

UEP0J331MPD Datasheet



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| | |
|------------------------------|---|
| DiGi Electronics Part Number | UEP0J331MPD-DG |
| Manufacturer | Nichicon |
| Manufacturer Product Number | UEP0J331MPD |
| Description | CAP ALUM 330UF 20% 6.3V RADIAL |
| Detailed Description | 330 μ F 6.3 V Aluminum Electrolytic Capacitors Radial, Can 1000 Hrs @ 105°C |

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Purchase and inquiry

Manufacturer Product Number:

UEPOJ331MPD

Series:

UEP

Capacitance:

330 μ F

Voltage - Rated:

6.3 V

Lifetime @ Temp.:

1000 Hrs @ 105°C

Polarization:

Bi-Polar

Applications:

General Purpose

Ripple Current @ High Frequency:

277.5 mA @ 10 kHz

Size / Dimension:

0.315" Dia (8.00mm)

Surface Mount Land Size:

-

Package / Case:

Radial, Can

Manufacturer:

Nichicon

Product Status:

Not For New Designs

Tolerance:

\pm 20%

ESR (Equivalent Series Resistance):

-

Operating Temperature:

-55°C ~ 105°C

Ratings:

-

Ripple Current @ Low Frequency:

185 mA @ 120 Hz

Lead Spacing:

0.138" (3.50mm)

Height - Seated (Max):

0.512" (13.00mm)

Mounting Type:

Through Hole

Environmental & Export classification

RoHS Status:

ROHS3 Compliant

REACH Status:

REACH Unaffected

HTSUS:

8532.22.0020

Moisture Sensitivity Level (MSL):

Not Applicable

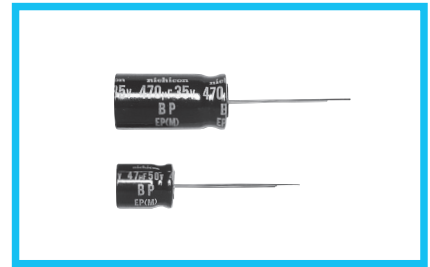
ECCN:

EAR99

ALUMINUM ELECTROLYTIC CAPACITORS

UEP

Bi-Polarized, Wide Temperature Range



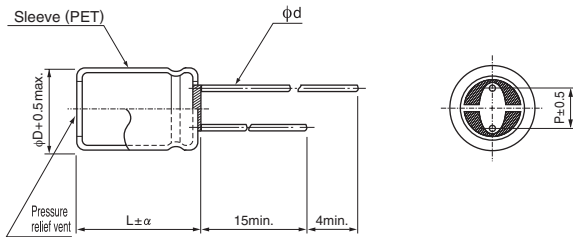
- Bi-polarized series for operations over wide temperature range of -55°C to +105°C.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).

Specifications

| Item | Performance Characteristics | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------------|---|---|------|------|------|------|---|------|------|---|--------------------|---|--|--|-------|---|--|--|-----------------|---|--|--|--|---|--|--|
| Category Temperature Range | -55 to +105°C | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rated Voltage Range | 6.3 to 100V | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rated Capacitance Range | 10 to 6800µF | | | | | | | | | | | | | | | | | | | | | | | | | |
| Capacitance Tolerance | ±20% at 120Hz, 20°C | | | | | | | | | | | | | | | | | | | | | | | | | |
| Leakage Current ※ | After 5 minutes' application of rated voltage at 20°C, leakage current is not more than 0.03CV(µA). | | | | | | | | | | | | | | | | | | | | | | | | | |
| Tangent of loss angle (tan δ) | Measurement frequency : 120Hz, Temperature : 20°C | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Rated voltage (V) | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 100 | | | | | | | | | | | | | | | | | |
| | tan δ (max.) | 0.24 | 0.24 | 0.20 | 0.20 | 0.16 | 0.14 | 0.12 | 0.10 | | | | | | | | | | | | | | | | | |
| Stability at Low Temperature | Measurement frequency : 120Hz | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Rated voltage (V) | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 100 | | | | | | | | | | | | | | | | | |
| | Impedance ratio (max.) | Z(-25°C) / Z(+20°C) | 4 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | | | | | | | | | | | | | | | | |
| | | Z(-40°C) / Z(+20°C) | 10 | 8 | 6 | 4 | 3 | 3 | 3 | 3 | | | | | | | | | | | | | | | | |
| 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 with the polarity inverted every 250 hours. | | | | | | <table border="1"> <tr> <td>Capacitance change</td> <td colspan="3">Within ±25% of the initial capacitance value (6.3to16V)</td> </tr> <tr> <td>tan δ</td> <td colspan="3">Within ±20% of the initial capacitance value (25to100V)</td> </tr> <tr> <td>Leakage current</td> <td colspan="3">150% or less than the initial specified value</td> </tr> <tr> <td></td> <td colspan="3">Less than or equal to the initial specified value</td> </tr> </table> | | | | Capacitance change | Within ±25% of the initial capacitance value (6.3to16V) | | | tan δ | Within ±20% of the initial capacitance value (25to100V) | | | Leakage current | 150% or less than the initial specified value | | | | Less than or equal to the initial specified value | | |
| | Capacitance change | Within ±25% of the initial capacitance value (6.3to16V) | | | | | | | | | | | | | | | | | | | | | | | | |
| tan δ | Within ±20% of the initial capacitance value (25to100V) | | | | | | | | | | | | | | | | | | | | | | | | | |
| Leakage current | 150% or less than the initial specified value | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 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 black sleeve. | | | | | | | | | | | | | | | | | | | | | | | | | |

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

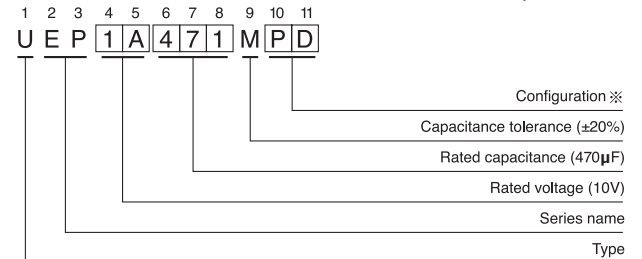
Radial Lead Type



| α | | (mm) | | | | |
|----|----------|------|-----|------|-----|-----|
| α | (L < 20) | 1.5 | | | | |
| | (L ≥ 20) | 2.0 | | | | |
| φD | | 8 | 10 | 12.5 | 16 | 18 |
| P | | 3.5 | 5.0 | 5.0 | 7.5 | 7.5 |
| φd | | 0.6 | 0.6 | 0.6 | 0.8 | 0.8 |

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

Type numbering system (Example : 10V 470µF)



※ Configuration

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

Frequency coefficient of rated ripple current

| Cap.(µF) | Frequency | 50 Hz | 120Hz | 300 Hz | 1 kHz | 10 kHz or more |
|--------------|-----------|-------|-------|--------|-------|----------------|
| 10 to 47 | | 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 6800 | | 0.85 | 1.00 | 1.10 | 1.13 | 1.15 |

• Dimension table in next page.

ALUMINUM ELECTROLYTIC CAPACITORS

UEP

■ Dimensions

| Rated Voltage (V) (code) | Rated Capacitance (μF) | Case Size φD×L (mm) | tan δ | Leakage Current (μA) (at 20°C after 5 minutes) | Rated Ripple (mArms) (105°C/120Hz) | Part Number |
|-----------------------------|------------------------|---------------------|-------|---|---------------------------------------|-------------|
| 6.3 (0J) | 220 | 8×11.5 | 0.24 | 41.58 | 150 | UEP0J221MPD |
| | 330 | 8×11.5 | 0.24 | 62.37 | 185 | UEP0J331MPD |
| | 470 | 10×12.5 | 0.24 | 88.83 | 260 | UEP0J471MPD |
| | 1000 | 10×20 | 0.24 | 189 | 460 | UEP0J102MPD |
| | 2200 | 12.5×25 | 0.26 | 415.8 | 820 | UEP0J222MHD |
| | 3300 | 16×25 | 0.28 | 623.7 | 1110 | UEP0J332MHD |
| | 4700 | 16×30.5 | 0.30 | 888.3 | 1430 | UEP0J472MHD |
| 10 (1A) | 6800 | 18×35.5 | 0.34 | 1285.2 | 1830 | UEP0J682MHD |
| | 220 | 8×11.5 | 0.24 | 66 | 150 | UEP1A221MPD |
| | 330 | 10×16 | 0.24 | 99 | 240 | UEP1A331MPD |
| | 470 | 10×16 | 0.24 | 141 | 290 | UEP1A471MPD |
| | 1000 | 12.5×20 | 0.24 | 300 | 510 | UEP1A102MHD |
| | 2200 | 16×25 | 0.26 | 660 | 910 | UEP1A222MHD |
| | 3300 | 16×30.5 | 0.28 | 990 | 1200 | UEP1A332MHD |
| 16 (1C) | 4700 | 18×35.5 | 0.30 | 1410 | 1520 | UEP1A472MHD |
| | 100 | 8×11.5 | 0.20 | 48 | 110 | UEP1C101MPD |
| | 220 | 10×12.5 | 0.20 | 105.6 | 195 | UEP1C221MPD |
| | 330 | 10×16 | 0.20 | 158.4 | 265 | UEP1C331MPD |
| | 470 | 10×20 | 0.20 | 225.6 | 345 | UEP1C471MPD |
| | 1000 | 12.5×25 | 0.20 | 480 | 605 | UEP1C102MHD |
| | 2200 | 16×30.5 | 0.22 | 1056 | 1070 | UEP1C222MHD |
| 25 (1E) | 3300 | 18×35.5 | 0.24 | 1584 | 1400 | UEP1C332MHD |
| | 100 | 8×11.5 | 0.20 | 75 | 110 | UEP1E101MPD |
| | 220 | 10×16 | 0.20 | 165 | 215 | UEP1E221MPD |
| | 330 | 12.5×20 | 0.20 | 247.5 | 320 | UEP1E331MHD |
| | 470 | 12.5×20 | 0.20 | 352.5 | 380 | UEP1E471MHD |
| | 1000 | 16×25 | 0.20 | 750 | 670 | UEP1E102MHD |
| | 2200 | 18×35.5 | 0.22 | 1650 | 1140 | UEP1E222MHD |
| 35 (1V) | 3300 | 18×35.5 | 0.22 | 1650 | 1140 | UEP1E222MHD |
| | 33 | 8×11.5 | 0.16 | 34.65 | 72 | UEP1V330MPD |
| | 47 | 8×11.5 | 0.16 | 49.35 | 86 | UEP1V470MPD |
| | 100 | 10×16 | 0.16 | 105 | 160 | UEP1V101MPD |
| | 220 | 12.5×20 | 0.16 | 231 | 290 | UEP1V221MHD |
| | 330 | 12.5×20 | 0.16 | 346.5 | 350 | UEP1V331MHD |
| | 470 | 12.5×25 | 0.16 | 493.5 | 465 | UEP1V471MHD |
| 1000 | 16×30.5 | 0.16 | 1050 | 805 | UEP1V102MHD | |

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.

ALUMINUM ELECTROLYTIC CAPACITORS

UEP

■ Dimensions

| Rated Voltage (V) (code) | Rated Capacitance (μF) | Case Size φD×L (mm) | tan δ | Leakage Current (μA) (at 20°C after 5 minutes) | Rated Ripple (mArms) (105°C/120Hz) | Part Number |
|--------------------------|------------------------|---------------------|-------|--|------------------------------------|-------------|
| 50 (1H) | 22 | 8×11.5 | 0.14 | 33 | 63 | UEP1H220MPD |
| | 33 | 8×11.5 | 0.14 | 49.5 | 77 | UEP1H330MPD |
| | 47 | 10×12.5 | 0.14 | 70.5 | 105 | UEP1H470MPD |
| | 100 | 10×20 | 0.14 | 150 | 190 | UEP1H101MPD |
| | 220 | 12.5×25 | 0.14 | 330 | 340 | UEP1H221MHD |
| | 330 | 16×25 | 0.14 | 495 | 460 | UEP1H331MHD |
| | 470 | 16×30.5 | 0.14 | 705 | 590 | UEP1H471MHD |
| 63 (1J) | 22 | 8×11.5 | 0.12 | 41.58 | 68 | UEP1J220MPD |
| | 33 | 10×12.5 | 0.12 | 62.37 | 98 | UEP1J330MPD |
| | 47 | 10×16 | 0.12 | 88.83 | 130 | UEP1J470MPD |
| | 100 | 12.5×20 | 0.12 | 189 | 225 | UEP1J101MHD |
| | 220 | 16×25 | 0.12 | 415.8 | 405 | UEP1J221MHD |
| | 330 | 16×30.5 | 0.12 | 623.7 | 535 | UEP1J331MHD |
| | 470 | 18×35.5 | 0.12 | 888.3 | 680 | UEP1J471MHD |
| 100 (2A) | 10 | 8×11.5 | 0.10 | 30 | 50 | UEP2A100MPD |
| | 22 | 10×16 | 0.10 | 66 | 97 | UEP2A220MPD |
| | 33 | 12.5×20 | 0.10 | 99 | 140 | UEP2A330MHD |
| | 47 | 12.5×20 | 0.10 | 141 | 170 | UEP2A470MHD |
| | 100 | 16×25 | 0.10 | 300 | 300 | UEP2A101MHD |
| | 220 | 18×35.5 | 0.10 | 660 | 510 | UEP2A221MHD |

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.

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

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