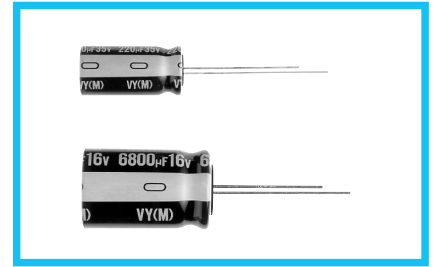
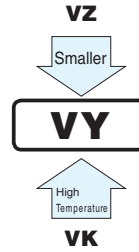


# ALUMINUM ELECTROLYTIC CAPACITORS

**VY** Wide Temperature Range series



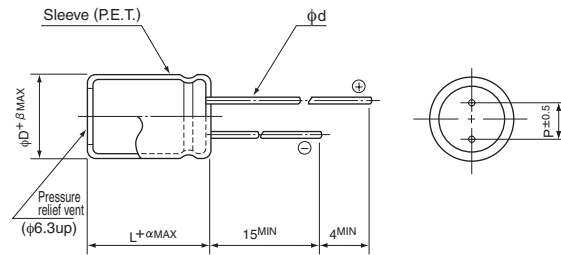
- One rank smaller case sizes than VZ series.
- Compliant to the RoHS directive (2011/65/EU).



## Specifications

| Item                          | Performance Characteristics   |   |
|-------------------------------|---|---|
| Category Temperature Range    | -55 to +105°C (6.3 to 100V), -40 to +105°C (160 to 400V), -25 to +105°C (450V)  |   |
| Rated Voltage Range           | 6.3 to 450V   |   |
| Rated Capacitance Range       | 0.1 to 68000μF  |   |
| Capacitance Tolerance         | ±20% at 120Hz, 20°C   |   |
| Leakage Current               | Rated voltage (V)   | 6.3 to 100  |
|                               |   | 160 to 450  |
| Tangent of loss angle (tan δ) | For capacitance of more than 1000μF, add 0.02 for every increase of 1000μF. Measurement frequency : 120Hz at 20°C   |   |
|                               | Rated voltage (V)   | 6.3 10 16 25 35 50 63 100 160 to 250 350 to 450               |
| Stability at Low Temperature  | Measurement frequency : 120Hz   |   |
|                               | Rated voltage (V)   | 6.3 10 16 25 35 to 50 63 to 100 160 to 200 250 to 350 400 450 |
| Endurance                     | The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 1000 hours at 105°C.  |   |
|                               | Capacitance change  | tan δ   |
| Shelf Life                    | After storing the capacitors under no load at 105°C for 1000 hours and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they shall meet the specified values for the endurance characteristics listed above. |   |
|                               | Marking   |   |

## Radial Lead Type

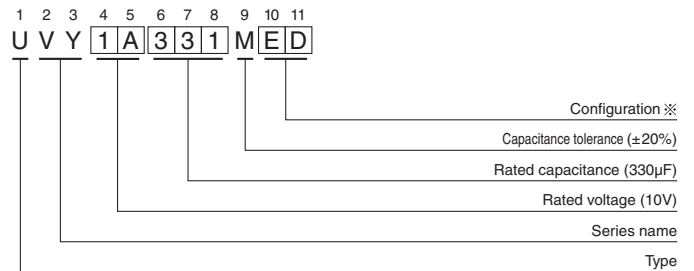


|    | 5   | 6.3 | 8   | 10  | 12.5 | 16  | 18  | 20   | 22   | 25   |
|----|-----|-----|-----|-----|------|-----|-----|------|------|------|
| φD | 5   | 6.3 | 8   | 10  | 12.5 | 16  | 18  | 20   | 22   | 25   |
| P  | 2.0 | 2.5 | 3.5 | 5.0 | 5.0  | 7.5 | 7.5 | 10.0 | 10.0 | 12.5 |
| φd | 0.5 | 0.5 | 0.6 | 0.6 | 0.6  | 0.8 | 0.8 | 1.0  | 1.0  | 1.0  |
| β  | 0.5 | 0.5 | 0.5 | 0.5 | 0.5  | 0.5 | 0.5 | 0.5  | 1.0  | 1.0  |

|   |          |     |
|---|----------|-----|
| α | (L < 20) | 1.5 |
|   | (L ≥ 20) | 2.0 |

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

## Type numbering system (Example : 10V 330μF)



| φ D        | Pb-free leadwire<br>Pb-free PET sleeve |
|------------|--|
| 5          | DD                                     |
| 6.3        | ED                                     |
| 8 · 10     | PD                                     |
| 12.5 to 18 | HD                                     |
| 20 to 25   | RD                                     |

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.



## ■ Dimensions

| Cap.(μF) | V<br>Code | 6.3       |      | 10        |      | 16        |      | 25        |      | 35        |      | 50        |      | 63        |                           |
|----------|-----------|-----------|------|-----------|------|-----------|------|-----------|------|-----------|------|-----------|------|-----------|---------------------------|
|          |           | 0J        |      | 1A        |      | 1C        |      | 1E        |      | 1V        |      | 1H        |      | 1J        |                           |
| 0.1      | 0R1       |           |      |           |      |           |      |           |      |           |      | 5 × 11    | 1.3  |           |                           |
| 0.22     | R22       |           |      |           |      |           |      |           |      |           |      | 5 × 11    | 2.9  |           |                           |
| 0.33     | R33       |           |      |           |      |           |      |           |      |           |      | 5 × 11    | 4.3  |           |                           |
| 0.47     | R47       |           |      |           |      |           |      |           |      |           |      | 5 × 11    | 7    |           |                           |
| 1        | 010       |           |      |           |      |           |      |           |      |           |      | 5 × 11    | 13   |           |                           |
| 2.2      | 2R2       |           |      |           |      |           |      |           |      |           |      | 5 × 11    | 20   |           |                           |
| 3.3      | 3R3       |           |      |           |      |           |      |           |      |           |      | 5 × 11    | 25   |           |                           |
| 4.7      | 4R7       |           |      |           |      |           |      |           |      |           |      | 5 × 11    | 30   |           |                           |
| 10       | 100       |           |      |           |      |           |      |           |      |           |      | 5 × 11    | 46   |           |                           |
| 22       | 220       |           |      |           |      |           |      |           |      |           |      | 5 × 11    | 68   | 5 × 11    | 71                        |
| 33       | 330       |           |      |           |      |           |      |           |      |           |      | 5 × 11    | 90   | 6.3 × 11  | 100                       |
| 47       | 470       |           |      |           |      |           |      |           |      |           |      | 5 × 11    | 93   | 6.3 × 11  | 115                       |
| 68       | 680       |           |      |           |      |           |      |           |      | 6.3 × 11  | 110  | 6.3 × 11  | 150  | 8 × 11.5  | 155                       |
| 100      | 101       |           |      |           |      |           |      | 5 × 11    | 125  | 6.3 × 11  | 150  | 8 × 11.5  | 190  | 8 × 11.5  | 200                       |
| 220      | 221       |           |      | 5 × 11    | 155  | 6.3 × 11  | 190  | 6.3 × 11  | 200  | 8 × 11.5  | 250  | 10 × 12.5 | 300  | 10 × 16   | 335                       |
| 330      | 331       |           |      | 6.3 × 11  | 210  | 6.3 × 11  | 225  | 8 × 11.5  | 275  | 10 × 12.5 | 350  | 10 × 16   | 410  | 10 × 20   | 510                       |
| 470      | 471       |           |      | 6.3 × 11  | 250  | 8 × 11.5  | 315  | 10 × 12.5 | 380  | 10 × 16   | 460  | 10 × 20   | 540  | 12.5 × 20 | 640                       |
| 1000     | 102       | 8 × 11.5  | 390  | 10 × 12.5 | 460  | 10 × 12.5 | 500  | 10 × 16   | 610  | 12.5 × 20 | 810  | 12.5 × 25 | 950  | 16 × 25   | 930                       |
| 2200     | 222       | 10 × 16   | 635  | 10 × 16   | 705  | 10 × 20   | 710  | 12.5 × 25 | 1090 | 16 × 25   | 1260 | 16 × 31.5 | 1410 | 18 × 35.5 | 1650                      |
| 3300     | 332       | 10 × 20   | 840  | 12.5 × 20 | 1000 | 12.5 × 25 | 1170 | 16 × 25   | 1400 | 16 × 31.5 | 1500 | 18 × 35.5 | 1770 | 20 × 40   | 1950                      |
| 4700     | 472       | 12.5 × 20 | 1090 | 12.5 × 25 | 1260 | 16 × 25   | 1500 | 16 × 25   | 1570 | 16 × 35.5 | 1780 | 20 × 40   | 2100 | 22 × 50   | 2450                      |
| 6800     | 682       | 12.5 × 25 | 1350 | 16 × 25   | 1570 | 16 × 25   | 1600 | 16 × 35.5 | 1850 | 18 × 40   | 2000 | 22 × 50   | 2500 | 25 × 50   | 2800                      |
| 10000    | 103       | 16 × 25   | 1650 | 16 × 31.5 | 1820 | 16 × 35.5 | 1930 | 18 × 40   | 2000 | 22 × 50   | 2650 | 25 × 50   | 2850 |           |                           |
| 15000    | 153       | 16 × 31.5 | 1820 | 16 × 35.5 | 2050 | 18 × 40   | 2210 | 22 × 50   | 2750 | 25 × 50   | 3100 |           |      |           |                           |
| 22000    | 223       | 18 × 35.5 | 2280 | 18 × 40   | 2420 | 22 × 40   | 2710 | 25 × 50   | 3250 |           |      |           |      |           |                           |
| 33000    | 333       | 20 × 40   | 2500 | 22 × 50   | 3210 | 25 × 50   | 3450 |           |      |           |      |           |      |           |                           |
| 47000    | 473       | 22 × 50   | 2780 | 25 × 50   | 3570 |           |      |           |      |           |      |           |      |           |                           |
| 68000    | 683       | 25 × 50   | 3070 |           |      |           |      |           |      |           |      |           |      |           | Case size<br>φ D × L (mm) |

Rated ripple

| Cap.(μF) | V<br>Code | 100       |      | 160       |      | 200       |     | 250       |      | 350       |     | 400       |     | 450       |                           |
|----------|-----------|-----------|------|-----------|------|-----------|-----|-----------|------|-----------|-----|-----------|-----|-----------|---------------------------|
|          |           | 2A        |      | 2C        |      | 2D        |     | 2E        |      | 2V        |     | 2G        |     | 2W        |                           |
| 0.1      | 0R1       | 5 × 11    | 1.5  |           |      | 6.3 × 11  | 1.5 |           |      |           |     |           |     |           |                           |
| 0.22     | R22       | 5 × 11    | 3.4  |           |      | 6.3 × 11  | 3.3 |           |      |           |     |           |     |           |                           |
| 0.33     | R33       | 5 × 11    | 5.0  |           |      | 6.3 × 11  | 5   |           |      |           |     |           |     |           |                           |
| 0.47     | R47       | 5 × 11    | 7.1  |           |      | 6.3 × 11  | 11  |           |      |           |     | 6.3 × 11  | 8.5 |           |                           |
| 1        | 010       | 5 × 11    | 15   |           |      | 6.3 × 11  | 16  |           |      |           |     | 6.3 × 11  | 14  |           |                           |
| 2.2      | 2R2       | 5 × 11    | 21   |           |      | 6.3 × 11  | 25  |           |      | 6.3 × 11  | 21  | 8 × 11.5  | 27  | 8 × 11.5  | 20                        |
| 3.3      | 3R3       | 5 × 11    | 29   |           |      | 6.3 × 11  | 30  | 6.3 × 11  | 28   | 8 × 11.5  | 30  | 8 × 11.5  | 34  | 10 × 12.5 | 28                        |
| 4.7      | 4R7       | 5 × 11    | 32   |           |      | 6.3 × 11  | 35  | 6.3 × 11  | 35   | 8 × 11.5  | 39  | 10 × 12.5 | 42  | 10 × 12.5 | 32                        |
| 10       | 100       | 5 × 11    | 50   | 8 × 11.5  | 41   | 8 × 11.5  | 57  | 10 × 12.5 | 71   | 10 × 12.5 | 64  | 10 × 16   | 64  | 10 × 20   | 56                        |
| 22       | 220       | 6.3 × 11  | 93   | 10 × 12.5 | 92   | 10 × 16   | 105 | 10 × 20   | 105  | 12.5 × 20 | 105 | 12.5 × 25 | 140 | 12.5 × 25 | 100                       |
| 33       | 330       | 8 × 11.5  | 130  | 10 × 16   | 125  | 10 × 20   | 140 | 10 × 20   | 140  | 12.5 × 25 | 170 | 16 × 25   | 170 | 16 × 25   | 125                       |
| 47       | 470       | 8 × 11.5  | 140  | 10 × 20   | 150  | 12.5 × 20 | 195 | 12.5 × 20 | 190  | 16 × 25   | 210 | 16 × 25   | 200 | 16 × 31.5 | 155                       |
| 68       | 680       | 10 × 12.5 | 190  | 12.5 × 20 | 250  | 12.5 × 25 | 250 | 16 × 25   | 270  | 16 × 25   | 285 | 16 × 31.5 | 240 | 18 × 35.5 | 185                       |
| 100      | 101       | 10 × 16   | 240  | 12.5 × 25 | 310  | 16 × 25   | 320 | 16 × 25   | 310  | 18 × 35.5 | 370 | 18 × 35.5 | 310 | 18 × 40   | 200                       |
| 220      | 221       | 12.5 × 20 | 390  | 16 × 31.5 | 410  | 16 × 35.5 | 500 | 18 × 35.5 | 485  | 22 × 50   | 540 | 22 × 50   | 460 | 25 × 50   | 250                       |
| 330      | 331       | 12.5 × 25 | 540  | 18 × 35.5 | 570  | 18 × 40   | 675 | 20 × 40   | 710  | 25 × 50   | 710 |           |     |           |                           |
| 470      | 471       | 16 × 25   | 715  | 18 × 40   | 855  | 22 × 40   | 925 | 22 × 50   | 1000 |           |     |           |     |           |                           |
| 1000     | 102       | 18 × 35.5 | 960  | 25 × 50   | 1350 |           |     |           |      |           |     |           |     |           |                           |
| 2200     | 222       | 22 × 50   | 1750 |           |      |           |     |           |      |           |     |           |     |           |                           |
| 3300     | 332       | 25 × 50   | 2070 |           |      |           |     |           |      |           |     |           |     |           | Case size<br>φ D × L (mm) |

Rated ripple

Rated ripple current (mArms) at 105°C 120Hz

## ● Frequency coefficient of rated ripple current

| V          | Cap.(μF)      | Frequency |       |       |       |                |
|------------|---------------|-----------|-------|-------|-------|----------------|
|            |               | 50Hz      | 120Hz | 300Hz | 1 kHz | 10 kHz or more |
| 6.3 to 100 | 0.1 to 68     | 0.75      | 1.00  | 1.35  | 1.57  | 2.00           |
|            | 100 to 470    | 0.80      | 1.00  | 1.23  | 1.34  | 1.50           |
|            | 1000 to 68000 | 0.85      | 1.00  | 1.10  | 1.13  | 1.15           |
| 160 to 450 | 0.1 to 220    | 0.80      | 1.00  | 1.25  | 1.40  | 1.60           |
|            | 330 to 1000   | 0.90      | 1.00  | 1.10  | 1.13  | 1.15           |

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

## Nichicon:

[UVY0J103MHD](#) [UVY0J153MHD](#) [UVY0J222MPD](#) [UVY1A222MPD](#) [UVY1A223MHD](#) [UVY0J102MPD](#)  
[UVY0J473MRD](#) [UVY0J682MHD](#) [UVY0J683MRD](#) [UVY0J223MHD](#) [UVY0J332MPD](#) [UVY0J333MRD](#) [UVY0J472MHD](#)  
[UVY1A331MED](#) [UVY1A332MHD](#) [UVY1A333MRD](#) [UVY1C221MED](#) [UVY1C222MPD](#) [UVY1C223MRD](#)  
[UVY1E103MHD](#) [UVY1E153MRD](#) [UVY1E221MED](#) [UVY1E221MED1TA](#) [UVY1H100MDD](#) [UVY1H101MPD](#)  
[UVY1H3R3MDD](#) [UVY1H470MED](#) [UVY1A102MPD](#) [UVY1A103MHD](#) [UVY1A153MHD](#) [UVY1A221MDD](#)  
[UVY1A682MHD](#) [UVY1C102MPD](#) [UVY1C103MHD](#) [UVY1C153MHD](#) [UVY1C682MHD](#) [UVY1E101MDD](#)  
[UVY1E101MDD1TA](#) [UVY1E102MPD](#) [UVY1E682MHD](#) [UVY1H010MDD](#) [UVY1H0R1MDD](#) [UVY1A471MED](#)  
[UVY1A472MHD](#) [UVY1A473MRD](#) [UVY1C471MPD](#) [UVY1C472MHD](#) [UVY1E332MHD](#) [UVY1E471MPD](#)  
[UVY1E472MHD](#) [UVY1H221MPD](#) [UVY1H222MHD](#) [UVY1H2R2MDD](#) [UVY1C331MED](#) [UVY1C332MHD](#)  
[UVY1C333MRD](#) [UVY1E222MHD](#) [UVY1E223MRD](#) [UVY1E331MPD](#) [UVY1H102MHD](#) [UVY1H103MRD](#)  
[UVY1H220MDD](#) [UVY1H471MPD](#) [UVY1H472MRD](#) [UVY1H4R7MDD](#) [UVY1J101MPD](#) [UVY1J102MHD](#)  
[UVY1J220MDD](#) [UVY1J682MRD](#) [UVY1V101MED](#) [UVY1V472MHD](#) [UVY1V680MED](#) [UVY1V682MHD](#)  
[UVY2A2R2MDD](#) [UVY2A330MPD](#) [UVY2A331MHD](#) [UVY1H330MDD](#) [UVY1H331MPD](#) [UVY1H332MHD](#)  
[UVY1HR33MDD](#) [UVY1HR47MDD](#) [UVY1J471MHD](#) [UVY1J472MRD](#) [UVY1J680MPD](#) [UVY1V470MDD](#)  
[UVY1V471MPD](#) [UVY1H680MED](#) [UVY1H682MRD](#) [UVY1HR22MDD](#) [UVY1J331MPD](#) [UVY1J332MRD](#)  
[UVY1J470MED](#) [UVY1V222MHD](#) [UVY1V331MPD](#) [UVY1V332MHD](#) [UVY2A100MDD](#) [UVY2A101MPD](#)  
[UVY2A102MHD](#) [UVY1J221MPD](#) [UVY1J222MHD](#)