



### ■ Dimensions

| V(Code)   |           | 10 (1A)               |                    |                      | 16 (1C)               |                    |                      | 25 (1E)               |                    |                      | 35 (1V)               |                    |                      | 50 (1H)               |                    |                      |
|-----------|-----------|-----------------------|--------------------|----------------------|-----------------------|--------------------|----------------------|-----------------------|--------------------|----------------------|-----------------------|--------------------|----------------------|-----------------------|--------------------|----------------------|
| Cap. (μF) | Item Code | Case size φD × L (mm) | Impedance (Ω) MAX. | Rated ripple (mAmps) | Case size φD × L (mm) | Impedance (Ω) MAX. | Rated ripple (mAmps) | Case size φD × L (mm) | Impedance (Ω) MAX. | Rated ripple (mAmps) | Case size φD × L (mm) | Impedance (Ω) MAX. | Rated ripple (mAmps) | Case size φD × L (mm) | Impedance (Ω) MAX. | Rated ripple (mAmps) |
| 1         | 010       |                       |                    |                      |                       |                    |                      |                       |                    |                      |                       |                    |                      | 8 × 11.5              | 2.00               | 35                   |
| 2.2       | 2R2       |                       |                    |                      |                       |                    |                      |                       |                    |                      |                       |                    |                      | 8 × 11.5              | 1.80               | 50                   |
| 3.3       | 3R3       |                       |                    |                      |                       |                    |                      |                       |                    |                      |                       |                    |                      | 8 × 11.5              | 1.50               | 60                   |
| 4.7       | 4R7       |                       |                    |                      |                       |                    |                      |                       |                    |                      |                       |                    |                      | 8 × 11.5              | 1.15               | 85                   |
| 10        | 100       |                       |                    |                      |                       |                    |                      |                       |                    |                      |                       |                    |                      | 8 × 11.5              | 0.75               | 180                  |
| 22        | 220       |                       |                    |                      |                       |                    |                      |                       |                    |                      |                       |                    |                      | 8 × 11.5              | 0.50               | 250                  |
| 33        | 330       |                       |                    |                      |                       |                    |                      |                       |                    |                      |                       |                    |                      | 8 × 11.5              | 0.45               | 300                  |
| 47        | 470       |                       |                    |                      |                       |                    |                      |                       |                    |                      |                       |                    |                      | 8 × 11.5              | 0.35               | 440                  |
| 100       | 101       |                       |                    |                      | 8 × 11.5              | 0.32               | 340                  | 8 × 11.5              | 0.13               | 500                  | 10 × 12.5             | 0.15               | 620                  | 10 × 12.5             | 0.18               | 555                  |
| 220       | 221       | 8 × 11.5              | 0.26               | 340                  | 10 × 12.5             | 0.15               | 620                  | 10 × 12.5             | 0.10               | 680                  | 10 × 16               | 0.094              | 790                  | 10 × 20               | 0.098              | 930                  |
| 330       | 331       | 10 × 12.5             | 0.15               | 620                  | 10 × 12.5             | 0.10               | 680                  | 10 × 16               | 0.075              | 945                  | 10 × 20               | 0.075              | 950                  | 12.5 × 20             | 0.070              | 1330                 |
| 470       | 471       | 10 × 12.5             | 0.10               | 680                  | 10 × 16               | 0.075              | 945                  | 10 × 20               | 0.057              | 1100                 | 12.5 × 20             | 0.058              | 1330                 | 12.5 × 25             | 0.055              | 1650                 |
| 1000      | 102       | 10 × 20               | 0.057              | 1100                 | 12.5 × 20             | 0.042              | 1490                 | 12.5 × 25             | 0.033              | 1750                 | 16 × 25               | 0.031              | 2010                 | 16 × 31.5             | 0.031              | 2430                 |
| 2200      | 222       | 12.5 × 25             | 0.033              | 1750                 | 16 × 25               | 0.024              | 2300                 | 16 × 31.5             | 0.020              | 2710                 | 18 × 35.5             | 0.025              | 2790                 |                       |                    |                      |
| 3300      | 332       | 16 × 25               | 0.024              | 2300                 | 16 × 31.5             | 0.020              | 2710                 | 18 × 31.5             | 0.017              | 3310                 |                       |                    |                      |                       |                    |                      |
| 4700      | 472       | 16 × 31.5             | 0.020              | 2710                 | 18 × 31.5             | 0.018              | 3270                 |                       |                    |                      |                       |                    |                      |                       |                    |                      |

| V(Code)   |           | 63 (1J)               |                    |                      | 80 (1K)               |                    |                      | 100 (2A)              |                    |                      |
|-----------|-----------|-----------------------|--------------------|----------------------|-----------------------|--------------------|----------------------|-----------------------|--------------------|----------------------|
| Cap. (μF) | Item Code | Case size φD × L (mm) | Impedance (Ω) MAX. | Rated ripple (mAmps) | Case size φD × L (mm) | Impedance (Ω) MAX. | Rated ripple (mAmps) | Case size φD × L (mm) | Impedance (Ω) MAX. | Rated ripple (mAmps) |
| 4.7       | 4R7       |                       |                    |                      |                       |                    |                      | 8 × 11.5              | 2.00               | 130                  |
| 10        | 100       |                       |                    |                      |                       |                    |                      | 8 × 11.5              | 1.50               | 150                  |
| 22        | 220       | 8 × 11.5              | 2.00               | 130                  | 8 × 11.5              | 1.50               | 150                  | 10 × 12.5             | 0.80               | 480                  |
| 33        | 330       | 8 × 11.5              | 1.50               | 150                  | 10 × 12.5             | 0.80               | 480                  | 10 × 12.5             | 0.80               | 480                  |
| 47        | 470       | 10 × 12.5             | 0.59               | 530                  | 10 × 12.5             | 0.80               | 480                  | 10 × 16               | 0.55               | 630                  |
| 100       | 101       | 10 × 16               | 0.41               | 690                  | 10 × 20               | 0.39               | 790                  | 12.5 × 20             | 0.25               | 990                  |
| 220       | 221       | 12.5 × 20             | 0.16               | 1050                 | 12.5 × 25             | 0.18               | 1240                 | 16 × 25               | 0.11               | 1500                 |
| 330       | 331       | 12.5 × 25             | 0.12               | 1290                 | 12.5 × 31.5           | 0.16               | 1390                 | 16 × 31.5             | 0.079              | 1790                 |
| 470       | 471       | 12.5 × 31.5           | 0.097              | 1460                 | 16 × 25               | 0.11               | 1500                 |                       |                    |                      |

Rated Ripple (mAmps) at 125°C 100kHz  
Impedance (Ω) MAX. at 20°C 100kHz

### ● Frequency coefficient of rated ripple current

| V         | Frequency |       |       |      |               |
|-----------|-----------|-------|-------|------|---------------|
|           | Cv        | 120Hz | 300Hz | 1kHz | 10kHz or more |
| 10 to 100 | 1000 > CV | 0.50  | 0.64  | 0.83 | 1.00          |
|           | 1000 ≤ CV | 0.67  | 0.79  | 0.91 | 1.00          |

| V(Code)   |           | 160 (2C)              |                      | 200 (2D)              |                      | 250 (2E)              |                      | 350 (2V)              |                      | 400 (2G)              |                      | 450 (2W)              |                      |
|-----------|-----------|-----------------------|----------------------|-----------------------|----------------------|-----------------------|----------------------|-----------------------|----------------------|-----------------------|----------------------|-----------------------|----------------------|
| Cap. (μF) | Item Code | Case size φD × L (mm) | Rated ripple (mAmps) | Case size φD × L (mm) | Rated ripple (mAmps) | Case size φD × L (mm) | Rated ripple (mAmps) | Case size φD × L (mm) | Rated ripple (mAmps) | Case size φD × L (mm) | Rated ripple (mAmps) | Case size φD × L (mm) | Rated ripple (mAmps) |
| 4.7       | 4R7       |                       |                      |                       |                      |                       |                      | 10 × 20               | 53                   | 10 × 20               | 53                   | 10 × 25               | 58                   |
| 10        | 100       |                       |                      | 10 × 20               | 78                   | 10 × 20               | 78                   | 10 × 25               | 85                   | 10 × 25               | 86                   | 12.5 × 20             | 86                   |
| 22        | 220       | 10 × 20               | 115                  | 10 × 25               | 126                  | 12.5 × 20             | 128                  | 12.5 × 25             | 139                  | 12.5 × 31.5           | 142                  | 16 × 25               | 154                  |
| 33        | 330       | 10 × 25               | 154                  | 12.5 × 20             | 157                  | 12.5 × 25             | 171                  | 16 × 25               | 189                  | 16 × 25               | 189                  | 16 × 31.5             | 203                  |
| 47        | 470       | 12.5 × 20             | 187                  | 12.5 × 25             | 204                  | 16 × 25               | 225                  | 16 × 31.5             | 243                  | 16 × 31.5             | 243                  |                       |                      |
| 68        | 680       | 12.5 × 25             | 245                  | 16 × 20               | 250                  | 16 × 31.5             | 292                  |                       |                      |                       |                      |                       |                      |
| 100       | 101       | 16 × 25               | 329                  | 16 × 25               | 329                  |                       |                      |                       |                      |                       |                      |                       |                      |
| 150       | 151       | 16 × 31.5             | 434                  |                       |                      |                       |                      |                       |                      |                       |                      |                       |                      |

Rated Ripple (mAmps) at 125°C 120Hz

### ● Frequency coefficient of rated ripple current

| V          | Frequency |      |       |       |      |       |        |
|------------|-----------|------|-------|-------|------|-------|--------|
|            | Cap. (μF) | 50Hz | 120Hz | 300Hz | 1kHz | 10kHz | 100kHz |
| 160 to 450 | 4.7 to 33 | 0.75 | 1.00  | 1.25  | 1.50 | 1.75  | 1.80   |
|            | 47 to 150 | 0.80 | 1.00  | 1.15  | 1.30 | 1.40  | 1.50   |