

**Alchip® MVE Series**

- Rated voltage range : 6.3 to 450V, capacitance range : 0.47 to 6800μF
- Endurance : 1000 to 2000 hours at 105°C
- Case size range : φ4×5.2L to φ18×21.5L
- Solvent-proof type except 100 to 450V<sub>dc</sub> (see PRECAUTIONS AND GUIDELINES)
- Pb-free design

MVE

↑  
downsized  
size extended  
MVK



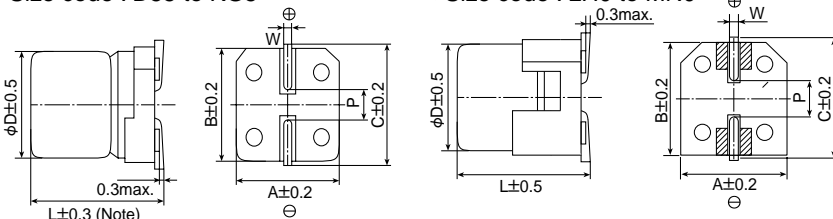
**◆ SPECIFICATIONS**

| Items   | Characteristics   |  |  |
|---|---|--|--|
| <b>Category</b><br>Temperature Range                          | -40 to +105°C   |  |  |
| <b>Rated Voltage Range</b>                                    | 6.3 to 450V <sub>dc</sub>   |  |  |
| <b>Capacitance Tolerance</b>                                  | ±20%(M) (20°C, 120Hz)   |  |  |
| <b>Leakage Current</b>  | Rated voltage(V <sub>dc</sub> )   | 6.3 to 100V      160 to 450V   |  |
|   | D55 to JA0  | I=0.01CV or 3μA, whichever is greater (2 minutes)      —                       |  |
|   | KE0 to MN0  | I=0.03CV or 4μA, whichever is greater (1 minute)      I=0.04CV+100μA (1minute) |  |
|   | Where, I : Max. leakage current (μA), C : Nominal capacitance (μF), V : Rated voltage (V) (20°C)  |  |  |
| <b>Dissipation Factor (tanδ)</b>                              | See STANDARD RATINGS (20°C, 120Hz)  |  |  |
| <b>Low Temperature Characteristics (Max. Impedance Ratio)</b> | Rated voltage (V <sub>dc</sub> )  | 6.3V   10V   16V   25V   35V   50V   63V   100V   160 to 250V   400 to 450V    |  |
|   | D55 to JA0  | Z(-25°C)/Z(+20°C)  | 4   3   2   2   2   2   2   3   —   —  |
|   |   | Z(-40°C)/Z(+20°C)  | 12   8   6   4   3   3   3   4   —   — |
|   | KE0 to MN0  | Z(-25°C)/Z(+20°C)  | 5   4   3   2   2   2   2   2   3   6  |
| Z(-40°C)/Z(+20°C)   |   | 10   8   6   4   3   3   3   3   6   10  |  |
|   | (120Hz)   |  |  |
| <b>Endurance</b>  | The following specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage is applied for the specified period of time at 105°C.                        |  |  |
|   | Size code   | D55 to F80      HA0 to MN0   |  |
|   | Time  | 1000 hours      2000 hours   |  |
|   | Capacitance change  | ≤±30% of the initial value      ≤±20% of the initial value                     |  |
|   | D.F. (tanδ)   | ≤300% of the initial specified value      ≤200% of the initial specified value |  |
|   | Leakage current   | ≤The initial specified value      ≤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 1000 hours (500 hours for B55 to F80 size) at 105°C without voltage applied. |  |  |
|   | Size code   | D55 to F80      HA0 to MN0   |  |
|   | Capacitance change  | ≤±25% of the initial value      ≤±20% of the initial value                     |  |
|   | D.F. (tanδ)   | ≤200% of the initial specified value      ≤200% of the initial specified value |  |
|   | Leakage current   | ≤The initial specified value      ≤The initial specified value                 |  |

**◆ DIMENSIONS [mm]**

- Terminal Code : A
- Size code : D55 to KG5

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

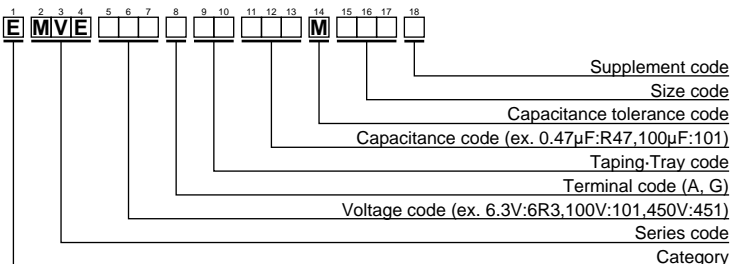


Note : L±0.5 for HA0 to KG5

▨ : Dummy terminals

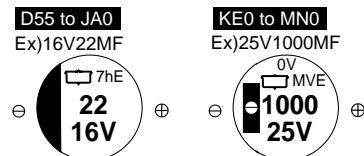
| Size code | D    | L    | A    | B    | C    | W          | P   |
|-----------|------|------|------|------|------|------------|-----|
| D55       | 4    | 5.2  | 4.3  | 4.3  | 5.1  | 0.5 to 0.8 | 1.0 |
| E55       | 5    | 5.2  | 5.3  | 5.3  | 5.9  | 0.5 to 0.8 | 1.4 |
| F55       | 6.3  | 5.2  | 6.6  | 6.6  | 7.2  | 0.5 to 0.8 | 1.9 |
| 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 |
| 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 |

**◆ PART NUMBERING SYSTEM**



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

**◆ MARKING**



◆ **STANDARD RATINGS**

□ is non solvent-proof.

| WV (Vdc) | Cap (μF) | Size code | tanδ | Rated ripple current (mA rms/105°C, 120Hz) | Part No.           | WV (Vdc) | Cap (μF)           | Size code | tanδ | Rated ripple current (mA rms/105°C, 120Hz) | Part No.           |                     |                     |
|----------|----------|-----------|------|--|--------------------|----------|--------------------|-----------|------|--|--------------------|---------------------|---------------------|
| 6.3      | 22       | D55       | 0.30 | 22   | EMVE6R3ADA220MD55G | 35       | 470                | KE0       | 0.22 | 520  | EMVE350A□□471MKE0S |                     |                     |
|          | 33       | E55       | 0.30 | 34   | EMVE6R3ADA330ME55G |          | 470                | LH0       | 0.22 | 650  | EMVE350GTR471MLH0S |                     |                     |
|          | 47       | E55       | 0.30 | 38   | EMVE6R3ADA470ME55G |          | 1000               | LH0       | 0.22 | 750  | EMVE350GTR102MLH0S |                     |                     |
|          | 100      | F55       | 0.30 | 69   | EMVE6R3ADA101MF55G |          | 1000               | MH0       | 0.22 | 1000                                       | EMVE350GTR102MMH0S |                     |                     |
|          | 220      | F80       | 0.45 | 120  | EMVE6R3ADA221MF80G |          | 2200               | MN0       | 0.24 | 1450                                       | EMVE350GTR222MMN0S |                     |                     |
|          | 330      | HA0       | 0.40 | 290  | EMVE6R3ADA331MHA0G |          | 50                 | 0.47      | D55  | 0.12                                       | 5.0                | EMVE500ADAR47MD55G  |                     |
|          | 470      | HA0       | 0.45 | 320  | EMVE6R3ADA471MHA0G |          |                    | 1.0       | D55  | 0.12                                       | 8.0                | EMVE500ADA1R0MD55G  |                     |
|          | 680      | HA0       | 0.45 | 340  | EMVE6R3ADA681MHA0G |          |                    | 2.2       | D55  | 0.12                                       | 12                 | EMVE500ADA2R2MD55G  |                     |
|          | 1000     | JA0       | 0.40 | 410  | EMVE6R3ADA102MJA0G |          |                    | 3.3       | D55  | 0.12                                       | 15                 | EMVE500ADA3R3MD55G  |                     |
|          | 1500     | JA0       | 0.45 | 550  | EMVE6R3ADA152MJA0G |          |                    | 4.7       | E55  | 0.12                                       | 20                 | EMVE500ADA4R7ME55G  |                     |
|          | 2200     | KE0       | 0.40 | 680  | EMVE6R3A□□222MKE0S |          |                    | 10        | F55  | 0.12                                       | 32                 | EMVE500ADA100MF55G  |                     |
|          | 2200     | LH0       | 0.40 | 840  | EMVE6R3GTR222MLH0S |          |                    | 22        | F60  | 0.12                                       | 47                 | EMVE500ADA220MF60G  |                     |
|          | 3300     | KG5       | 0.42 | 850  | EMVE6R3A□□332MKG5S |          |                    | 33        | F80  | 0.14                                       | 65                 | EMVE500ADA330MF80G  |                     |
|          | 3300     | MH0       | 0.42 | 1000                                       | EMVE6R3GTR332MMH0S |          |                    | 47        | F80  | 0.14                                       | 80                 | EMVE500ADA470MF80G  |                     |
|          | 4700     | LN0       | 0.44 | 1200                                       | EMVE6R3GTR472MLN0S |          |                    | 100       | HA0  | 0.14                                       | 230                | EMVE500ADA101MHA0G  |                     |
|          | 4700     | MH0       | 0.44 | 1200                                       | EMVE6R3GTR472MMH0S |          |                    | 220       | JA0  | 0.14                                       | 375                | EMVE500ADA221MJA0G  |                     |
|          | 6800     | LN0       | 0.48 | 1200                                       | EMVE6R3GTR682MLN0S |          |                    | 330       | KE0  | 0.18                                       | 500                | EMVE500A□□331MKE0S  |                     |
| 6800     | MN0      | 0.48      | 1350 | EMVE6R3GTR682MMN0S                         | 330                | LH0      |                    | 0.18      | 600  | EMVE500GTR331MLH0S                         |                    |                     |                     |
|          |          |           |      |  | 470                | LH0      |                    | 0.18      | 700  | EMVE500GTR471MLH0S                         |                    |                     |                     |
|          |          |           |      |  | 470                | MH0      |                    | 0.18      | 750  | EMVE500GTR471MMH0S                         |                    |                     |                     |
|          |          |           |      |  | 1000               | MN0      |                    | 0.18      | 1200 | EMVE500GTR102MMN0S                         |                    |                     |                     |
| 10       | 22       | E55       | 0.24 | 30   | EMVE100ADA220ME55G | 63       |                    | 0.47      | D55  | 0.12                                       | 5.0                | EMVE630ADAR47MD55G  |                     |
|          | 33       | E55       | 0.24 | 34   | EMVE100ADA330ME55G |          | 1.0                | D55       | 0.12 | 8.0  | EMVE630ADA1R0MD55G |                     |                     |
|          | 47       | F55       | 0.24 | 48   | EMVE100ADA470MF55G |          | 2.2                | D55       | 0.12 | 12   | EMVE630ADA2R2MD55G |                     |                     |
|          | 100      | F55       | 0.30 | 69   | EMVE100ADA101MF55G |          | 3.3                | E55       | 0.12 | 17   | EMVE630ADA3R3ME55G |                     |                     |
|          | 150      | F80       | 0.35 | 100  | EMVE100ADA151MF80G |          | 4.7                | F55       | 0.12 | 22   | EMVE630ADA4R7MF55G |                     |                     |
|          | 220      | F80       | 0.35 | 120  | EMVE100ADA221MF80G |          | 10                 | F55       | 0.12 | 32   | EMVE630ADA100MF55G |                     |                     |
|          | 330      | HA0       | 0.35 | 290  | EMVE100ADA331MHA0G |          | 22                 | F80       | 0.12 | 58   | EMVE630ADA220MF80G |                     |                     |
|          | 470      | HA0       | 0.35 | 320  | EMVE100ADA471MHA0G |          | 33                 | HA0       | 0.12 | 140  | EMVE630ADA330MHA0G |                     |                     |
|          | 1000     | JA0       | 0.35 | 410  | EMVE100ADA102MJA0G |          | 47                 | HA0       | 0.12 | 170  | EMVE630ADA470MHA0G |                     |                     |
|          | 2200     | KG5       | 0.36 | 750  | EMVE100A□□222MKG5S |          | 100                | JA0       | 0.12 | 310  | EMVE630ADA101MJA0G |                     |                     |
|          | 2200     | LH0       | 0.36 | 850  | EMVE100GTR222MLH0S |          | 220                | KE0       | 0.14 | 470  | EMVE630A□□221MKE0S |                     |                     |
|          | 3300     | LH0       | 0.38 | 1000                                       | EMVE100GTR332MLH0S |          | 220                | LH0       | 0.14 | 560  | EMVE630GTR221MLH0S |                     |                     |
|          | 3300     | MH0       | 0.38 | 1100                                       | EMVE100GTR332MMH0S |          | 330                | LH0       | 0.14 | 700  | EMVE630GTR331MLH0S |                     |                     |
|          | 4700     | LN0       | 0.40 | 1300                                       | EMVE100GTR472MLN0S |          | 330                | MH0       | 0.14 | 750  | EMVE630GTR331MMH0S |                     |                     |
|          | 4700     | MN0       | 0.40 | 1350                                       | EMVE100GTR472MMN0S |          | 470                | LN0       | 0.14 | 900  | EMVE630GTR471MLN0S |                     |                     |
|          |          |           |      |  |                    |          | 470                | MH0       | 0.14 | 900  | EMVE630GTR471MMH0S |                     |                     |
|          | 16       | 10        | D55  | 0.20                                       | 17                 |          | EMVE160ADA100MD55G | 100       | 22   | HA0  | 0.12               | 100                 | EMVE101ADA220MHA0G  |
| 22       |          | E55       | 0.20 | 30   | EMVE160ADA220ME55G | 33       | JA0                |           | 0.12 | 150  | EMVE101ADA330MJA0G |                     |                     |
| 33       |          | F55       | 0.20 | 45   | EMVE160ADA330MF55G | 47       | KE0                |           | 0.10 | 250  | EMVE101A□□470MKE0S |                     |                     |
| 47       |          | F55       | 0.20 | 48   | EMVE160ADA470MF55G | 68       | KE0                |           | 0.10 | 300  | EMVE101A□□680MKE0S |                     |                     |
| 100      |          | F55       | 0.26 | 69   | EMVE160ADA101MF55G | 100      | KE0                |           | 0.10 | 380  | EMVE101A□□101MKE0S |                     |                     |
| 150      |          | F80       | 0.28 | 100  | EMVE160ADA151MF80G | 100      | LH0                |           | 0.10 | 450  | EMVE101GTR101MLH0S |                     |                     |
| 220      |          | F80       | 0.28 | 120  | EMVE160ADA221MF80G | 220      | LN0                |           | 0.10 | 750  | EMVE101GTR221MLN0S |                     |                     |
| 330      |          | HA0       | 0.28 | 290  | EMVE160ADA331MHA0G | 220      | MH0                |           | 0.10 | 750  | EMVE101GTR221MMH0S |                     |                     |
| 470      |          | HA0       | 0.28 | 320  | EMVE160ADA471MHA0G | 330      | MN0                |           | 0.10 | 980  | EMVE101GTR331MMN0S |                     |                     |
| 680      |          | JA0       | 0.28 | 470  | EMVE160ADA681MJA0G | 160      | 33                 |           | KE0  | 0.15                                       | 95                 | EMVE161A□□330MKE0S  |                     |
| 1000     |          | KE0       | 0.30 | 550  | EMVE160A□□102MKE0S |          | 47                 |           | LH0  | 0.15                                       | 260                | EMVE161GTR470MLH0S  |                     |
| 1000     |          | LH0       | 0.30 | 650  | EMVE160GTR102MLH0S |          | 68                 |           | LN0  | 0.15                                       | 320                | EMVE161GTR680MLN0S  |                     |
| 2200     |          | LH0       | 0.32 | 950  | EMVE160GTR222MLH0S |          | 68                 |           | MH0  | 0.15                                       | 320                | EMVE161GTR680MMH0S  |                     |
| 2200     |          | MH0       | 0.32 | 1000                                       | EMVE160GTR222MMH0S |          | 100                |           | LN0  | 0.15                                       | 380                | EMVE161GTR101MLN0S  |                     |
| 3300     |          | LN0       | 0.34 | 1200                                       | EMVE160GTR332MLN0S |          | 200                |           | 10   | KE0  | 0.15               | 80                  | EMVE201A□□100MKE0S  |
| 3300     |          | MH0       | 0.34 | 1200                                       | EMVE160GTR332MMH0S |          |                    |           | 22   | KG5  | 0.15               | 110                 | EMVE201A□□220MKG5S  |
|          |          |           |      |  |                    |          |                    |           | 33   | LH0  | 0.15               | 220                 | EMVE201GTR330MLH0S  |
|          |          |           |      |  | 47                 |          |                    | LN0       | 0.15 | 270  | EMVE201GTR470MLN0S |                     |                     |
|          |          |           |      |  | 47                 |          |                    | MH0       | 0.15 | 270  | EMVE201GTR470MMH0S |                     |                     |
|          |          |           |      |  | 68                 |          |                    | MN0       | 0.15 | 330  | EMVE201GTR680MMN0S |                     |                     |
|          |          |           |      |  | 250                |          |                    | 4.7       | KE0  | 0.15                                       | 65                 | EMVE251A□□47R7MKE0S |                     |
|          |          |           |      |  |                    |          |                    | 10        | KG5  | 0.15                                       | 105                | EMVE251A□□100MKG5S  |                     |
|          |          |           |      |  |                    |          |                    | 22        | LH0  | 0.15                                       | 180                | EMVE251GTR220MLH0S  |                     |
|          |          |           |      |  |                    |          |                    | 33        | LN0  | 0.15                                       | 230                | EMVE251GTR330MLN0S  |                     |
|          |          |           |      |  |                    |          |                    | 33        | MH0  | 0.15                                       | 230                | EMVE251GTR330MMH0S  |                     |
|          |          |           |      |  |                    |          |                    | 47        | MN0  | 0.15                                       | 280                | EMVE251GTR470MMN0S  |                     |
|          |          |           |      |  |                    | 400      |                    | 4.7       | KG5  | 0.20                                       | 50                 | EMVE401A□□47R7MKG5S |                     |
|          |          |           |      |  |                    |          |                    | 10        | LH0  | 0.20                                       | 85                 | EMVE401GTR100MLH0S  |                     |
|          |          |           |      |  |                    |          |                    | 22        | MN0  | 0.20                                       | 130                | EMVE401GTR220MMN0S  |                     |
|          |          |           |      |  |                    |          |                    | 450       | 3.3  | KE0  | 0.20               | 40                  | EMVE451A□□3R3MKE0S  |
|          |          |           |      |  |                    |          |                    |           | 4.7  | KG5  | 0.20               | 50                  | EMVE451A□□47R7MKG5S |
|          |          |           |      |  |                    |          | 10                 |           | LH0  | 0.20                                       | 85                 | EMVE451GTR100MLH0S  |                     |
|          |          |           |      |  |                    |          | 22                 |           | MN0  | 0.20                                       | 130                | EMVE451GTR220MMN0S  |                     |
|          |          |           |      |  |                    |          |                    |           |      |  |                    |                     |                     |
|          |          |           |      |  |                    |          |                    |           |      |  |                    |                     |                     |
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|          |          |           |      |  |                    |          |                    |           |      |  |                    |                     |                     |
|          |          |           |      |  |                    |          |                    |           |      |  |                    |                     |                     |
|          |          |           |      |  |                    |          |                    |           |      |  |                    |                     |                     |

□ : Taping / Tray code

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