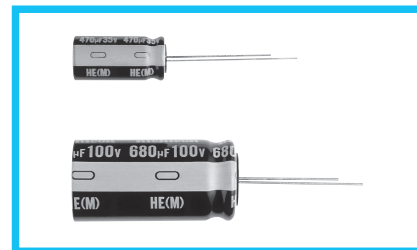


**UHE**Miniature Sized, Low Impedance,  
High Reliability

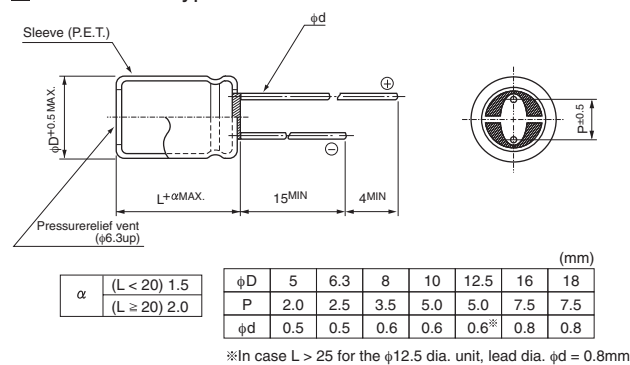
- Low impedance and high reliability withstanding 4000 hours to 10000 hours.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).



## Specifications

| Item                          | Performance Characteristics                                                                                                                                                                             |                 |                                                   |      |             |      |             |      |      |       |  |
|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|---------------------------------------------------|------|-------------|------|-------------|------|------|-------|--|
| Category Temperature Range    | -40 to +105°C                                                                                                                                                                                           |                 |                                                   |      |             |      |             |      |      |       |  |
| Rated Voltage Range           | 6.3 to 100V                                                                                                                                                                                             |                 |                                                   |      |             |      |             |      |      |       |  |
| Rated Capacitance Range       | 2.2 to 18000μF                                                                                                                                                                                          |                 |                                                   |      |             |      |             |      |      |       |  |
| Capacitance Tolerance         | ±20% at 120Hz, 20°C                                                                                                                                                                                     |                 |                                                   |      |             |      |             |      |      |       |  |
| Leakage Current               | After 2 minutes' application of rated voltage at 20°C, leakage current is not more than 0.01CV or 3 (μA), whichever is greater.                                                                         |                 |                                                   |      |             |      |             |      |      |       |  |
| Tangent of loss angle (tan δ) | Rated voltage (V)                                                                                                                                                                                       | 6.3             | 10                                                | 16   | 25          | 35   | 50          | 63   | 100  | 120Hz |  |
|                               | tan δ (MAX.)                                                                                                                                                                                            | 0.22            | 0.19                                              | 0.16 | 0.14        | 0.12 | 0.10        | 0.09 | 0.08 | 20°C  |  |
|                               | For capacitance of more than 1000μF, add 0.02 for every increase of 1000μF.                                                                                                                             |                 |                                                   |      |             |      |             |      |      |       |  |
| Stability at Low Temperature  | Rated voltage (V)                                                                                                                                                                                       | 6.3             | 10                                                | 16   | 25          | 35   | 50          | 63   | 100  | 120Hz |  |
|                               | Impedance ratio (MAX.)                                                                                                                                                                                  | Z-25°C / Z+20°C | 4                                                 | 3    | 2           | 2    | 2           | 2    | 2    | 2     |  |
|                               |                                                                                                                                                                                                         | Z-40°C / Z+20°C | 8                                                 | 6    | 4           | 3    | 3           | 3    | 3    | 3     |  |
| Endurance                     | The following specifications shall be met when the capacitors are restored to 20°C after D.C. bias plus rated ripple current is applied at 105°C , the peak voltage shall not exceed the rated voltage. |                 |                                                   |      |             |      |             |      |      |       |  |
|                               | Case size                                                                                                                                                                                               |                 | φD ≤ 6.3                                          |      | φD = 8 , 10 |      | φD ≥ 12.5   |      |      |       |  |
|                               | Rated voltage (V)                                                                                                                                                                                       | 6.3 to 10WV     | 4000 hours                                        |      | 6000 hours  |      | 8000 hours  |      |      |       |  |
|                               |                                                                                                                                                                                                         | 16 to 100WV     | 5000 hours                                        |      | 7000 hours  |      | 10000 hours |      |      |       |  |
|                               | Capacitance change                                                                                                                                                                                      |                 | Within ±25% of the initial capacitance value      |      |             |      |             |      |      |       |  |
|                               | tan δ                                                                                                                                                                                                   |                 | 200% or less than the initial specified value     |      |             |      |             |      |      |       |  |
|                               | Leakage current                                                                                                                                                                                         |                 | Less than or equal to the initial specified value |      |             |      |             |      |      |       |  |
| Marking                       | Printed with white color letter on black sleeve.                                                                                                                                                        |                 |                                                   |      |             |      |             |      |      |       |  |

## Radial Lead Type

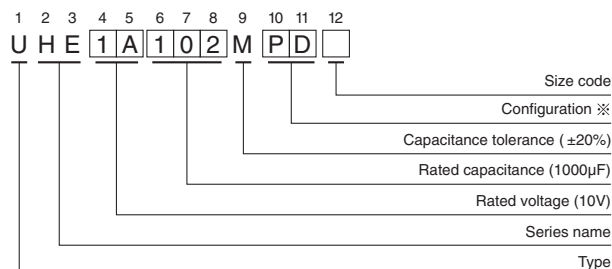


- Please refer to page 20 about the end seal configuration.

## Frequency coefficient of rated ripple current

| Cap. (μF)     | Frequency | 50Hz | 120Hz | 300Hz | 1kHz | 10kHz or more |
|---------------|-----------|------|-------|-------|------|---------------|
| 2.2 to 33     |           | 0.45 | 0.55  | 0.70  | 0.90 | 1.00          |
| 39 to 330     |           | 0.60 | 0.70  | 0.85  | 0.95 | 1.00          |
| 390 to 1000   |           | 0.65 | 0.75  | 0.90  | 0.98 | 1.00          |
| 1200 to 18000 |           | 0.75 | 0.80  | 0.95  | 1.00 | 1.00          |

## Type numbering system (Example : 10V 1000μF)



### ※ Configuration

| φ D        | Pb-free leadwire<br>Pb-free PET sleeve |
|------------|----------------------------------------|
| 5          | DD                                     |
| 6.3        | ED                                     |
| 8 - 10     | PD                                     |
| 12.5 to 18 | HD                                     |

Please refer to page 20, 21, 22 about the formed or taped product spec.  
Please refer to page 4 for the minimum order quantity.

- Dimension table in next page.

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## ■ Dimensions

| V (Code)<br><br>Cap.(μF)<br>Code |     | Item        | 6.3 (0J)                    |                    |                |                                           | 10 (1A)                     |                    |                |                                           |
|----------------------------------|-----|-------------|-----------------------------|--------------------|----------------|-------------------------------------------|-----------------------------|--------------------|----------------|-------------------------------------------|
|                                  |     |             | Case size<br>φD × L<br>(mm) | Impedance (Ω) MAX. |                | Rated ripple<br>(mArms)<br>105°C / 100kHz | Case size<br>φD × L<br>(mm) | Impedance (Ω) MAX. |                | Rated ripple<br>(mArms)<br>105°C / 100kHz |
|                                  |     |             |                             | 20°C / 100kHz      | −10°C / 100kHz |                                           |                             | 20°C / 100kHz      | −10°C / 100kHz |                                           |
| 100                              | 101 |             |                             |                    |                | 5 × 11                                    | 0.58                        | 2.3                | 210            |                                           |
| 150                              | 151 | 5 × 11      | 0.58                        | 2.3                | 210            |                                           |                             |                    |                |                                           |
| 220                              | 221 |             |                             |                    |                | 6.3 × 11                                  | 0.22                        | 0.87               | 340            |                                           |
| 330                              | 331 | 6.3 × 11    | 0.22                        | 0.87               | 340            |                                           |                             |                    |                |                                           |
| 470                              | 471 |             |                             |                    |                | 8 × 11.5                                  | 0.13                        | 0.52               | 640            |                                           |
| 680                              | 681 | 8 × 11.5    | 0.13                        | 0.52               | 640            | 8 × 15                                    | 0.087                       | 0.35               | 840            |                                           |
|                                  |     |             |                             |                    |                | ▲ 10 × 12.5                               | 0.080                       | 0.32               | 865            |                                           |
| 820                              | 821 | 10 × 12.5   | 0.080                       | 0.32               | 865            |                                           |                             |                    |                |                                           |
| 1000                             | 102 | 8 × 15      | 0.087                       | 0.35               | 840            | 8 × 20                                    | 0.069                       | 0.27               | 1050           |                                           |
|                                  |     |             |                             |                    |                | ▲ 10 × 16                                 | 0.060                       | 0.24               | 1210           |                                           |
| 1200                             | 122 | 8 × 20      | 0.069                       | 0.27               | 1050           | 10 × 20                                   | 0.046                       | 0.18               | 1400           |                                           |
|                                  |     | ▲ 10 × 16   | 0.060                       | 0.24               | 1210           |                                           |                             |                    |                |                                           |
| 1500                             | 152 | 10 × 20     | 0.046                       | 0.18               | 1400           | 10 × 25                                   | 0.042                       | 0.17               | 1650           |                                           |
|                                  |     |             |                             |                    |                | ▲ 12.5 × 15                               | 0.049                       | 0.16               | 1450           |                                           |
| 1800                             | 182 | 12.5 × 15   | 0.049                       | 0.16               | 1450           |                                           |                             |                    |                |                                           |
| 2200                             | 222 | 10 × 25     | 0.042                       | 0.17               | 1650           | 10 × 31.5                                 | 0.031                       | 0.12               | 1910           |                                           |
|                                  |     |             |                             |                    |                | ▲ 12.5 × 20                               | 0.035                       | 0.12               | 1900           |                                           |
|                                  |     |             |                             |                    |                | ● 16 × 15                                 | 0.042                       | 0.12               | 1940           |                                           |
| 2700                             | 272 | ▲ 10 × 31.5 | 0.031                       | 0.12               | 1910           | 18 × 15                                   | 0.043                       | 0.11               | 2210           |                                           |
|                                  |     | 16 × 15     | 0.042                       | 0.12               | 1940           |                                           |                             |                    |                |                                           |
| 3300                             | 332 | 12.5 × 20   | 0.035                       | 0.12               | 1900           | 12.5 × 25                                 | 0.027                       | 0.089              | 2230           |                                           |
| 3900                             | 392 | 12.5 × 25   | 0.027                       | 0.089              | 2230           | 12.5 × 31.5                               | 0.024                       | 0.078              | 2650           |                                           |
|                                  |     | ▲ 18 × 15   | 0.043                       | 0.11               | 2210           | ▲ 16 × 20                                 | 0.027                       | 0.078              | 2530           |                                           |
| 4700                             | 472 | 12.5 × 31.5 | 0.024                       | 0.078              | 2650           | 12.5 × 35.5                               | 0.020                       | 0.065              | 2880           |                                           |
| 5600                             | 562 | 12.5 × 35.5 | 0.020                       | 0.065              | 2880           | 12.5 × 40                                 | 0.017                       | 0.056              | 3350           |                                           |
|                                  |     | ▲ 16 × 20   | 0.027                       | 0.078              | 2530           | ▲ 16 × 25                                 | 0.021                       | 0.060              | 2930           |                                           |
|                                  |     |             |                             |                    |                | ● 18 × 20                                 | 0.026                       | 0.067              | 2860           |                                           |
| 6800                             | 682 | 12.5 × 40   | 0.017                       | 0.056              | 3350           | 16 × 31.5                                 | 0.017                       | 0.050              | 3450           |                                           |
|                                  |     | ▲ 16 × 25   | 0.021                       | 0.060              | 2930           |                                           |                             |                    |                |                                           |
|                                  |     | ● 18 × 20   | 0.026                       | 0.067              | 2860           |                                           |                             |                    |                | ▲ 18 × 25                                 |
| 8200                             | 822 | 16 × 31.5   | 0.017                       | 0.050              | 3450           | 16 × 35.5                                 | 0.015                       | 0.044              | 3610           |                                           |
|                                  |     |             |                             |                    |                | ▲ 18 × 31.5                               | 0.015                       | 0.040              | 4170           |                                           |
| 10000                            | 103 | 16 × 35.5   | 0.015                       | 0.044              | 3610           | 16 × 40                                   | 0.013                       | 0.038              | 4080           |                                           |
|                                  |     | ▲ 18 × 25   | 0.019                       | 0.049              | 3140           | ▲ 18 × 35.5                               | 0.014                       | 0.038              | 4220           |                                           |
| 12000                            | 123 | 16 × 40     | 0.013                       | 0.038              | 4080           | 18 × 40                                   | 0.012                       | 0.032              | 4280           |                                           |
|                                  |     | ▲ 18 × 31.5 | 0.015                       | 0.040              | 4170           |                                           |                             |                    |                |                                           |
| 15000                            | 153 | 18 × 35.5   | 0.014                       | 0.038              | 4220           |                                           |                             |                    |                |                                           |
| 18000                            | 183 | 18 × 40     | 0.012                       | 0.032              | 4280           |                                           |                             |                    |                |                                           |

▲: In this case, [6] will be put at 12th digit of type numbering system.

●: In this case, [3] will be put at 12th digit of type numbering system.

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## ■ Dimensions

| V (Code)<br><br>Item<br><br>Cap.(μF)Code |     | 16 (1C)                     |                    |                |                                           | 25 (1E)                     |                    |                |                                           |
|------------------------------------------|-----|-----------------------------|--------------------|----------------|-------------------------------------------|-----------------------------|--------------------|----------------|-------------------------------------------|
|                                          |     | Case size<br>φD × L<br>(mm) | Impedance (Ω) MAX. |                | Rated ripple<br>(mArms)<br>105°C / 100kHz | Case size<br>φD × L<br>(mm) | Impedance (Ω) MAX. |                | Rated ripple<br>(mArms)<br>105°C / 100kHz |
|                                          |     |                             | 20°C / 100kHz      | −10°C / 100kHz |                                           |                             | 20°C / 100kHz      | −10°C / 100kHz |                                           |
| 47                                       | 470 |                             |                    |                |                                           | 5 × 11                      | 0.58               | 2.3            | 210                                       |
| 56                                       | 560 | 5 × 11                      | 0.58               | 2.3            | 210                                       |                             |                    |                |                                           |
| 100                                      | 101 |                             |                    |                |                                           | 6.3 × 11                    | 0.22               | 0.87           | 340                                       |
| 120                                      | 121 | 6.3 × 11                    | 0.22               | 0.87           | 340                                       |                             |                    |                |                                           |
| 220                                      | 221 |                             |                    |                |                                           | 8 × 11.5                    | 0.13               | 0.52           | 640                                       |
| 330                                      | 331 | 8 × 11.5                    | 0.13               | 0.52           | 640                                       | 8 × 15                      | 0.087              | 0.35           | 840                                       |
|                                          |     |                             |                    |                |                                           | ▲ 10 × 12.5                 | 0.080              | 0.32           | 865                                       |
| 470                                      | 471 | 8 × 15                      | 0.087              | 0.35           | 840                                       | 8 × 20                      | 0.069              | 0.27           | 1050                                      |
|                                          |     | ▲ 10 × 12.5                 | 0.080              | 0.32           | 865                                       | ▲ 10 × 16                   | 0.06               | 0.24           | 1210                                      |
| 680                                      | 681 | 8 × 20                      | 0.069              | 0.27           | 1050                                      | 10 × 20                     | 0.046              | 0.18           | 1400                                      |
|                                          |     | ▲ 10 × 16                   | 0.060              | 0.24           | 1210                                      | ▲ 12.5 × 15                 | 0.049              | 0.16           | 1450                                      |
| 820                                      | 821 |                             |                    |                |                                           | 10 × 25                     | 0.042              | 0.17           | 1650                                      |
| 1000                                     | 102 | 10 × 20                     | 0.046              | 0.18           | 1400                                      | 10 × 31.5                   | 0.031              | 0.12           | 1910                                      |
|                                          |     | ▲ 12.5 × 15                 | 0.049              | 0.16           | 1450                                      | ▲ 12.5 × 20                 | 0.035              | 0.12           | 1900                                      |
|                                          |     |                             |                    |                |                                           | ● 16 × 15                   | 0.042              | 0.12           | 1940                                      |
| 1200                                     | 122 | 10 × 25                     | 0.042              | 0.17           | 1650                                      | 18 × 15                     | 0.043              | 0.11           | 2210                                      |
| 1500                                     | 152 | 10 × 31.5                   | 0.031              | 0.12           | 1910                                      | 12.5 × 25                   | 0.027              | 0.089          | 2230                                      |
|                                          |     | ▲ 12.5 × 20                 | 0.035              | 0.12           | 1900                                      |                             |                    |                |                                           |
|                                          |     | ● 16 × 15                   | 0.042              | 0.12           | 1940                                      |                             |                    |                |                                           |
| 1800                                     | 182 |                             |                    |                |                                           | 12.5 × 31.5                 | 0.024              | 0.078          | 2650                                      |
|                                          |     |                             |                    |                |                                           | ▲ 16 × 20                   | 0.027              | 0.078          | 2530                                      |
| 2200                                     | 222 | 12.5 × 25                   | 0.027              | 0.089          | 2230                                      | 12.5 × 35.5                 | 0.020              | 0.065          | 2880                                      |
|                                          |     | ▲ 18 × 15                   | 0.043              | 0.11           | 2210                                      | ▲ 18 × 20                   | 0.026              | 0.067          | 2860                                      |
| 2700                                     | 272 | 12.5 × 31.5                 | 0.024              | 0.078          | 2650                                      | 12.5 × 40                   | 0.017              | 0.056          | 3350                                      |
|                                          |     | ▲ 16 × 20                   | 0.027              | 0.078          | 2530                                      | ▲ 16 × 25                   | 0.021              | 0.060          | 2930                                      |
| 3300                                     | 332 | 12.5 × 35.5                 | 0.020              | 0.065          | 2880                                      | 16 × 31.5                   | 0.017              | 0.050          | 3450                                      |
|                                          |     |                             |                    |                |                                           | ▲ 18 × 25                   | 0.019              | 0.049          | 3140                                      |
| 3900                                     | 392 | 12.5 × 40                   | 0.017              | 0.056          | 3350                                      | 16 × 35.5                   | 0.015              | 0.044          | 3610                                      |
|                                          |     | ▲ 16 × 25                   | 0.021              | 0.060          | 2930                                      |                             |                    |                |                                           |
|                                          |     | ● 16 × 20                   | 0.026              | 0.067          | 2860                                      | ▲ 18 × 31.5                 | 0.015              | 0.040          | 4170                                      |
| 4700                                     | 472 | 16 × 31.5                   | 0.017              | 0.050          | 3450                                      | 16 × 40                     | 0.013              | 0.038          | 4080                                      |
|                                          |     | ▲ 18 × 25                   | 0.019              | 0.049          | 3140                                      | ▲ 18 × 35.5                 | 0.014              | 0.038          | 4220                                      |
| 5600                                     | 562 | 16 × 35.5                   | 0.015              | 0.044          | 3610                                      | 18 × 40                     | 0.012              | 0.032          | 4280                                      |
|                                          |     | ▲ 18 × 31.5                 | 0.015              | 0.040          | 4170                                      |                             |                    |                |                                           |
| 6800                                     | 682 | 16 × 40                     | 0.013              | 0.038          | 4080                                      |                             |                    |                |                                           |
| 8200                                     | 822 | 18 × 35.5                   | 0.014              | 0.038          | 4220                                      |                             |                    |                |                                           |
| 10000                                    | 103 | 18 × 40                     | 0.012              | 0.032          | 4280                                      |                             |                    |                |                                           |

▲ : In this case, [6] will be put at 12th digit of type numbering system.

● : In this case, [3] will be put at 12th digit of type numbering system.

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## ■ Dimensions

| Cap.(μF) | Item<br>Code | V (Code)                    |                    |                |                                           | 35 (1V)                     |                    |                |                                           | 50 (1H)                     |                    |                |                                           |
|----------|--------------|-----------------------------|--------------------|----------------|-------------------------------------------|-----------------------------|--------------------|----------------|-------------------------------------------|-----------------------------|--------------------|----------------|-------------------------------------------|
|          |              | Case size<br>φD × L<br>(mm) | Impedance (Ω) MAX. |                | Rated ripple<br>(mAmps)<br>105°C / 100kHz | Case size<br>φD × L<br>(mm) | Impedance (Ω) MAX. |                | Rated ripple<br>(mAmps)<br>105°C / 100kHz | Case size<br>φD × L<br>(mm) | Impedance (Ω) MAX. |                | Rated ripple<br>(mAmps)<br>105°C / 100kHz |
|          |              |                             | 20°C / 100kHz      | -10°C / 100kHz |                                           |                             | 20°C / 100kHz      | -10°C / 100kHz |                                           |                             | 20°C / 100kHz      | -10°C / 100kHz |                                           |
| 2.2      | 2R2          |                             |                    |                |                                           | 5 × 11                      | 2.5                | 10             | 43                                        |                             |                    |                |                                           |
| 3.3      | 3R3          |                             |                    |                |                                           | 5 × 11                      | 2.2                | 8.8            | 53                                        |                             |                    |                |                                           |
| 4.7      | 4R7          |                             |                    |                |                                           | 5 × 11                      | 1.9                | 7.6            | 88                                        |                             |                    |                |                                           |
| 10       | 100          |                             |                    |                |                                           | 5 × 11                      | 1.5                | 6              | 100                                       |                             |                    |                |                                           |
| 22       | 220          |                             |                    |                |                                           | 5 × 11                      | 0.70               | 2.8            | 180                                       |                             |                    |                |                                           |
| 33       | 330          | 5 × 11                      | 0.58               | 2.3            | 210                                       | 6.3 × 11                    | 0.30               | 1.2            | 295                                       |                             |                    |                |                                           |
| 47       | 470          | 6.3 × 11                    | 0.22               | 0.87           | 250                                       | 6.3 × 11                    | 0.30               | 1.2            | 295                                       |                             |                    |                |                                           |
| 56       | 560          | 6.3 × 11                    | 0.22               | 0.87           | 340                                       | 6.3 × 11                    | 0.30               | 1.2            | 295                                       |                             |                    |                |                                           |
| 100      | 101          | 8 × 11.5                    | 0.13               | 0.52           | 640                                       | 8 × 11.5                    | 0.17               | 0.68           | 555                                       |                             |                    |                |                                           |
| 120      | 121          |                             |                    |                |                                           | 8 × 15                      | 0.12               | 0.48           | 730                                       |                             |                    |                |                                           |
| 150      | 151          | 8 × 11.5                    | 0.13               | 0.52           | 640                                       | 10 × 12.5                   | 0.12               | 0.48           | 760                                       |                             |                    |                |                                           |
| 180      | 181          |                             |                    |                |                                           | 8 × 20                      | 0.091              | 0.36           | 910                                       |                             |                    |                |                                           |
| 220      | 221          | 8 × 15                      | 0.087              | 0.35           | 840                                       | 10 × 16                     | 0.084              | 0.34           | 1050                                      |                             |                    |                |                                           |
|          |              | ▲ 10 × 12.5                 | 0.080              | 0.32           | 865                                       |                             |                    |                |                                           |                             |                    |                |                                           |
| 270      | 271          | 8 × 20                      | 0.069              | 0.27           | 1050                                      | 10 × 20                     | 0.060              | 0.24           | 1220                                      |                             |                    |                |                                           |
|          |              |                             |                    |                |                                           | ▲ 12.5 × 15                 | 0.061              | 0.20           | 1260                                      |                             |                    |                |                                           |
| 330      | 331          | 10 × 16                     | 0.060              | 0.24           | 1210                                      | 10 × 25                     | 0.055              | 0.22           | 1440                                      |                             |                    |                |                                           |
|          |              |                             |                    |                |                                           | ▲ 10 × 20                   | 0.060              | 0.24           | 1220                                      |                             |                    |                |                                           |
| 470      | 471          | 10 × 20                     | 0.046              | 0.18           | 1400                                      | 10 × 31.5                   | 0.043              | 0.17           | 1690                                      |                             |                    |                |                                           |
|          |              | ▲ 12.5 × 15                 | 0.049              | 0.16           | 1450                                      | ▲ 12.5 × 20                 | 0.045              | 0.15           | 1660                                      |                             |                    |                |                                           |
|          |              |                             |                    |                |                                           | ● 16 × 15                   | 0.055              | 0.17           | 1690                                      |                             |                    |                |                                           |
| 560      | 561          | 10 × 25                     | 0.042              | 0.17           | 1650                                      | 12.5 × 25                   | 0.034              | 0.11           | 1950                                      |                             |                    |                |                                           |
|          |              |                             |                    |                |                                           | ▲ 18 × 15                   | 0.054              | 0.15           | 1930                                      |                             |                    |                |                                           |
| 680      | 681          | 10 × 31.5                   | 0.031              | 0.12           | 1910                                      | 12.5 × 31.5                 | 0.030              | 0.10           | 2310                                      |                             |                    |                |                                           |
|          |              | ▲ 12.5 × 20                 | 0.035              | 0.12           | 1900                                      |                             |                    |                |                                           |                             |                    |                |                                           |
|          |              | ● 16 × 15                   | 0.042              | 0.12           | 1940                                      |                             |                    |                |                                           |                             |                    |                |                                           |
| 820      | 821          |                             |                    |                |                                           | 12.5 × 35.5                 | 0.025              | 0.083          | 2510                                      |                             |                    |                |                                           |
|          |              |                             |                    |                |                                           | ▲ 16 × 20                   | 0.034              | 0.10           | 2210                                      |                             |                    |                |                                           |
| 1000     | 102          | 12.5 × 25                   | 0.027              | 0.089          | 2230                                      | 12.5 × 40                   | 0.021              | 0.069          | 2920                                      |                             |                    |                |                                           |
|          |              | ▲ 18 × 15                   | 0.043              | 0.11           | 2210                                      | ▲ 16 × 25                   | 0.025              | 0.075          | 2555                                      |                             |                    |                |                                           |
|          |              |                             |                    |                |                                           | ● 18 × 20                   | 0.036              | 0.097          | 2490                                      |                             |                    |                |                                           |
| 1200     | 122          | 12.5 × 31.5                 | 0.024              | 0.078          | 2650                                      | 16 × 31.5                   | 0.022              | 0.066          | 3010                                      |                             |                    |                |                                           |
|          |              | ▲ 16 × 20                   | 0.027              | 0.078          | 2530                                      | ▲ 18 × 25                   | 0.026              | 0.070          | 2740                                      |                             |                    |                |                                           |
| 1500     | 152          | 12.5 × 35.5                 | 0.020              | 0.065          | 2880                                      | 16 × 35.5                   | 0.019              | 0.057          | 3150                                      |                             |                    |                |                                           |
| 1800     | 182          | 12.5 × 40                   | 0.017              | 0.056          | 3350                                      | 16 × 40                     | 0.016              | 0.048          | 3710                                      |                             |                    |                |                                           |
|          |              | ▲ 16 × 25                   | 0.021              | 0.060          | 2930                                      |                             |                    |                |                                           |                             |                    |                |                                           |
|          |              | ● 18 × 20                   | 0.026              | 0.067          | 2860                                      |                             |                    |                |                                           |                             |                    |                |                                           |
| 2200     | 222          | 16 × 31.5                   | 0.017              | 0.050          | 3450                                      | ▲ 18 × 35.5                 | 0.017              | 0.046          | 3680                                      |                             |                    |                |                                           |
|          |              | ▲ 18 × 25                   | 0.019              | 0.049          | 3140                                      |                             |                    |                |                                           |                             |                    |                |                                           |
| 2700     | 272          | 16 × 35.5                   | 0.015              | 0.044          | 3610                                      | 18 × 40                     | 0.014              | 0.038          | 3800                                      |                             |                    |                |                                           |
|          |              | ▲ 18 × 31.5                 | 0.015              | 0.040          | 4170                                      |                             |                    |                |                                           |                             |                    |                |                                           |
| 3300     | 332          | 16 × 40                     | 0.013              | 0.038          | 4080                                      |                             |                    |                |                                           |                             |                    |                |                                           |
|          |              | ▲ 18 × 35.5                 | 0.014              | 0.038          | 4220                                      |                             |                    |                |                                           |                             |                    |                |                                           |
| 3900     | 392          | 18 × 40                     | 0.012              | 0.032          | 4280                                      |                             |                    |                |                                           |                             |                    |                |                                           |

▲ : In this case, [6] will be put at 12th digit of type numbering system.

● : In this case, [3] will be put at 12th digit of type numbering system.

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## ■ Dimensions

| V (Code)<br><br>Item<br><br>Cap.(μF)Code |     | 63 (1J)                     |                    |                |                                           | 100 (2A)                    |                    |                |                                           |
|------------------------------------------|-----|-----------------------------|--------------------|----------------|-------------------------------------------|-----------------------------|--------------------|----------------|-------------------------------------------|
|                                          |     | Case size<br>φD × L<br>(mm) | Impedance (Ω) MAX. |                | Rated ripple<br>(mArms)<br>105°C / 100kHz | Case size<br>φD × L<br>(mm) | Impedance (Ω) MAX. |                | Rated ripple<br>(mArms)<br>105°C / 100kHz |
|                                          |     |                             | 20°C / 100kHz      | −10°C / 100kHz |                                           |                             | 20°C / 100kHz      | −10°C / 100kHz |                                           |
| 6.8                                      | 6R8 |                             |                    |                |                                           | 5 × 11                      | 2.3                | 9.3            | 62                                        |
| 15                                       | 150 | 5 × 11                      | 2.3                | 9.3            | 62                                        | 6.3 × 11                    | 1.2                | 5.0            | 126                                       |
| 27                                       | 270 |                             |                    |                |                                           | 8 × 11.5                    | 0.63               | 2.8            | 260                                       |
| 33                                       | 330 | 6.3 × 11                    | 1.2                | 5.0            | 126                                       |                             |                    |                |                                           |
| 39                                       | 390 |                             |                    |                |                                           | 8 × 15                      | 0.45               | 2.1            | 335                                       |
| 47                                       | 470 | 8 × 11.5                    | 0.63               | 2.8            | 260                                       | 10 × 12.5                   | 0.43               | 1.8            | 325                                       |
| 56                                       | 560 | 8 × 11.5                    | 0.63               | 2.8            | 260                                       | 8 × 20                      | 0.33               | 1.6            | 408                                       |
| 68                                       | 680 |                             |                    |                |                                           | 10 × 16                     | 0.31               | 1.5            | 400                                       |
| 82                                       | 820 | 8 × 15                      | 0.45               | 2.1            | 335                                       | 10 × 20                     | 0.21               | 0.94           | 518                                       |
|                                          |     | ▲ 10 × 12.5                 | 0.43               | 1.8            | 325                                       | ▲ 12.5 × 15                 | 0.23               | 1.1            | 527                                       |
| 100                                      | 101 |                             |                    |                |                                           | 10 × 25                     | 0.20               | 0.84           | 595                                       |
|                                          |     |                             |                    |                |                                           | ▲ 12.5 × 20                 | 0.20               | 0.84           | 740                                       |
| 120                                      | 121 | 8 × 20                      | 0.33               | 1.6            | 408                                       | 10 × 31.5                   | 0.15               | 0.71           | 740                                       |
|                                          |     | ▲ 10 × 16                   | 0.31               | 1.5            | 400                                       | ▲ 12.5 × 20                 | 0.16               | 0.64           | 765                                       |
| 150                                      | 151 |                             |                    |                |                                           | 16 × 15                     | 0.14               | 0.66           | 895                                       |
| 180                                      | 181 | 10 × 20                     | 0.21               | 0.94           | 518                                       | 12.5 × 25                   | 0.12               | 0.45           | 875                                       |
|                                          |     | ▲ 12.5 × 15                 | 0.23               | 1.1            | 527                                       | ▲ 18 × 15                   | 0.12               | 0.50           | 1030                                      |
| 220                                      | 221 | 10 × 25                     | 0.20               | 0.84           | 595                                       | 12.5 × 31.5                 | 0.10               | 0.42           | 1010                                      |
|                                          |     |                             |                    |                |                                           | ▲ 16 × 20                   | 0.091              | 0.38           | 1130                                      |
| 270                                      | 271 | 10 × 31.5                   | 0.15               | 0.71           | 740                                       | 12.5 × 35.5                 | 0.083              | 0.35           | 1140                                      |
|                                          |     | ▲ 12.5 × 20                 | 0.16               | 0.64           | 765                                       |                             |                    |                |                                           |
|                                          |     | ● 16 × 15                   | 0.14               | 0.66           | 895                                       | ▲ 16 × 25                   | 0.073              | 0.27           | 1350                                      |
| 330                                      | 331 | 12.5 × 25                   | 0.12               | 0.45           | 875                                       | 12.5 × 40                   | 0.071              | 0.30           | 1280                                      |
|                                          |     |                             |                    |                |                                           | ▲ 18 × 20                   | 0.080              | 0.30           | 1300                                      |
| 390                                      | 391 | 18 × 15                     | 0.12               | 0.50           | 1030                                      | 16 × 31.5                   | 0.054              | 0.20           | 1650                                      |
|                                          |     |                             |                    |                |                                           | ▲ 18 × 25                   | 0.057              | 0.21           | 1560                                      |
| 470                                      | 471 | 12.5 × 31.5                 | 0.10               | 0.42           | 1010                                      | 16 × 35.5                   | 0.045              | 0.17           | 1900                                      |
|                                          |     | ▲ 16 × 20                   | 0.091              | 0.38           | 1130                                      | ▲ 18 × 31.5                 | 0.047              | 0.17           | 1720                                      |
| 560                                      | 561 | 12.5 × 35.5                 | 0.083              | 0.35           | 1140                                      | 16 × 40                     | 0.040              | 0.15           | 2130                                      |
|                                          |     | ▲ 16 × 25                   | 0.073              | 0.27           | 1350                                      |                             |                    |                |                                           |
| 680                                      | 681 | 12.5 × 40                   | 0.071              | 0.30           | 1280                                      | 18 × 35.5                   | 0.040              | 0.15           | 1890                                      |
|                                          |     | ▲ 18 × 20                   | 0.080              | 0.30           | 1300                                      |                             |                    |                |                                           |
| 820                                      | 821 | 16 × 31.5                   | 0.054              | 0.20           | 1650                                      | 18 × 40                     | 0.036              | 0.13           | 2470                                      |
|                                          |     | ▲ 18 × 25                   | 0.057              | 0.21           | 1560                                      |                             |                    |                |                                           |
| 1000                                     | 102 | 16 × 35.5                   | 0.045              | 0.17           | 1900                                      |                             |                    |                |                                           |
|                                          |     | ▲ 18 × 31.5                 | 0.047              | 0.17           | 1720                                      |                             |                    |                |                                           |
| 1200                                     | 122 | 16 × 40                     | 0.040              | 0.15           | 2130                                      |                             |                    |                |                                           |
|                                          |     | ▲ 18 × 35.5                 | 0.040              | 0.15           | 1890                                      |                             |                    |                |                                           |
| 1500                                     | 152 | 18 × 40                     | 0.036              | 0.13           | 2470                                      |                             |                    |                |                                           |

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