to MN0  | 0.22 | 0.18 | 0.16 | 0.14 | 0.12 | 0.14                                 | —    | 0.10        | 0.20       | 0.24 |            |  |
| When nominal capacitance exceeds 1,000μF, add 0.02 to the value above for each 1,000μF increase. (at 20°C, 120Hz)  |  |   |      |      |      |      |      |                                      |      |             |            |      |            |  |
| <b>Low Temperature Characteristics (Max. Impedance Ratio)</b>  | Rated voltage (V <sub>dc</sub> )   | 10V   | 16V  | 25V  | 35V  | 50V  | 63V  | 80V                                  | 100V | 160 to 250V | 400 & 450V |      |            |  |
|  | F60 to JA0   | Z(-25°C)/Z(+20°C)   | 3    | 2    | 2    | 2    | 2    | 2                                    | 2    | 2           | —          | —    |            |  |
|  |  | Z(-40°C)/Z(+20°C)   | 6    | 4    | 4    | 3    | 3    | 3                                    | 3    | 3           | —          | —    |            |  |
|  | KE0 to MN0   | Z(-25°C)/Z(+20°C)   | 4    | 3    | 2    | 2    | 2    | 2                                    | —    | 2           | 3          | 6    |            |  |
|  |  | Z(-40°C)/Z(+20°C)   | 8    | 6    | 4    | 3    | 3    | 3                                    | —    | 3           | 6          | 10   | (at 120Hz) |  |
| The following specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage is applied for the specified time at 125°C. |  |   |      |      |      |      |      |                                      |      |             |            |      |            |  |
| <b>Endurance</b>   | Time   | F60 to H63 (10 to 100V <sub>dc</sub> ) : 1,000hours<br>HA0 to JA0 (10 to 100V <sub>dc</sub> ) : 2,000hours<br>KE0 to MN0 (10 to 100V <sub>dc</sub> ) : 5,000hours<br>KE0 to MN0 (160 to 450V <sub>dc</sub> ) : 2,000hours |      |      |      |      |      |                                      |      |             |            |      |            |  |
|  | Capacitance change   | ≤±30% of the initial value  |      |      |      |      |      |                                      |      |             |            |      |            |  |
|  | D.F. (tanδ)  | ≤300% of the initial specified value  |      |      |      |      |      |                                      |      |             |            |      |            |  |
|  | Leakage current  | ≤The initial specified value  |      |      |      |      |      |                                      |      |             |            |      |            |  |
| <b>Shelf Life</b>  | The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1,000 hours (500 hours for 400 to 450V <sub>dc</sub> ) at 125°C without voltage applied. Before the measurement, the capacitor shall be preconditioned by applying voltage according to Item 4.1 of JIS C 5101-4. |   |      |      |      |      |      |                                      |      |             |            |      |            |  |
|  | Rated voltage(V <sub>dc</sub> )  | 10 to 50V <sub>dc</sub>   |      |      |      |      |      | 63 to 450V <sub>dc</sub>             |      |             |            |      |            |  |
|  | Capacitance change   | ≤±30% of the initial value  |      |      |      |      |      | ≤±30% of the initial value           |      |             |            |      |            |  |
|  | D.F. (tanδ)  | ≤300% of the initial specified value  |      |      |      |      |      | ≤300% of the initial specified value |      |             |            |      |            |  |
|  | Leakage current  | ≤The initial specified value  |      |      |      |      |      | ≤500% of the initial specified value |      |             |            |      |            |  |

◆ **DIMENSIONS [mm]**

- Terminal Code : A
- Size code : F60 to MN0



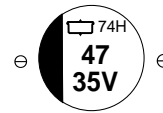
- Terminal Code : G
- Size code : LH0 to MN0



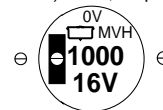
| Size code | D    | L    | A    | B    | C    | W          | P   |
|-----------|------|------|------|------|------|------------|-----|
| F60       | 6.3  | 5.7  | 6.6  | 6.6  | 7.2  | 0.5 to 0.8 | 1.9 |
| F80       | 6.3  | 7.7  | 6.6  | 6.6  | 7.2  | 0.5 to 0.8 | 1.9 |
| H63       | 8    | 6.3  | 8.3  | 8.3  | 9.0  | 0.5 to 0.8 | 2.3 |
| HA0       | 8    | 10.0 | 8.3  | 8.3  | 9.0  | 0.7 to 1.1 | 3.1 |
| JA0       | 10   | 10.0 | 10.3 | 10.3 | 11.0 | 0.7 to 1.1 | 4.5 |
| KE0       | 12.5 | 13.5 | 13.0 | 13.0 | 13.7 | 1.0 to 1.3 | 4.2 |
| KG5       | 12.5 | 16.0 | 13.0 | 13.0 | 13.7 | 1.0 to 1.3 | 4.2 |
| LH0       | 16   | 16.5 | 17.0 | 17.0 | 18.0 | 1.0 to 1.3 | 6.5 |
| LN0       | 16   | 21.5 | 17.0 | 17.0 | 18.0 | 1.0 to 1.3 | 6.5 |
| MH0       | 18   | 16.5 | 19.0 | 19.0 | 20.0 | 1.0 to 1.3 | 6.5 |
| MN0       | 18   | 21.5 | 19.0 | 19.0 | 20.0 | 1.0 to 1.3 | 6.5 |

◆ **MARKING**

F60 to JA0  
EX) 35V47μF



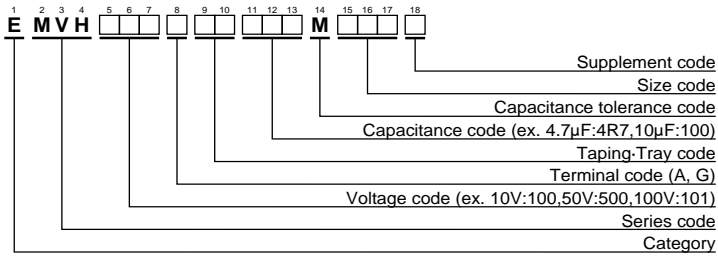
KE0 to MN0  
EX) 16V1,000μF





Alchip™-MVH Series

◆PART NUMBERING SYSTEM



Please refer to "Product code guide (surface mount type)"

◆STANDARD RATINGS

□ is not solvent resistant (63 to 450V<sub>dc</sub>).

Table with columns for WV (V<sub>dc</sub>), Cap (μF), Size code, ESR (Ω<sub>max</sub>/100kHz), Rated ripple current (mA<sub>rms</sub>/125°C), and Part No. for various capacitor models.

□ : Enter the appropriate terminal code.

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