



**THE DATASHEET OF
UPW2A331MHD**



ALUMINUM ELECTROLYTIC CAPACITORS

UPW Miniature Sized, Low Impedance,
High Reliability For
Switching Power Supplies



- Smaller case size and lower impedance than UPM.
- Low impedance and high reliability withstanding 3000 hours to 8000 hours.
- Capacitance ranges available based on the numerical values in E12 series under JIS.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).
- AEC-Q200 Qualified. Please contact us for details.



Specifications

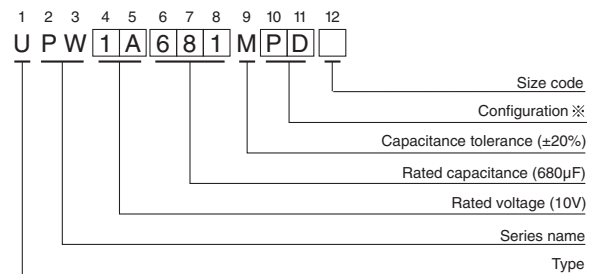
| Item | Performance Characteristics | | | | | | | | | | | | | | | | | | |
|-------------------------------|--|-------------------|----------|----------|----------|-------------------|----------|----------|---------|----------|------------------------|---------------------|----------|--------------------|--|-------|---|-----------------|---|
| Category Temperature Range | -55 to +105°C (6.3 to 100V) | | | | | | | | | | | | | | | | | | |
| Rated Voltage Range | 6.3 to 100V | | | | | | | | | | | | | | | | | | |
| Rated Capacitance Range | 15 to 15000µF | | | | | | | | | | | | | | | | | | |
| Capacitance Tolerance | ±20% at 120Hz, 20°C | | | | | | | | | | | | | | | | | | |
| Leakage Current ※ | After 1 minute's application of rated voltage at 20°C, leakage current is not more than 0.03CV(µA). | | | | | | | | | | | | | | | | | | |
| 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 <table border="1"> <tr> <td>Rated voltage (V)</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> <td>63</td> <td>100</td> </tr> <tr> <td>tan δ (max.)</td> <td>0.22</td> <td>0.19</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.10</td> <td>0.09</td> <td>0.08</td> </tr> </table> | Rated voltage (V) | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 100 | tan δ (max.) | 0.22 | 0.19 | 0.16 | 0.14 | 0.12 | 0.10 | 0.09 | 0.08 |
| Rated voltage (V) | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 100 | | | | | | | | | | | |
| tan δ (max.) | 0.22 | 0.19 | 0.16 | 0.14 | 0.12 | 0.10 | 0.09 | 0.08 | | | | | | | | | | | |
| Stability at Low Temperature | <table border="1"> <tr> <td colspan="2">120Hz</td> <td colspan="2"></td> </tr> <tr> <td>Rated voltage (V)</td> <td>6.3 · 10</td> <td>16 · 25</td> <td>35 · 50</td> <td>63 · 100</td> </tr> <tr> <td>Impedance ratio (max.)</td> <td>Z(-55°C) / Z(+20°C)</td> <td>3</td> <td>3</td> <td>3</td> </tr> </table> | 120Hz | | | | Rated voltage (V) | 6.3 · 10 | 16 · 25 | 35 · 50 | 63 · 100 | Impedance ratio (max.) | Z(-55°C) / Z(+20°C) | 3 | 3 | 3 | | | | |
| 120Hz | | | | | | | | | | | | | | | | | | | |
| Rated voltage (V) | 6.3 · 10 | 16 · 25 | 35 · 50 | 63 · 100 | | | | | | | | | | | | | | | |
| Impedance ratio (max.) | Z(-55°C) / Z(+20°C) | 3 | 3 | 3 | | | | | | | | | | | | | | | |
| Endurance | <p>The specifications listed below shall be met when the capacitors are restored to 20°C after D.C. bias plus rated ripple current is applied at 105°C for the condition listed at right. The peak voltage shall not exceed the rated voltage.</p> <table border="1"> <tr> <td>Rated Voltage</td> <td>φD(mm)</td> <td>φ8</td> <td>φ10</td> <td>φ12.5</td> <td>≥φ16</td> </tr> <tr> <td>6.3~100V</td> <td></td> <td>3000hrs.</td> <td>5000hrs.</td> <td>7000hrs.</td> <td>8000hrs.</td> </tr> </table> <table border="1"> <tr> <td>Capacitance change</td> <td>Within ±20% of the initial capacitance value</td> </tr> <tr> <td>tan δ</td> <td>200% or less than the initial specified value</td> </tr> <tr> <td>Leakage current</td> <td>Less than or equal to the initial specified value</td> </tr> </table> | Rated Voltage | φD(mm) | φ8 | φ10 | φ12.5 | ≥φ16 | 6.3~100V | | 3000hrs. | 5000hrs. | 7000hrs. | 8000hrs. | Capacitance change | Within ±20% 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 |
| Rated Voltage | φD(mm) | φ8 | φ10 | φ12.5 | ≥φ16 | | | | | | | | | | | | | | |
| 6.3~100V | | 3000hrs. | 5000hrs. | 7000hrs. | 8000hrs. | | | | | | | | | | | | | | |
| Capacitance change | Within ±20% 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 | | | | | | | | | | | | | | | | | | |
| 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 | Printed with white color letter on dark brown sleeve. | | | | | | | | | | | | | | | | | | |

※ I : Leakage Current (µA), C : Rated Capacitance (µF), V : Rated Voltage (V)

Radial Lead Type



Type numbering system (Example : 10V 680µF)



※ Configuration

| | |
|------------|--|
| φ D | Pb-free leadwire Pb-free PET sleeve |
| 8 · 10 | PD |
| 12.5 to 18 | HD |

- Please refer to the Guidelines for Aluminum Electrolytic Capacitors for end seal configuration information.

Frequency coefficient of rated ripple current

| Cap. (µF) | Frequency | 50Hz | 120Hz | 300Hz | 1kHz | 10kHz or more |
|---------------|-----------|------|-------|-------|------|---------------|
| 15 to 47 | | 0.20 | 0.30 | 0.50 | 0.80 | 1.00 |
| 68 to 330 | | 0.55 | 0.65 | 0.75 | 0.85 | 1.00 |
| 390 to 1000 | | 0.70 | 0.75 | 0.80 | 0.90 | 1.00 |
| 1200 to 15000 | | 0.80 | 0.85 | 0.90 | 0.95 | 1.00 |

• Dimension table in next page.

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■ Dimensions

| Rated Voltage (V) (code) | Rated Capacitance (μ F) | Case Size ϕ D×L (mm) | tan δ | Leakage Current (μ A) (at 20°C after 1 minute) | Impedance (Ω) max. | | Rated Ripple (mA _{rms}) (105°C/100kHz) | Part Number |
|--------------------------------|---------------------------------|------------------------------|--------------|--|--------------------------------|------------------|--|--------------|
| | | | | | 20°C/ 100kHz | -10°C/ 100kHz | | |
| 6.3 (0J) | 470 | 8×11.5 | 0.22 | 88.83 | 0.117 | 0.234 | 555 | UPW0J471MPD |
| | 560 | 8×11.5 | 0.22 | 105.84 | 0.117 | 0.234 | 555 | UPW0J561MPD |
| | 680 | 10×12.5 | 0.22 | 128.52 | 0.090 | 0.18 | 755 | UPW0J681MPD |
| | 820 | 8×15 | 0.22 | 154.98 | 0.085 | 0.17 | 730 | UPW0J821MPD |
| | 820 | 10×12.5 | 0.22 | 154.98 | 0.090 | 0.18 | 755 | UPW0J821MPD6 |
| | 1000 | 10×12.5 | 0.22 | 189 | 0.090 | 0.18 | 755 | UPW0J102MPD |
| | 1200 | 8×20 | 0.22 | 226.8 | 0.065 | 0.13 | 995 | UPW0J122MPD |
| | 1200 | 10×16 | 0.22 | 226.8 | 0.068 | 0.136 | 1050 | UPW0J122MPD6 |
| | 1500 | 10×20 | 0.22 | 283.5 | 0.052 | 0.104 | 1220 | UPW0J152MPD |
| | 2200 | 12.5×20 | 0.24 | 415.8 | 0.038 | 0.076 | 1655 | UPW0J222MHD |
| | 2200 | 10×25 | 0.24 | 415.8 | 0.045 | 0.090 | 1440 | UPW0J222MPD6 |
| | 2700 | 10×30.5 | 0.24 | 510.3 | 0.035 | 0.070 | 1815 | UPW0J272MPD |
| | 3300 | 12.5×20 | 0.26 | 623.7 | 0.038 | 0.076 | 1655 | UPW0J332MHD |
| | 3900 | 12.5×25 | 0.26 | 737.1 | 0.030 | 0.060 | 1945 | UPW0J392MHD |
| | 4700 | 16×25 | 0.28 | 888.3 | 0.022 | 0.044 | 2555 | UPW0J472MHD |
| | 4700 | 12.5×30.5 | 0.28 | 888.3 | 0.025 | 0.050 | 2310 | UPW0J472MHD6 |
| | 5600 | 12.5×35.5 | 0.30 | 1058.4 | 0.022 | 0.044 | 2510 | UPW0J562MHD |
| | 5600 | 16×20 | 0.30 | 1058.4 | 0.029 | 0.058 | 2210 | UPW0J562MHD6 |
| | 6800 | 16×25 | 0.32 | 1285.2 | 0.022 | 0.044 | 2560 | UPW0J682MHD |
| | 6800 | 18×20 | 0.32 | 1285.2 | 0.028 | 0.056 | 2490 | UPW0J682MHD6 |
| 8200 | 16×30.5 | 0.36 | 1549.8 | 0.018 | 0.036 | 3010 | UPW0J822MHD | |
| 10000 | 16×30.5 | 0.40 | 1890 | 0.016 | 0.032 | 3150 | UPW0J103MHD | |
| 10000 | 18×25 | 0.40 | 1890 | 0.020 | 0.040 | 2740 | UPW0J103MHD6 | |
| 12000 | 18×30.5 | 0.44 | 2268 | 0.016 | 0.032 | 3635 | UPW0J123MHD | |
| 15000 | 18×35.5 | 0.50 | 2835 | 0.015 | 0.030 | 3680 | UPW0J153MHD | |
| 10 (1A) | 330 | 8×11.5 | 0.19 | 99 | 0.117 | 0.234 | 555 | UPW1A331MPD |
| | 470 | 8×11.5 | 0.19 | 141 | 0.117 | 0.234 | 555 | UPW1A471MPD |
| | 680 | 10×12.5 | 0.19 | 204 | 0.090 | 0.18 | 760 | UPW1A681MPD |
| | 680 | 8×15 | 0.19 | 204 | 0.085 | 0.17 | 730 | UPW1A681MPD6 |
| | 1000 | 10×16 | 0.19 | 300 | 0.068 | 0.136 | 1050 | UPW1A102MPD |
| | 1000 | 8×20 | 0.19 | 300 | 0.065 | 0.13 | 995 | UPW1A102MPD6 |
| | 1200 | 10×20 | 0.19 | 360 | 0.052 | 0.104 | 1220 | UPW1A122MPD |
| | 1500 | 10×20 | 0.19 | 450 | 0.052 | 0.104 | 1220 | UPW1A152MPD |
| | 1500 | 10×25 | 0.19 | 450 | 0.045 | 0.090 | 1440 | UPW1A152MPD6 |
| | 2200 | 12.5×20 | 0.21 | 660 | 0.038 | 0.076 | 1655 | UPW1A222MHD |
| | 2200 | 10×30.5 | 0.21 | 660 | 0.035 | 0.070 | 1815 | UPW1A222MPD6 |
| | 2700 | 12.5×25 | 0.21 | 810 | 0.030 | 0.060 | 1945 | UPW1A272MHD |
| | 3300 | 12.5×25 | 0.23 | 990 | 0.030 | 0.060 | 1950 | UPW1A332MHD |
| | 3300 | 12.5×30.5 | 0.23 | 990 | 0.025 | 0.050 | 2310 | UPW1A332MHD6 |
| | 3900 | 12.5×35.5 | 0.23 | 1170 | 0.022 | 0.044 | 2510 | UPW1A392MHD |
| | 3900 | 16×20 | 0.23 | 1170 | 0.029 | 0.058 | 2210 | UPW1A392MHD6 |
| | 4700 | 16×25 | 0.25 | 1410 | 0.022 | 0.044 | 2555 | UPW1A472MHD |
| | 5600 | 16×25 | 0.27 | 1680 | 0.022 | 0.044 | 2560 | UPW1A562MHD |
| | 5600 | 18×20 | 0.27 | 1680 | 0.028 | 0.056 | 2490 | UPW1A562MHD6 |
| | 6800 | 16×30.5 | 0.29 | 2040 | 0.018 | 0.036 | 3010 | UPW1A682MHD |
| | 6800 | 18×25 | 0.29 | 2040 | 0.020 | 0.040 | 2740 | UPW1A682MHD6 |
| | 8200 | 16×35.5 | 0.33 | 2460 | 0.016 | 0.032 | 3150 | UPW1A822MHD |
| | 8200 | 18×30.5 | 0.33 | 2460 | 0.016 | 0.032 | 3635 | UPW1A822MHD6 |
| | 10000 | 18×35.5 | 0.37 | 3000 | 0.015 | 0.030 | 3680 | UPW1A103MHD |
| | 15000 | 18×40 | 0.47 | 4500 | 0.014 | 0.028 | 3800 | UPW1A153MHD |

For cut leads, formed leads or taped parts, please add the appropriate code after the size code (12th digit).
If there is no size code in the part number, please add size code "1" and then add the appropriate code.

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■ Dimensions

| Rated Voltage (V) (code) | Rated Capacitance (μ F) | Case Size ϕ D×L (mm) | tan δ | Leakage Current (μ A) (at 20°C after 1 minute) | Impedance (Ω) max. | | Rated Ripple (mA _{rms}) (105°C/100kHz) | Part Number |
|--------------------------------|---------------------------------|------------------------------|--------------|--|--------------------------------|------------------|--|--------------|
| | | | | | 20°C/ 100kHz | -10°C/ 100kHz | | |
| 16 (1C) | 220 | 8×11.5 | 0.16 | 105.6 | 0.117 | 0.234 | 555 | UPW1C221MPD |
| | 330 | 8×11.5 | 0.16 | 158.4 | 0.117 | 0.234 | 555 | UPW1C331MPD |
| | 470 | 10×12.5 | 0.16 | 225.6 | 0.090 | 0.18 | 760 | UPW1C471MPD |
| | 470 | 8×15 | 0.16 | 225.6 | 0.085 | 0.17 | 730 | UPW1C471MPD6 |
| | 680 | 10×16 | 0.16 | 326.4 | 0.068 | 0.136 | 1050 | UPW1C681MPD |
| | 680 | 8×20 | 0.16 | 326.4 | 0.065 | 0.13 | 995 | UPW1C681MPD6 |
| | 820 | 10×20 | 0.16 | 393.6 | 0.052 | 0.104 | 1220 | UPW1C821MPD |
| | 1000 | 10×20 | 0.16 | 480 | 0.052 | 0.104 | 1220 | UPW1C102MPD |
| | 1200 | 10×25 | 0.16 | 576 | 0.045 | 0.090 | 1440 | UPW1C122MPD |
| | 1500 | 12.5×20 | 0.16 | 720 | 0.038 | 0.076 | 1655 | UPW1C152MHD |
| | 1500 | 10×30.5 | 0.16 | 720 | 0.035 | 0.070 | 1815 | UPW1C152MPD6 |
| | 2200 | 12.5×25 | 0.18 | 1056 | 0.030 | 0.060 | 1945 | UPW1C222MHD |
| | 2700 | 12.5×30.5 | 0.18 | 1296 | 0.025 | 0.050 | 2310 | UPW1C272MHD |
| | 2700 | 16×20 | 0.18 | 1296 | 0.029 | 0.058 | 2210 | UPW1C272MHD6 |
| | 3300 | 16×25 | 0.20 | 1584 | 0.022 | 0.044 | 2555 | UPW1C332MHD |
| | 3300 | 12.5×35.5 | 0.20 | 1584 | 0.022 | 0.044 | 2510 | UPW1C332MHD6 |
| | 3900 | 16×25 | 0.20 | 1872 | 0.022 | 0.044 | 2560 | UPW1C392MHD |
| | 3900 | 18×20 | 0.20 | 1872 | 0.028 | 0.056 | 2490 | UPW1C392MHD6 |
| | 4700 | 16×30.5 | 0.22 | 2256 | 0.018 | 0.036 | 3010 | UPW1C472MHD |
| | 4700 | 18×25 | 0.22 | 2256 | 0.020 | 0.040 | 2740 | UPW1C472MHD6 |
| 5600 | 16×35.5 | 0.24 | 2688 | 0.016 | 0.032 | 3150 | UPW1C562MHD | |
| 5600 | 18×30.5 | 0.24 | 2688 | 0.016 | 0.032 | 3635 | UPW1C562MHD6 | |
| 6800 | 18×35.5 | 0.26 | 3264 | 0.015 | 0.030 | 3680 | UPW1C682MHD | |
| 8200 | 18×35.5 | 0.30 | 3936 | 0.015 | 0.030 | 3680 | UPW1C822MHD | |
| 10000 | 18×40 | 0.34 | 4800 | 0.014 | 0.028 | 3800 | UPW1C103MHD | |
| 25 (1E) | 150 | 8×11.5 | 0.14 | 112.5 | 0.117 | 0.234 | 555 | UPW1E151MPD |
| | 220 | 8×11.5 | 0.14 | 165 | 0.117 | 0.234 | 555 | UPW1E221MPD |
| | 330 | 10×12.5 | 0.14 | 247.5 | 0.090 | 0.18 | 760 | UPW1E331MPD |
| | 330 | 8×15 | 0.14 | 247.5 | 0.085 | 0.17 | 730 | UPW1E331MPD6 |
| | 470 | 10×16 | 0.14 | 352.5 | 0.068 | 0.136 | 1050 | UPW1E471MPD |
| | 470 | 8×20 | 0.14 | 352.5 | 0.065 | 0.13 | 995 | UPW1E471MPD6 |
| | 560 | 10×20 | 0.14 | 420 | 0.052 | 0.104 | 1220 | UPW1E561MPD |
| | 680 | 10×20 | 0.14 | 510 | 0.052 | 0.104 | 1220 | UPW1E681MPD |
| | 820 | 10×25 | 0.14 | 615 | 0.045 | 0.090 | 1440 | UPW1E821MPD |
| | 1000 | 12.5×20 | 0.14 | 750 | 0.038 | 0.076 | 1660 | UPW1E102MHD |
| | 1000 | 10×30.5 | 0.14 | 750 | 0.035 | 0.070 | 1815 | UPW1E102MPD6 |
| | 1500 | 16×25 | 0.14 | 1125 | 0.022 | 0.044 | 2555 | UPW1E152MHD |
| | 1500 | 12.5×25 | 0.14 | 1125 | 0.030 | 0.060 | 1950 | UPW1E152MHD6 |
| | 1800 | 12.5×30.5 | 0.14 | 1350 | 0.025 | 0.050 | 2310 | UPW1E182MHD |
| | 1800 | 16×20 | 0.14 | 1350 | 0.029 | 0.058 | 2210 | UPW1E182MHD6 |
| | 2200 | 16×25 | 0.16 | 1650 | 0.022 | 0.044 | 2555 | UPW1E222MHD |
| | 2200 | 18×20 | 0.16 | 1650 | 0.028 | 0.056 | 2490 | UPW1E222MHD6 |
| | 2200 | 12.5×35.5 | 0.16 | 1650 | 0.022 | 0.044 | 2510 | UPW1E222MHD3 |
| | 2700 | 16×25 | 0.16 | 2025 | 0.022 | 0.044 | 2555 | UPW1E272MHD |
| | 3300 | 16×30.5 | 0.18 | 2475 | 0.018 | 0.036 | 3010 | UPW1E332MHD |
| | 3300 | 18×25 | 0.18 | 2475 | 0.020 | 0.040 | 2740 | UPW1E332MHD6 |
| | 3900 | 16×35.5 | 0.18 | 2925 | 0.016 | 0.032 | 3150 | UPW1E392MHD |
| | 3900 | 18×30.5 | 0.18 | 2925 | 0.016 | 0.032 | 3635 | UPW1E392MHD6 |
| | 4700 | 18×35.5 | 0.20 | 3525 | 0.015 | 0.030 | 3680 | UPW1E472MHD |
| | 6800 | 18×40 | 0.24 | 5100 | 0.014 | 0.028 | 3800 | UPW1E682MHD |

For cut leads, formed leads or taped parts, please add the appropriate code after the size code (12th digit).
If there is no size code in the part number, please add size code "1" and then add the appropriate code.

UPW

■ Dimensions

| Rated Voltage (V) (code) | Rated Capacitance (μ F) | Case Size ϕ D×L (mm) | tan δ | Leakage Current (μ A) (at 20°C after 1 minute) | Impedance (Ω) max. | | Rated Ripple (mA _{rms}) (105°C/100kHz) | Part Number |
|--------------------------------|---------------------------------|------------------------------|--------------|--|--------------------------------|------------------|--|--------------|
| | | | | | 20°C/ 100kHz | -10°C/ 100kHz | | |
| 35 (1V) | 100 | 8×11.5 | 0.12 | 105 | 0.117 | 0.234 | 555 | UPW1V101MPD |
| | 150 | 8×11.5 | 0.12 | 157.5 | 0.117 | 0.234 | 555 | UPW1V151MPD |
| | 220 | 10×12.5 | 0.12 | 231 | 0.090 | 0.18 | 760 | UPW1V221MPD |
| | 220 | 8×15 | 0.12 | 231 | 0.085 | 0.17 | 730 | UPW1V221MPD6 |
| | 330 | 10×16 | 0.12 | 346.5 | 0.068 | 0.136 | 1050 | UPW1V331MPD |
| | 330 | 8×20 | 0.12 | 346.5 | 0.065 | 0.13 | 995 | UPW1V331MPD6 |
| | 390 | 10×20 | 0.12 | 409.5 | 0.052 | 0.104 | 1220 | UPW1V391MPD |
| | 470 | 10×20 | 0.12 | 493.5 | 0.052 | 0.104 | 1220 | UPW1V471MPD |
| | 560 | 10×25 | 0.12 | 588 | 0.045 | 0.090 | 1440 | UPW1V561MPD |
| | 680 | 12.5×20 | 0.12 | 714 | 0.038 | 0.076 | 1660 | UPW1V681MHD |
| | 680 | 10×30.5 | 0.12 | 714 | 0.035 | 0.070 | 1815 | UPW1V681MPD6 |
| | 1000 | 12.5×25 | 0.12 | 1050 | 0.030 | 0.060 | 1950 | UPW1V102MHD |
| | 1200 | 12.5×30.5 | 0.12 | 1260 | 0.025 | 0.050 | 2310 | UPW1V122MHD |
| | 1200 | 16×20 | 0.12 | 1260 | 0.029 | 0.058 | 2210 | UPW1V122MHD6 |
| | 1500 | 16×25 | 0.12 | 1575 | 0.022 | 0.044 | 2555 | UPW1V152MHD |
| | 1500 | 12.5×35.5 | 0.12 | 1575 | 0.022 | 0.044 | 2510 | UPW1V152MHD6 |
| | 1800 | 16×25 | 0.12 | 1890 | 0.022 | 0.044 | 2555 | UPW1V182MHD |
| | 1800 | 18×20 | 0.12 | 1890 | 0.028 | 0.056 | 2490 | UPW1V182MHD6 |
| | 2200 | 16×30.5 | 0.14 | 2310 | 0.018 | 0.036 | 3010 | UPW1V222MHD |
| | 2200 | 18×25 | 0.14 | 2310 | 0.020 | 0.040 | 2740 | UPW1V222MHD6 |
| 2700 | 16×35.5 | 0.14 | 2835 | 0.016 | 0.032 | 3150 | UPW1V272MHD | |
| 2700 | 18×30.5 | 0.14 | 2835 | 0.016 | 0.032 | 3635 | UPW1V272MHD6 | |
| 3300 | 18×35.5 | 0.16 | 3465 | 0.015 | 0.030 | 3680 | UPW1V332MHD | |
| 4700 | 18×40 | 0.18 | 4935 | 0.014 | 0.028 | 3800 | UPW1V472MHD | |
| 50 (1H) | 82 | 8×11.5 | 0.10 | 123 | 0.234 | 0.468 | 485 | UPW1H820MPD |
| | 100 | 8×11.5 | 0.10 | 150 | 0.234 | 0.468 | 485 | UPW1H101MPD |
| | 120 | 8×15 | 0.10 | 180 | 0.155 | 0.31 | 635 | UPW1H121MPD |
| | 120 | 10×12.5 | 0.10 | 180 | 0.162 | 0.324 | 620 | UPW1H121MPD6 |
| | 150 | 10×12.5 | 0.10 | 225 | 0.162 | 0.324 | 615 | UPW1H151MPD |
| | 180 | 8×20 | 0.10 | 270 | 0.12 | 0.24 | 860 | UPW1H181MPD |
| | 180 | 10×16 | 0.10 | 270 | 0.119 | 0.238 | 850 | UPW1H181MPD6 |
| | 220 | 10×16 | 0.10 | 330 | 0.119 | 0.238 | 850 | UPW1H221MPD |
| | 220 | 10×20 | 0.10 | 330 | 0.090 | 0.18 | 1030 | UPW1H221MPD6 |
| | 270 | 10×25 | 0.10 | 405 | 0.082 | 0.164 | 1200 | UPW1H271MPD |
| | 330 | 10×20 | 0.10 | 495 | 0.090 | 0.18 | 1030 | UPW1H331MPD |
| | 330 | 10×30.5 | 0.10 | 495 | 0.060 | 0.12 | 1610 | UPW1H331MPD6 |
| | 390 | 12.5×20 | 0.10 | 585 | 0.063 | 0.126 | 1480 | UPW1H391MHD |
| | 470 | 12.5×20 | 0.10 | 705 | 0.060 | 0.12 | 1500 | UPW1H471MHD |
| | 560 | 12.5×25 | 0.10 | 840 | 0.050 | 0.10 | 1832 | UPW1H561MHD |
| | 680 | 12.5×25 | 0.10 | 1020 | 0.050 | 0.10 | 1840 | UPW1H681MHD |
| | 680 | 16×20 | 0.10 | 1020 | 0.048 | 0.096 | 1840 | UPW1H681MHD6 |
| | 820 | 12.5×35.5 | 0.10 | 1230 | 0.034 | 0.068 | 2290 | UPW1H821MHD |
| | 820 | 18×20 | 0.10 | 1230 | 0.042 | 0.084 | 2420 | UPW1H821MHD6 |
| | 1000 | 16×25 | 0.10 | 1500 | 0.034 | 0.068 | 2235 | UPW1H102MHD |
| | 1200 | 16×30.5 | 0.10 | 1800 | 0.028 | 0.056 | 2700 | UPW1H122MHD |
| | 1200 | 18×25 | 0.10 | 1800 | 0.029 | 0.058 | 2610 | UPW1H122MHD6 |
| | 1500 | 16×30.5 | 0.10 | 2250 | 0.028 | 0.056 | 2700 | UPW1H152MHD |
| | 1500 | 16×35.5 | 0.10 | 2250 | 0.025 | 0.050 | 2790 | UPW1H152MHD6 |
| 1800 | 18×30.5 | 0.10 | 2700 | 0.025 | 0.050 | 3000 | UPW1H182MHD | |
| 2200 | 18×35.5 | 0.12 | 3300 | 0.023 | 0.046 | 3100 | UPW1H222MHD | |

For cut leads, formed leads or taped parts, please add the appropriate code after the size code (12th digit).
If there is no size code in the part number, please add size code "1" and then add the appropriate code.

UPW

■ Dimensions



| Rated Voltage (V) (code) | Rated Capacitance (μ F) | Case Size ϕ D×L (mm) | tan δ | Leakage Current (μ A) (at 20°C after 1 minute) | Impedance (Ω) max. | | Rated Ripple (mArms) (105°C/100kHz) | Part Number |
|--------------------------------|---------------------------------|------------------------------|--------------|--|--------------------------------|------------------|---|--------------|
| | | | | | 20°C/ 100kHz | -10°C/ 100kHz | | |
| 63 (1J) | 47 | 8×11.5 | 0.09 | 88.83 | 0.342 | 0.684 | 405 | UPW1J470MPD |
| | 68 | 8×11.5 | 0.09 | 128.52 | 0.342 | 0.684 | 405 | UPW1J680MPD |
| | 100 | 10×12.5 | 0.09 | 189 | 0.256 | 0.512 | 540 | UPW1J101MPD |
| | 100 | 8×15 | 0.09 | 189 | 0.23 | 0.46 | 535 | UPW1J101MPD6 |
| | 120 | 10×16 | 0.09 | 226.8 | 0.194 | 0.388 | 600 | UPW1J121MPD |
| | 150 | 10×16 | 0.09 | 283.5 | 0.194 | 0.388 | 660 | UPW1J151MPD |
| | 180 | 10×20 | 0.09 | 340.2 | 0.147 | 0.294 | 890 | UPW1J181MPD |
| | 180 | 12.5×15 | 0.09 | 340.2 | 0.15 | 0.30 | 1020 | UPW1J181MHD6 |
| | 220 | 10×20 | 0.09 | 415.8 | 0.147 | 0.294 | 885 | UPW1J221MPD |
| | 220 | 10×25 | 0.09 | 415.8 | 0.13 | 0.26 | 1050 | UPW1J221MPD6 |
| | 270 | 16×15 | 0.09 | 510.3 | 0.090 | 0.18 | 1410 | UPW1J271MHD |
| | 330 | 12.5×20 | 0.09 | 623.7 | 0.085 | 0.17 | 1290 | UPW1J331MHD |
| | 390 | 12.5×25 | 0.09 | 737.1 | 0.070 | 0.14 | 1720 | UPW1J391MHD |
| | 390 | 18×15 | 0.09 | 737.1 | 0.086 | 0.172 | 1690 | UPW1J391MHD6 |
| | 470 | 12.5×25 | 0.09 | 888.3 | 0.070 | 0.14 | 1720 | UPW1J471MHD |
| | 470 | 12.5×30.5 | 0.09 | 888.3 | 0.055 | 0.11 | 2090 | UPW1J471MHD6 |
| | 470 | 16×20 | 0.09 | 888.3 | 0.059 | 0.118 | 1770 | UPW1J471MHD3 |
| | 680 | 16×25 | 0.09 | 1285.2 | 0.050 | 0.10 | 2160 | UPW1J681MHD |
| | 680 | 12.5×35.5 | 0.09 | 1285.2 | 0.047 | 0.094 | 2270 | UPW1J681MHD6 |
| | 680 | 18×20 | 0.09 | 1285.2 | 0.055 | 0.11 | 2290 | UPW1J681MHD3 |
| | 820 | 16×30.5 | 0.09 | 1549.8 | 0.043 | 0.086 | 2670 | UPW1J821MHD |
| | 820 | 18×25 | 0.09 | 1549.8 | 0.043 | 0.086 | 2590 | UPW1J821MHD6 |
| 1000 | 16×30.5 | 0.09 | 1890 | 0.043 | 0.086 | 2770 | UPW1J102MHD | |
| 1000 | 16×35.5 | 0.09 | 1890 | 0.036 | 0.072 | 2770 | UPW1J102MHD6 | |
| 1200 | 18×30.5 | 0.09 | 2268 | 0.032 | 0.064 | 2950 | UPW1J122MHD | |
| 1500 | 18×35.5 | 0.09 | 2835 | 0.030 | 0.060 | 3100 | UPW1J152MHD | |
| 2200 | 18×40 | 0.11 | 4158 | 0.028 | 0.056 | 3200 | UPW1J222MHD | |
| 100 (2A) | 15 | 8×11.5 | 0.08 | 45 | 0.83 | 1.66 | 180 | UPW2A150MPD |
| | 22 | 8×11.5 | 0.08 | 66 | 0.68 | 1.36 | 230 | UPW2A220MPD |
| | 33 | 10×12.5 | 0.08 | 99 | 0.46 | 0.92 | 320 | UPW2A330MPD |
| | 33 | 8×15 | 0.08 | 99 | 0.45 | 0.90 | 360 | UPW2A330MPD6 |
| | 47 | 10×16 | 0.08 | 141 | 0.37 | 0.74 | 420 | UPW2A470MPD |
| | 47 | 8×20 | 0.08 | 141 | 0.37 | 0.74 | 420 | UPW2A470MPD6 |
| | 68 | 10×20 | 0.08 | 204 | 0.30 | 0.60 | 490 | UPW2A680MPD |
| | 82 | 10×25 | 0.08 | 246 | 0.25 | 0.50 | 540 | UPW2A820MPD |
| | 100 | 12.5×20 | 0.08 | 300 | 0.18 | 0.36 | 580 | UPW2A101MHD |
| | 150 | 12.5×25 | 0.08 | 450 | 0.13 | 0.26 | 710 | UPW2A151MHD |
| | 180 | 12.5×30.5 | 0.08 | 540 | 0.12 | 0.24 | 790 | UPW2A181MHD |
| | 180 | 16×20 | 0.08 | 540 | 0.13 | 0.26 | 750 | UPW2A181MHD6 |
| | 220 | 16×25 | 0.08 | 660 | 0.10 | 0.20 | 890 | UPW2A221MHD |
| | 220 | 18×20 | 0.08 | 660 | 0.11 | 0.22 | 850 | UPW2A221MHD6 |
| | 330 | 16×25 | 0.08 | 990 | 0.090 | 0.18 | 1080 | UPW2A331MHD |
| | 390 | 18×25 | 0.08 | 1170 | 0.083 | 0.166 | 1260 | UPW2A391MHD |
| | 470 | 16×30.5 | 0.08 | 1410 | 0.076 | 0.152 | 1310 | UPW2A471MHD |
| | 560 | 18×30.5 | 0.08 | 1680 | 0.068 | 0.136 | 1370 | UPW2A561MHD |
| | 680 | 16×35.5 | 0.08 | 2040 | 0.064 | 0.128 | 1410 | UPW2A681MHD |
| | 1000 | 18×40 | 0.08 | 3000 | 0.047 | 0.094 | 1520 | UPW2A102MHD |

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• For formed lead or taped product specifications and minimum order quantity, please refer to the Guidelines for Aluminum Electrolytic Capacitors.

Looking for pricing, stock, or lifecycle information?

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