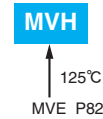


# Alchip™-MVH Series

- Lower ESR, Higher ripple current
- Endurance : 1,000 to 5,000 hours at 125°C
- Suitable to fit for automotive equipment
- Solvent resistant type except 63 to 450V<sub>dc</sub> (see PRECAUTIONS AND GUIDELINES)
- Vibration resistant structure
- RoHS Compliant



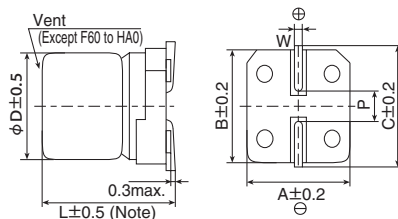
## SPECIFICATIONS

| Items                                                  | Characteristics                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                           |      |      |      |      |      |                                      |      |             |            |      |  |
|--------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------|------|------|------|--------------------------------------|------|-------------|------------|------|--|
| Category                                               | -40 to +125°C                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                           |      |      |      |      |      |                                      |      |             |            |      |  |
| Temperature Range                                      |                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                           |      |      |      |      |      |                                      |      |             |            |      |  |
| Rated Voltage Range                                    | 10 to 450V <sub>dc</sub>                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                           |      |      |      |      |      |                                      |      |             |            |      |  |
| Capacitance Tolerance                                  | ±20% (M) (at 20°C, 120Hz)                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                           |      |      |      |      |      |                                      |      |             |            |      |  |
| Leakage Current                                        | 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)                                                                                                                                                                                                                |                                                                                                                                                                                                                           |      |      |      |      |      |                                      |      |             |            |      |  |
| Dissipation Factor (tan δ)                             | Rated voltage (V <sub>dc</sub> )                                                                                                                                                                                                                                                                                                   | 10V                                                                                                                                                                                                                       | 16V  | 25V  | 35V  | 50V  | 63V  | 80V                                  | 100V | 160 to 250V | 400 & 450V |      |  |
|                                                        | tan δ (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)                                                                                                                                                                                                                  |                                                                                                                                                                                                                           |      |      |      |      |      |                                      |      |             |            |      |  |
| Low Temperature Characteristics (Max. Impedance Ratio) | 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)                                             |                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                           |      |      |      |      |      |                                      |      |             |            |      |  |
| Endurance                                              | 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.                                                                                                                                                                       |                                                                                                                                                                                                                           |      |      |      |      |      |                                      |      |             |            |      |  |
|                                                        | 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. (tan δ)                                                                                                                                                                                                                                                                                                                       | ≤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 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. (tan δ)                                                                                                                                                                                                                                                                                                                       | ≤300% of the initial specified value                                                                                                                                                                                      |      |      |      |      |      | ≤300% of the initial specified value |      |             |            |      |  |
|                                                        | Leakage current                                                                                                                                                                                                                                                                                                                    | ≤The initial specified value                                                                                                                                                                                              |      |      |      |      |      | ≤500% of the initial specified value |      |             |            |      |  |
|                                                        |                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                           |      |      |      |      |      |                                      |      |             |            |      |  |

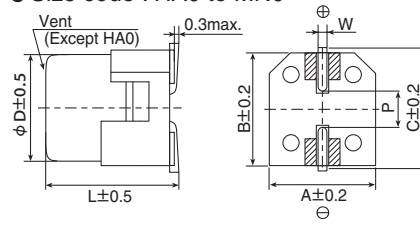
## DIMENSIONS [mm]

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

- Terminal Code : G(Vibration resistant structure)
- Size code : HA0 to MN0



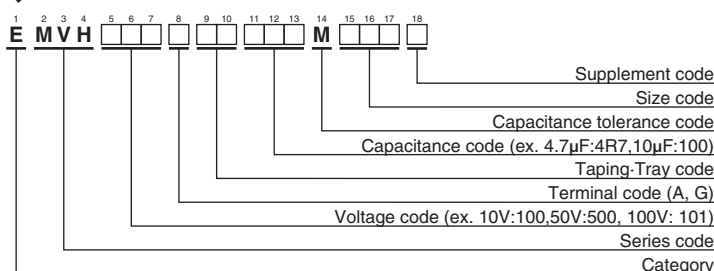
Note : L±0.3 for F60 and F80



⊠ : Dummy terminals

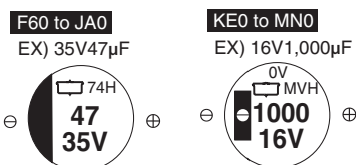
| Size code | D    | L    | A    | B    | C    | W          | P   |
|-----------|------|------|------|------|------|------------|-----|
| F60       | 6.3  | 5.7  | 6.6  | 6.6  | 7.2  | 0.5 to 0.8 | 1.9 |
| F80       | 6.3  | 7.7  | 6.6  | 6.6  | 7.2  | 0.5 to 0.8 | 1.9 |
| H63       | 8    | 6.3  | 8.3  | 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 |

## PART NUMBERING SYSTEM



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

## MARKING



## ◆STANDARD RATINGS

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

| WV<br>(V <sub>dc</sub> ) | Cap<br>(μF) | Size<br>code | ESR<br>(Ω max./<br>100kHz) |       | Rated ripple<br>current<br>(mA rms/125°C) |       | Part No.           |
|--------------------------|-------------|--------------|----------------------------|-------|-------------------------------------------|-------|--------------------|
|                          |             |              | 20°C                       | -40°C | 100kHz                                    | 120Hz |                    |
| 10                       | 100         | F80          | 0.90                       | 14.0  | 110                                       | —     | EMVH100ADA101MF80G |
|                          | 100         | H63          | 0.90                       | 14.0  | 110                                       | —     | EMVH100ADA101MH63G |
|                          | 220         | F80          | 0.90                       | 14.0  | 110                                       | —     | EMVH100ADA221MF80G |
|                          | 220         | H63          | 0.90                       | 14.0  | 110                                       | —     | EMVH100ADA221MH63G |
|                          | 220         | HA0          | 0.40                       | 6.0   | 220                                       | —     | EMVH100□DA221MHA0G |
|                          | 330         | HA0          | 0.40                       | 6.0   | 220                                       | —     | EMVH100□DA331MHA0G |
|                          | 330         | JA0          | 0.30                       | 4.5   | 296                                       | —     | EMVH100□DA331MJA0G |
|                          | 470         | JA0          | 0.30                       | 4.5   | 296                                       | —     | EMVH100□DA471MJA0G |
|                          | 1,000       | KE0          | 0.14                       | 2.1   | 750                                       | —     | EMVH100□RA102MKE0S |
|                          | 2,200       | LH0          | 0.10                       | 1.5   | 1,000                                     | —     | EMVH100□DA222MLH0S |
| 16                       | 2,200       | MH0          | 0.10                       | 1.5   | 1,200                                     | —     | EMVH100□DA222MMH0S |
|                          | 3,300       | MH0          | 0.10                       | 1.5   | 1,200                                     | —     | EMVH100□DA332MMH0S |
|                          | 4,700       | MN0          | 0.058                      | 0.87  | 1,550                                     | —     | EMVH100□DA472MMN0S |
|                          | 47          | F60          | 1.6                        | 24.0  | 69                                        | —     | EMVH160ADA470MF60G |
|                          | 100         | HA0          | 0.40                       | 6.0   | 220                                       | —     | EMVH160□DA101MHA0G |
|                          | 220         | HA0          | 0.40                       | 6.0   | 220                                       | —     | EMVH160□DA221MHA0G |
|                          | 220         | JA0          | 0.30                       | 4.5   | 296                                       | —     | EMVH160□DA221MJA0G |
|                          | 330         | JA0          | 0.30                       | 4.5   | 296                                       | —     | EMVH160□DA331MJA0G |
|                          | 470         | KE0          | 0.14                       | 2.1   | 750                                       | —     | EMVH160□RA471MKE0S |
|                          | 680         | KE0          | 0.14                       | 2.1   | 750                                       | —     | EMVH160□RA681MKE0S |
| 25                       | 680         | LH0          | 0.10                       | 1.5   | 1,000                                     | —     | EMVH160□DA681MLH0S |
|                          | 1,000       | MH0          | 0.10                       | 1.5   | 1,200                                     | —     | EMVH160□DA102MMH0S |
|                          | 2,200       | MH0          | 0.10                       | 1.5   | 1,200                                     | —     | EMVH160□DA222MMH0S |
|                          | 33          | F60          | 1.6                        | 24.0  | 69                                        | —     | EMVH250ADA330MF60G |
|                          | 47          | F80          | 0.90                       | 14.0  | 110                                       | —     | EMVH250ADA470MF80G |
|                          | 47          | H63          | 0.90                       | 14.0  | 110                                       | —     | EMVH250ADA470MH63G |
|                          | 100         | F80          | 0.90                       | 14.0  | 110                                       | —     | EMVH250ADA101MF80G |
|                          | 100         | H63          | 0.90                       | 14.0  | 110                                       | —     | EMVH250ADA101MH63G |
|                          | 100         | HA0          | 0.40                       | 6.0   | 220                                       | —     | EMVH250□DA101MHA0G |
|                          | 220         | HA0          | 0.40                       | 6.0   | 220                                       | —     | EMVH250□DA221MHA0G |
| 35                       | 220         | JA0          | 0.30                       | 4.5   | 296                                       | —     | EMVH250□DA221MJA0G |
|                          | 330         | JA0          | 0.30                       | 4.5   | 296                                       | —     | EMVH250□DA331MJA0G |
|                          | 330         | KE0          | 0.14                       | 2.1   | 750                                       | —     | EMVH250□RA331MKE0S |
|                          | 470         | KE0          | 0.14                       | 2.1   | 750                                       | —     | EMVH250□RA471MKE0S |
|                          | 470         | LH0          | 0.10                       | 1.5   | 1,000                                     | —     | EMVH250□DA471MLH0S |
|                          | 680         | LH0          | 0.10                       | 1.5   | 1,000                                     | —     | EMVH250□DA681MLH0S |
|                          | 680         | MH0          | 0.10                       | 1.5   | 1,200                                     | —     | EMVH250□DA681MMH0S |
|                          | 1,000       | MN0          | 0.058                      | 0.87  | 1,550                                     | —     | EMVH250□DA102MMN0S |
|                          | 10          | F60          | 1.6                        | 24.0  | 69                                        | —     | EMVH350ADA100MF60G |
|                          | 22          | F60          | 1.6                        | 24.0  | 69                                        | —     | EMVH350ADA220MF60G |
| 50                       | 33          | F80          | 0.90                       | 14.0  | 110                                       | —     | EMVH350ADA330MF80G |
|                          | 33          | H63          | 0.90                       | 14.0  | 110                                       | —     | EMVH350ADA330MH63G |
|                          | 47          | F80          | 0.90                       | 14.0  | 110                                       | —     | EMVH350ADA470MF80G |
|                          | 47          | H63          | 0.90                       | 14.0  | 110                                       | —     | EMVH350ADA470MH63G |
|                          | 47          | HA0          | 0.40                       | 6.0   | 220                                       | —     | EMVH350□DA470MHA0G |
|                          | 100         | HA0          | 0.40                       | 6.0   | 220                                       | —     | EMVH350□DA101MHA0G |
|                          | 100         | JA0          | 0.30                       | 4.5   | 296                                       | —     | EMVH350□DA101MJA0G |
|                          | 220         | JA0          | 0.30                       | 4.5   | 296                                       | —     | EMVH350□DA221MJA0G |
|                          | 330         | KE0          | 0.14                       | 2.1   | 750                                       | —     | EMVH350□RA331MKE0S |
|                          | 330         | LH0          | 0.10                       | 1.5   | 1,000                                     | —     | EMVH350□DA331MLH0S |
| 100                      | 470         | KG5          | 0.11                       | 1.5   | 900                                       | —     | EMVH350□RA471MKG5S |
|                          | 470         | LH0          | 0.10                       | 1.5   | 1,000                                     | —     | EMVH350□DA471MLH0S |
|                          | 680         | MH0          | 0.10                       | 1.5   | 1,200                                     | —     | EMVH350□DA681MMH0S |
|                          | 10          | F60          | 2.8                        | 42.0  | 51                                        | —     | EMVH500ADA100MF60G |
|                          | 10          | H63          | 1.6                        | 30.0  | 83                                        | —     | EMVH500ADA100MH63G |
|                          | 22          | F80          | 2.0                        | 30.0  | 83                                        | —     | EMVH500ADA220MF80G |
|                          | 22          | H63          | 1.6                        | 30.0  | 83                                        | —     | EMVH500ADA220MH63G |
|                          | 33          | F80          | 0.90                       | 14.0  | 110                                       | —     | EMVH500ADA330MF80G |
|                          | 33          | H63          | 0.90                       | 14.0  | 110                                       | —     | EMVH500ADA330MH63G |
|                          | 47          | F80          | 0.90                       | 14.0  | 110                                       | —     | EMVH500ADA470MF80G |
| 160                      | 47          | H63          | 0.90                       | 14.0  | 110                                       | —     | EMVH500ADA470MH63G |
|                          | 47          | HA0          | 0.40                       | 6.0   | 220                                       | —     | EMVH500□DA470MHA0G |
|                          | 100         | HA0          | 0.40                       | 6.0   | 220                                       | —     | EMVH500□DA101MHA0G |
|                          | 100         | JA0          | 0.30                       | 4.5   | 296                                       | —     | EMVH500□DA101MJA0G |
|                          | 220         | JA0          | 0.30                       | 4.5   | 296                                       | —     | EMVH500□DA221MJA0G |
|                          | 330         | KE0          | 0.14                       | 2.1   | 750                                       | —     | EMVH500□RA331MKE0S |
|                          | 330         | LH0          | 0.10                       | 1.5   | 1,000                                     | —     | EMVH500□DA331MLH0S |
|                          | 470         | KG5          | 0.11                       | 1.5   | 900                                       | —     | EMVH500□RA471MKG5S |
|                          | 470         | LH0          | 0.10                       | 1.5   | 1,000                                     | —     | EMVH500□DA471MLH0S |
|                          | 680         | MH0          | 0.10                       | 1.5   | 1,200                                     | —     | EMVH500□DA681MMH0S |
| 250                      | 10          | F60          | 2.8                        | 42.0  | 51                                        | —     | EMVH500ADA100MF60G |
|                          | 10          | H63          | 1.6                        | 30.0  | 83                                        | —     | EMVH500ADA100MH63G |
|                          | 22          | F80          | 2.0                        | 30.0  | 83                                        | —     | EMVH500ADA220MF80G |
|                          | 22          | H63          | 1.6                        | 30.0  | 83                                        | —     | EMVH500ADA220MH63G |
|                          | 33          | F80          | 0.90                       | 14.0  | 110                                       | —     | EMVH500ADA330MF80G |
|                          | 33          | H63          | 0.90                       | 14.0  | 110                                       | —     | EMVH500ADA330MH63G |
|                          | 47          | F80          | 0.90                       | 14.0  | 110                                       | —     | EMVH500ADA470MF80G |
|                          | 47          | H63          | 0.90                       | 14.0  | 110                                       | —     | EMVH500ADA470MH63G |
|                          | 47          | HA0          | 0.40                       | 6.0   | 220                                       | —     | EMVH500□DA470MHA0G |
|                          | 100         | HA0          | 0.40                       | 6.0   | 220                                       | —     | EMVH500□DA101MHA0G |
| 400                      | 100         | JA0          | 0.30                       | 4.5   | 296                                       | —     | EMVH500□DA101MJA0G |
|                          | 220         | JA0          | 0.30                       | 4.5   | 296                                       | —     | EMVH500□DA221MJA0G |
|                          | 330         | KE0          | 0.14                       | 2.1   | 750                                       | —     | EMVH500□RA331MKE0S |
|                          | 330         | LH0          | 0.10                       | 1.5   | 1,000                                     | —     | EMVH500□DA331MLH0S |
|                          | 470         | KG5          | 0.11                       | 1.5   | 900                                       | —     | EMVH500□RA471MKG5S |
|                          | 470         | LH0          | 0.10                       | 1.5   | 1,000                                     | —     | EMVH500□DA471MLH0S |
|                          | 680         | MH0          | 0.10                       | 1.5   | 1,200                                     | —     | EMVH500□DA681MMH0S |
|                          | 10          | F60          | 2.8                        | 42.0  | 51                                        | —     | EMVH500ADA100MF60G |
|                          | 10          | H63          | 1.6                        | 30.0  | 83                                        | —     | EMVH500ADA100MH63G |
|                          | 22          | F80          | 2.0                        | 30.0  | 83                                        | —     | EMVH500ADA220MF80G |
| 450                      | 22          | H63          | 1.6                        | 30.0  | 83                                        | —     | EMVH500ADA220MH63G |
|                          | 33          | F80          | 0.90                       | 14.0  | 110                                       | —     | EMVH500ADA330MF80G |
|                          | 33          | H63          | 0.90                       | 14.0  | 110                                       | —     | EMVH500ADA330MH63G |
|                          | 47          | F80          | 0.90                       | 14.0  | 110                                       | —     | EMVH500ADA470MF80G |
|                          | 47          | H63          | 0.90                       | 14.0  | 110                                       | —     | EMVH500ADA470MH63G |
|                          | 47          | HA0          | 0.40                       | 6.0   | 220                                       | —     | EMVH500□DA470MHA0G |
|                          | 100         | HA0          | 0.40                       | 6.0   | 220                                       | —     | EMVH500□DA101MHA0G |
|                          | 100         | JA0          | 0.30                       | 4.5   | 296                                       | —     | EMVH500□DA101MJA0G |
|                          | 220         | JA0          | 0.30                       | 4.5   | 296                                       | —     | EMVH500□DA221MJA0G |
|                          | 330         | KE0          | 0.14                       | 2.1   | 750                                       | —     | EMVH500□RA331MKE0S |
| 500                      | 330         | LH0          | 0.10                       | 1.5   | 1,000                                     | —     | EMVH500□DA331MLH0S |
|                          | 470         | KG5          | 0.11                       | 1.5   | 900                                       | —     | EMVH500□RA471MKG5S |
|                          | 470         | LH0          | 0.10                       | 1.5   | 1,000                                     | —     | EMVH500□DA471MLH0S |
|                          | 680         | MH0          | 0.10                       | 1.5   | 1,200                                     | —     | EMVH500□DA681MMH0S |
|                          | 10          | F60          | 2.8                        | 42.0  | 51                                        | —     | EMVH500ADA100MF60G |
|                          | 10          | H63          | 1.6                        | 30.0  | 83                                        | —     | EMVH500ADA100MH63G |
|                          | 22          | F80          | 2.0                        | 30.0  | 83                                        | —     | EMVH500ADA220MF80G |
|                          | 22          | H63          | 1.6                        | 30.0  | 83                                        | —     | EMVH500ADA220MH63G |
|                          | 33          | F80          | 0.90                       | 14.0  | 110                                       | —     | EMVH500ADA330MF80G |
|                          | 33          | H63          | 0.90                       | 14.0  | 110                                       | —     | EMVH500ADA330MH63G |
| 630                      | 47          | F80          | 0.90                       | 14.0  | 110                                       | —     | EMVH500ADA470MF80G |
|                          | 47          | H63          | 0.90                       | 14.0  | 110                                       | —     | EMVH500ADA470MH63G |
|                          | 47          | HA0          | 0.40                       | 6.0   | 220                                       | —     | EMVH500□DA470MHA0G |
|                          | 100         | HA0          | 0.40                       | 6.0   | 220                                       | —     | EMVH500□DA101MHA0G |
|                          | 100         | JA0          | 0.30                       | 4.5   | 296                                       | —     | EMVH500□DA101MJA0G |
|                          | 220         | JA0          | 0.30                       | 4.5   | 296                                       | —     | EMVH500□DA221MJA0G |
|                          | 330         | KE0          | 0.14                       | 2.1   | 750                                       | —     | EMVH500□RA331MKE0S |
|                          | 330         | LH0          | 0.10                       | 1.5   | 1,000                                     | —     | EMVH500□DA331MLH0S |
|                          | 470         | KG5          | 0.11                       | 1.5   | 900                                       | —     | EMVH500□RA471MKG5S |
|                          | 470         | LH0          | 0.10                       | 1.5   | 1,000                                     | —     | EMVH500□DA471MLH0S |
| 800                      | 680         | MH0          | 0.10                       | 1.5   | 1,200                                     | —     | EMVH500□DA681MMH0S |
|                          | 10          | F60          | 2.8                        | 42.0  | 51                                        | —     | EMVH500ADA100MF60G |
|                          | 10          | H63          | 1.6                        | 30.0  | 83                                        | —     | EMVH500ADA100MH63G |
|                          | 22          | F80          | 2.0                        | 30.0  | 83                                        | —     | EMVH500ADA220MF80G |
|                          | 22          | H63          | 1.6                        | 30.0  | 83                                        | —     | EMVH500ADA220MH63G |
|                          | 33          | F80          | 0.90                       | 14.0  | 110                                       | —     | EMVH500ADA330MF80G |
|                          | 33          | H63          | 0.90                       | 14.0  | 110                                       | —     | EMVH500ADA330MH63G |
|                          | 47          | F80          | 0.90                       | 14.0  | 110                                       | —     | EMVH500ADA470MF80G |
|                          | 47          | H63          | 0.90                       | 14.0  | 110                                       | —     | EMVH500ADA470MH63G |
|                          | 47          | HA0          | 0.40                       | 6.0   | 220                                       | —     | EMVH500□DA470MHA0G |
| 1000                     | 100         | HA0          | 0.40                       | 6.0   | 220                                       | —     | EMVH500□DA101MHA0G |
|                          | 100         | JA0          | 0.30                       | 4.5   | 296                                       | —     | EMVH500□DA101MJA0G |
|                          | 220         | JA0          | 0.30                       | 4.5   | 296                                       | —     | EMVH500□DA221MJA0G |
|                          | 330         | KE0          | 0.14                       | 2.1   | 750                                       | —     | EMVH500□RA331MKE0S |
|                          | 330         | LH0          | 0.10                       | 1.5   | 1,000                                     | —     | EMVH500□DA331MLH0S |
|                          | 470         | KG5          | 0.11                       | 1.5   | 900                                       | —     | EMVH500□RA471MKG5S |
|                          | 470         | LH0          | 0.10                       | 1.5   | 1,000                                     | —     | EMVH500□DA471MLH0S |
|                          | 680         | MH0          | 0.10                       | 1.5   | 1,200                                     | —     | EMVH500□DA681MMH0S |
|                          | 10          | F60          | 2.8                        | 42.0  | 51                                        | —     | EMVH500ADA100MF60G |
|                          | 10          | H63          | 1.6                        | 30.0  | 83                                        | —     | EMVH500ADA100MH63G |
| 1250                     | 22          | F80          | 2.0                        | 30.0  | 83                                        | —     | EMVH500ADA220MF80G |
|                          | 22          | H63          | 1.6                        | 30.0  | 83                                        | —     | EMVH500ADA220MH63G |
|                          | 33          | F80          | 0.90                       | 14.0  | 110                                       | —     | EMVH500ADA330MF80G |
|                          | 33          | H63          | 0.90                       | 14.0  | 110                                       | —     | EMVH500ADA330MH63G |
|                          | 47          | F80          | 0.90                       | 14.0  | 110                                       | —     | EMVH500ADA470MF80G |
|                          | 47          | H63          | 0.90                       | 14.0  | 110                                       | —     | EMVH500ADA470MH63G |
|                          | 47          | HA0          | 0.40                       | 6.0   | 220                                       | —     | EMVH500□DA47       |