

MVG(MV)-BP Series

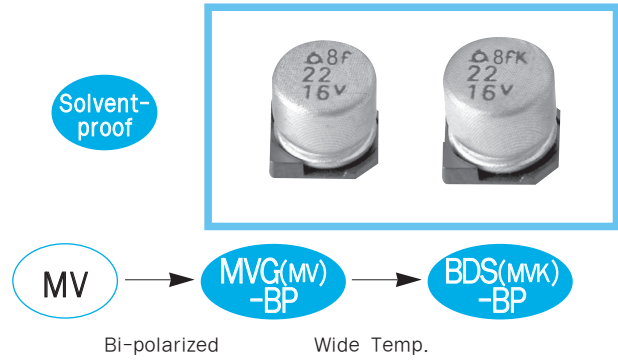
• 85°C 2,000Hrs assured.

- Vertical SMD type.
- Bi-polarized.
- For LED MT / TV.
- RoHS compliant.
- Halogen-free capacitors are also available.

BDS(MVK)-BP Series

• 105°C 1,000Hrs assured.

- Vertical SMD type.
- Bi-polarized.
- Wide Temperature Range.
- For LED MT / TV.
- RoHS compliant.
- Halogen-free capacitors are also available.

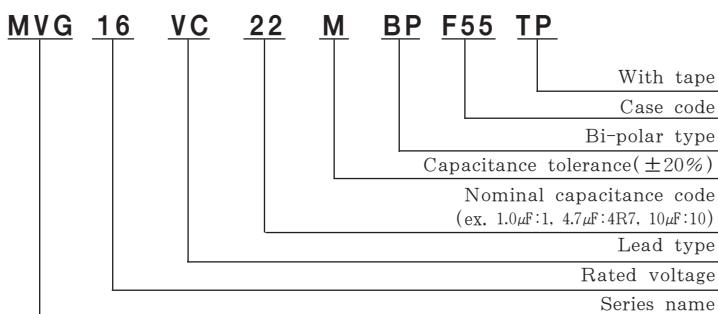


SPECIFICATIONS

| Item | Characteristics | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|------------------------------|--------------------------------------|------------------------------|--------------------------------------|------|---------------------------------|---|-----|----|----|----|-------|------------------|------|------|------|------|------|------|------------------|----|------|------|------|------|------|
| | MVG(MV)-BP | BDS(MVK)-BP | | | | | | | | | | | | | | | | | | | | | | | | | |
| Series Name | MVG(MV)-BP | BDS(MVK)-BP | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rated Voltage Range | 4 ~ 50 V _{DC} | 6.3 ~ 50 V _{DC} | | | | | | | | | | | | | | | | | | | | | | | | | |
| Operating Temperature Range | -40 ~ +85°C | -40 ~ +105°C | | | | | | | | | | | | | | | | | | | | | | | | | |
| Capacitance Tolerance | ±20%(M) (at 20°C, 120Hz) | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Leakage Current (In both directions) | I = 0.05CV(μA) or 10μA, whichever is greater. Where, I:Max. Leakage current(μA), C:Nominal capacitance(μF), V:Rated voltage(V _{DC}) (at 20°C, after 2 minutes) | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Dissipation Factor(Tanδ) | <table border="1" style="width: 100%; text-align: center;"> <tr> <td>Rated Voltage(V_{DC})</td> <td>4</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35~50</td> </tr> <tr> <td>MV-BP</td> <td>0.45</td> <td>0.32</td> <td>0.26</td> <td>0.24</td> <td>0.22</td> <td>0.20</td> </tr> <tr> <td>MVK-BP</td> <td>-</td> <td>0.35</td> <td>0.26</td> <td>0.24</td> <td>0.20</td> <td>0.18</td> </tr> </table> | | | | | | Rated Voltage(V _{DC}) | 4 | 6.3 | 10 | 16 | 25 | 35~50 | MV-BP | 0.45 | 0.32 | 0.26 | 0.24 | 0.22 | 0.20 | MVK-BP | - | 0.35 | 0.26 | 0.24 | 0.20 | 0.18 |
| | Rated Voltage(V _{DC}) | 4 | 6.3 | 10 | 16 | 25 | 35~50 | | | | | | | | | | | | | | | | | | | | |
| | MV-BP | 0.45 | 0.32 | 0.26 | 0.24 | 0.22 | 0.20 | | | | | | | | | | | | | | | | | | | | |
| MVK-BP | - | 0.35 | 0.26 | 0.24 | 0.20 | 0.18 | | | | | | | | | | | | | | | | | | | | | |
| (at 20°C, 120Hz) | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Temperature Characteristics (Max. Impedance ratio) | <table border="1" style="width: 100%; text-align: center;"> <tr> <td>Rated Voltage(V_{DC})</td> <td>4</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35~50</td> </tr> <tr> <td>Z(-25°C)/Z(20°C)</td> <td>7</td> <td>4</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> </tr> <tr> <td>Z(-40°C)/Z(20°C)</td> <td>15</td> <td>10</td> <td>8</td> <td>6</td> <td>4</td> <td>3</td> </tr> </table> | | | | | | Rated Voltage(V _{DC}) | 4 | 6.3 | 10 | 16 | 25 | 35~50 | Z(-25°C)/Z(20°C) | 7 | 4 | 3 | 2 | 2 | 2 | Z(-40°C)/Z(20°C) | 15 | 10 | 8 | 6 | 4 | 3 |
| | Rated Voltage(V _{DC}) | 4 | 6.3 | 10 | 16 | 25 | 35~50 | | | | | | | | | | | | | | | | | | | | |
| | Z(-25°C)/Z(20°C) | 7 | 4 | 3 | 2 | 2 | 2 | | | | | | | | | | | | | | | | | | | | |
| Z(-40°C)/Z(20°C) | 15 | 10 | 8 | 6 | 4 | 3 | | | | | | | | | | | | | | | | | | | | | |
| (at 120Hz) | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Load Life | The following specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage is applied with the following conditions with its polarization reversed every 250 hours. | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Series Name | | MVG(MV)-BP | | BDS(MVK)-BP | | | | | | | | | | | | | | | | | | | | | | |
| | Test time & temperature | | 2,000 hours at 85°C | | 1,000 hours at 105°C | | | | | | | | | | | | | | | | | | | | | | |
| | Capacitance change | | ≤ ±20% of the initial value | | ≤ ±30% of the initial value | | | | | | | | | | | | | | | | | | | | | | |
| | Tanδ | | ≤200% of the initial specified value | | ≤300% of the initial specified value | | | | | | | | | | | | | | | | | | | | | | |
| Leakage current | | ≤The initial specified value | | ≤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 85°C (MVG(MV)-BP) or 105°C (BDS(MVK)-BP) without voltage applied. The rated voltage shall be applied to the capacitors for a minimum of 30 minutes, at least 24 hours and not more than 48 hours before the measurements. | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Series Name | | MVG(MV)-BP | | BDS(MVK)-BP | | | | | | | | | | | | | | | | | | | | | | |
| | Capacitance change | | ≤ ±15% of the initial value | | ≤ ±25% of the initial value | | | | | | | | | | | | | | | | | | | | | | |
| | Tanδ | | ≤150% of the initial specified value | | ≤200% of the initial specified value | | | | | | | | | | | | | | | | | | | | | | |
| | Leakage current | | ≤The initial specified value | | ≤The initial specified value | | | | | | | | | | | | | | | | | | | | | | |
| Others | Satisfied characteristics KS C IEC 60384-4 | | | | | | | | | | | | | | | | | | | | | | | | | | |

MVG(MV)-BP / BDS(MVK)-BP Series

PART NUMBERING SYSTEM



DIMENSIONS OF MVG(MV)-BP, BDS(MVK)-BP Series

Unit(mm)

DIMENSIONS

MARKING

Recommended solder land on PC board

■ : Solder land on PC board

Note 1 : 6.3WV is marked by 6V.

| Case code | ∅D | L | A | B | C | W | P | a | b | c |
|-----------|-----|-----|-----|-----|-----|---------|-----|-----|-----|-----|
| D55 | 4 | 5.2 | 4.3 | 4.3 | 5.1 | 0.5~0.8 | 1.0 | 1.0 | 2.6 | 1.6 |
| E55 | 5 | 5.2 | 5.3 | 5.3 | 5.9 | 0.5~0.8 | 1.4 | 1.4 | 3.0 | 1.6 |
| F55 | 6.3 | 5.2 | 6.6 | 6.6 | 7.2 | 0.5~0.8 | 1.9 | 1.9 | 3.5 | 1.6 |
| F60 | 6.3 | 5.7 | 6.6 | 6.6 | 7.2 | 0.5~0.8 | 1.9 | 1.9 | 3.5 | 1.6 |

RATINGS OF MVG(MV)-BP, BDS(MVK)-BP Series

MVG(MV)-BP

| μF \ V _{DC} | 4 | | 6.3 | | 10 | | 16 | | 25 | | 35 | | 50 | | |
|----------------------|-----|----|-----|----|-----|----|-----|----|-----|----|----|-----|----|-----|-----|
| | 1.0 | | | | | | | | | | | | | | D55 |
| (1.5) | | | | | | | | | | | | | | D55 | 6.5 |
| 2.2 | | | | | | | | | | | | D55 | 8 | E55 | 9 |
| 3.3 | | | | | | | | | D55 | 9 | | | | E55 | 11 |
| 4.7 | | | | | | | D55 | 11 | | | | E55 | 13 | F55 | 14 |
| (6.8) | | | | | D55 | 12 | | | E55 | 15 | | F55 | 17 | | |
| 10 | | | D55 | 13 | | | E55 | 18 | | | | F55 | 21 | | |
| (15) | D55 | 14 | | | E55 | 21 | | | F55 | 24 | | | | | |
| 22 | | | E55 | 23 | | | F55 | 28 | | | | | | | |
| 33 | | | | | F55 | 33 | | | | | | | | | |
| 47 | | | F55 | 36 | | | | | | | | | | | |

↑ Rated Ripple Current(mArms/ 85°C, 120Hz)
 ↑ Case code

BDS(MVK)-BP

| μF \ V _{DC} | 6.3 | | 10 | | 16 | | 25 | | 35 | | 50 | |
|----------------------|-----|----|-----|----|-----|----|-----|----|-----|----|-----|-----|
| | 1.0 | | | | | | | | | | | D55 |
| (1.5) | | | | | | | | | | | D55 | 7.2 |
| 2.2 | | | | | | | | | D55 | 7 | E55 | 9.0 |
| 3.3 | | | | | | | D55 | 8 | | | E55 | 12 |
| 4.7 | | | | | D55 | 10 | | | E55 | 14 | F60 | 16 |
| (6.8) | | | D55 | 11 | | | E55 | 16 | | | F60 | 20 |
| 10 | D55 | 12 | | | E55 | 18 | | | F60 | 23 | | |
| (15) | | | E55 | 20 | | | F60 | 28 | | | | |
| 22 | E55 | 23 | | | F60 | 32 | | | | | | |
| 33 | | | F60 | 35 | | | | | | | | |
| 47 | F60 | 39 | | | | | | | | | | |

↑ Rated Ripple Current (mArms/105°C, 120Hz)
 ↑ Case code

Note : → Use next higher voltage part.
 Parenthesized capacitance is not standard part.

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