

NICHICON Aluminum Electrolytic Capacitors



nichicon UHE 105°C LOW IMPEDANCE, HIGH REL. SERIES (LEAD FREE)

Features:

- Lead free product
- High reliability
- Long life up to 10,000 hours

Specifications:

- Operating temperature range: -40°C to +105°C
- Voltage range: 6.3 - 100Vdc
- Capacitance range: 6.8 to 180000µF
- Capacitance tolerance: ±20% at 120Hz, 20°C
- Leakage current: After 2 minutes of rated voltage, leakage current is not more than 0.01CV or 3(µA), whichever is greater



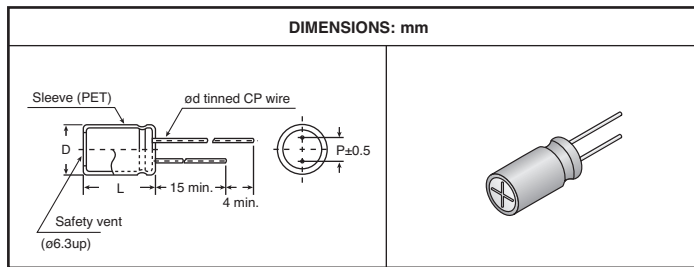
RoHS Compliant



LEAD-FREE

Application Note:

- A higher voltage capacitor may be used in a lower voltage application



Endurance:

| Case Size (Diameter)øD | ≤5-6.3 | =8, 10 | ≥12.5 |
|------------------------|----------------------|------------------------|---|
| Rated Voltage V | 6.3~10WV 16~100WV | 4000 Hrs. 5000 Hrs. | 6000 Hrs. 7000 Hrs. 8000 Hrs. 10000 Hrs. |

For quantities of 1000 and up, call for quote.

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| MOUSER STOCK NO. | Value (µF) | Impedance Ω Max. @ 20°C/100kHz | Ripple (mA rms) 105°C/100 kHz | Case Size D x L (mm) Max. | LS (mm) | Price Each | | | |
|------------------|------------|--------------------------------|-------------------------------|---------------------------|---------|------------|------|------|------|
| | | | | | | 1 | 10 | 100 | 500 |
| 6.3 Volt | | | | | | | | | |
| 647-UHE0J331MED | 330 | 0.22 | 340 | 6.3 x 11 | 2.5 | .21 | .16 | .12 | .10 |
| 647-UHE0J681MPD | 680 | 0.13 | 640 | 8 x 11.5 | 3.5 | .27 | .25 | .202 | .15 |
| 647-UHE0J102MPD | 1000 | 0.087 | 840 | 8 x 15 | 3.5 | .27 | .24 | .221 | .165 |
| 647-UHE0J122MPD | 1200 | 0.069 | 1050 | 8 x 20 | 3.5 | .34 | .31 | .256 | .19 |
| 647-UHE0J182MHD | 1800 | 0.049 | 1450 | 12.5 x 15 | 5.0 | .40 | .36 | .255 | .222 |
| 647-UHE0J222MPD | 2200 | 0.042 | 1650 | 10 x 25 | 5.0 | .48 | .43 | .319 | .252 |
| 647-UHE0J332MHD | 3300 | 0.035 | 1900 | 12.5 x 20 | 5.0 | .64 | .58 | .391 | .338 |
| 647-UHE0J103MHD6 | 10000 | 0.019 | 3140 | 18 x 25 | 7.5 | 1.20 | .904 | .804 | .683 |
| 10 Volt | | | | | | | | | |
| 647-UHE1A101MDD | 100 | 0.580 | 210 | 5 x 11 | 2.0 | .14 | .11 | .08 | .07 |
| 647-UHE1A221MED | 220 | 0.220 | 340 | 6.3 x 11 | 2.5 | .22 | .17 | .13 | .11 |
| 647-UHE1A471MPD | 470 | 0.130 | 640 | 8 x 11.5 | 3.5 | .27 | .25 | .202 | .15 |
| 647-UHE1A681MPD | 680 | 0.087 | 840 | 8 x 15 | 3.5 | .28 | .25 | .21 | .158 |
| 647-UHE1A681MPD6 | 680 | 0.080 | 865 | 10 x 12.5 | 5.0 | .28 | .25 | .181 | .158 |
| 647-UHE1A102MPD | 1000 | 0.069 | 1050 | 8 x 20 | 5.0 | .37 | .34 | .239 | .208 |
| 647-UHE1A102MPD6 | 1000 | 0.060 | 1210 | 10 x 16 | 5.0 | .37 | .34 | .239 | .208 |
| 647-UHE1A122MPD | 1200 | 0.046 | 1400 | 10 x 20 | 5.0 | .43 | .39 | .321 | .238 |
| 647-UHE1A222MPD | 2200 | 0.031 | 1910 | 10 x 31.5 | 5.0 | .62 | .56 | .415 | .328 |
| 647-UHE1A332MHD | 3300 | 0.027 | 2230 | 12.5 x 25 | 5.0 | .75 | .68 | .443 | .379 |
| 647-UHE1A472MHD | 4700 | 0.020 | 2880 | 12.5 x 35.5 | 5.0 | .98 | .819 | .546 | .464 |
| 647-UHE1A682MHD | 6800 | 0.017 | 3450 | 16 x 31.5 | 7.5 | 1.44 | 1.20 | .804 | .683 |
| 647-UHE1A103MHD | 10000 | 0.013 | 4080 | 16 x 40 | 7.5 | 1.77 | 1.47 | .986 | .838 |
| 16 Volt | | | | | | | | | |
| 647-UHE1C121MED | 120 | 0.22 | 340 | 6.3 x 11 | 2.5 | .15 | .14 | .12 | .09 |
| 647-UHE1C331MPD | 330 | 0.13 | 640 | 8 x 11.5 | 3.5 | .28 | .25 | .21 | .158 |
| 647-UHE1C471MPD | 470 | 0.087 | 840 | 8 x 15 | 3.5 | .29 | .26 | .218 | .162 |
| 647-UHE1C681MPD | 680 | 0.069 | 1050 | 8 x 20 | 3.5 | .43 | .39 | .321 | .238 |
| 647-UHE1C102MPD | 1000 | 0.046 | 1400 | 10 x 20 | 5.0 | .48 | .43 | .292 | .252 |
| 647-UHE1C122MPD | 1200 | 0.042 | 1650 | 10 x 25 | 5.0 | .59 | .54 | .418 | .324 |
| 647-UHE1C152MPD | 1500 | 0.031 | 1910 | 10 x 31.5 | 5.0 | .65 | .585 | .418 | .324 |
| 647-UHE1C222MHD | 2200 | 0.027 | 2230 | 12.5 x 25 | 5.0 | .78 | .709 | .457 | .392 |
| 647-UHE1C332MHD | 3300 | 0.02 | 2880 | 12.5 x 35.5 | 5.0 | 1.01 | .852 | .568 | .482 |
| 647-UHE1C472MHD | 4700 | 0.017 | 3450 | 16 x 31.5 | 7.5 | 1.37 | 1.14 | .764 | .649 |
| 647-UHE1C682MHD | 6800 | 0.013 | 4080 | 16 x 40 | 7.5 | 1.77 | 1.47 | .986 | .838 |
| 647-UHE1C103MHD | 10000 | 0.012 | 4280 | 18 x 40 | 7.5 | 2.04 | 1.65 | 1.08 | .96 |
| 25 Volt | | | | | | | | | |
| 647-UHE1E470MDD | 47 | 0.580 | 210 | 5 x 11 | 2.0 | .15 | .14 | .12 | .09 |
| 647-UHE1E101MED | 100 | 0.220 | 340 | 6.3 x 11 | 2.5 | .20 | .18 | .15 | .12 |
| 647-UHE1E221MPD | 220 | 0.130 | 640 | 8 x 11.5 | 3.5 | .28 | .25 | .21 | .158 |
| 647-UHE1E331MPD | 330 | 0.087 | 840 | 8 x 15 | 3.5 | .27 | .24 | .17 | .148 |
| 647-UHE1E471MPD | 470 | 0.060 | 1210 | 8 x 20 | 3.5 | .43 | .39 | .321 | .238 |
| 647-UHE1E102MPD6 | 470 | 0.069 | 1050 | 10 x 16 | 5.0 | .43 | .39 | .321 | .238 |
| 647-UHE1E681MPD | 680 | 0.046 | 1400 | 10 x 20 | 5.0 | .50 | .45 | .331 | .262 |
| 647-UHE1E102MPD | 1000 | 0.031 | 1910 | 10 x 31.5 | 5.0 | .64 | .58 | .429 | .34 |
| 647-UHE1E102MHD3 | 1000 | 0.042 | 1940 | 16 x 15 | 7.5 | .64 | .58 | .393 | .34 |
| 647-UHE1E122MHD | 1200 | 0.043 | 2210 | 18 x 15 | 7.5 | .72 | .653 | .422 | .361 |
| 647-UHE1E222MHD | 2200 | 0.020 | 2880 | 12.5 x 35.5 | 5.0 | 1.01 | .852 | .568 | .482 |
| 647-UHE1E332MHD | 3300 | 0.017 | 3450 | 16 x 31.5 | 7.5 | 1.38 | 1.15 | .77 | .654 |
| 647-UHE1E472MHD | 4700 | 0.013 | 4080 | 16 x 40 | 7.5 | 1.69 | 1.41 | .94 | .799 |
| 35 Volt | | | | | | | | | |
| 647-UHE1V330MDD | 33 | 0.580 | 210 | 5 x 11 | 2.0 | .15 | .14 | .12 | .09 |
| 647-UHE1V151MPD | 150 | 0.130 | 640 | 8 x 11.5 | 3.5 | .26 | .20 | .15 | .13 |
| 647-UHE1V221MPD | 220 | 0.087 | 840 | 8 x 15 | 3.5 | .28 | .197 | .164 | .146 |
| 647-UHE1V331MPD | 330 | 0.060 | 1210 | 10 x 16 | 5.0 | .43 | .39 | .321 | .238 |

| MOUSER STOCK NO. | Value (µF) | Impedance Ω Max. @ 20°C/100kHz | Ripple (mA rms) 105°C/100 kHz | Case Size D x L (mm) Max. | LS (mm) | Price Each | | | |
|------------------------|------------|--------------------------------|-------------------------------|---------------------------|---------|------------|------|------|------|
| | | | | | | 1 | 10 | 100 | 500 |
| 35 Volt (Cont.) | | | | | | | | | |
| 647-UHE1V471MPD | 470 | 0.046 | 1400 | 10 x 20 | 5.0 | .50 | .45 | .331 | .262 |
| 647-UHE1V681MPD | 680 | 0.031 | 1910 | 10 x 31.5 | 5.0 | .64 | .58 | .429 | .34 |
| 647-UHE1V102MHD | 1000 | 0.027 | 2230 | 12.5 x 25 | 5.0 | .78 | .709 | .457 | .392 |
| 647-UHE1V122MHD | 1200 | 0.024 | 2650 | 12.5 x 31.5 | 5.0 | .98 | .819 | .546 | .464 |
| 647-UHE1V182MHD | 1800 | 0.017 | 3350 | 12.5 x 40 | 5.0 | 1.01 | .852 | .568 | .482 |
| 647-UHE1V222MHD | 2200 | 0.017 | 3450 | 16 x 31.5 | 7.5 | 1.38 | 1.15 | .77 | .654 |
| 647-UHE1V332MHD | 3300 | 0.013 | 4080 | 16 x 40 | 7.5 | 1.69 | 1.41 | .94 | .799 |
| 50 Volt | | | | | | | | | |
| 647-UHE1H220MDD | 22 | 0.700 | 180 | 5 x 11 | 2.0 | .15 | .14 | .12 | .09 |
| 647-UHE1H560MED | 56 | 0.300 | 295 | 6.3 x 11 | 2.5 | .20 | .18 | .15 | .12 |
| 647-UHE1H101MPD | 100 | 0.170 | 555 | 8 x 11.5 | 3.5 | .28 | .25 | .21 | .158 |
| 647-UHE1H121MPD | 120 | 0.120 | 730 | 8 x 15 | 3.5 | .30 | .27 | .229 | .17 |
| 647-UHE1H151MPD | 150 | 0.120 | 760 | 10 x 12.5 | 5.0 | .30 | .27 | .229 | .17 |
| 647-UHE1H221MPD | 220 | 0.084 | 1050 | 10 x 16 | 5.0 | .37 | .34 | .278 | .206 |
| 647-UHE1H331MPD | 330 | 0.055 | 1440 | 10 x 25 | 5.0 | .50 | .46 | .336 | .266 |
| 647-UHE1H471MPD | 470 | 0.043 | 1690 | 10 x 31.5 | 5.0 | .65 | .59 | .423 | .327 |
| 647-UHE1H471MHD3 | 470 | 0.055 | 1690 | 16 x 15 | 7.5 | .65 | .59 | .382 | .327 |
| 647-UHE1H681MHD | 680 | 0.030 | 2310 | 12.5 x 31.5 | 5.0 | .80 | .728 | .47 | .403 |
| 647-UHE1H102MHD | 1000 | 0.021 | 2920 | 12.5 x 40 | 5.0 | .49 | .47 | .435 | .389 |
| 647-UHE1H102MHD3 | 1000 | 0.036 | 2490 | 18 x 20 | 7.5 | .98 | .819 | .546 | .464 |
| 647-UHE1H122MHD | 1200 | 0.022 | 3010 | 16 x 31.5 | 7.5 | 1.37 | 1.14 | .764 | .649 |
| 647-UHE1H222MHD6 | 2200 | 0.017 | 3680 | 18 x 35.5 | 7.5 | 1.72 | 1.39 | .912 | .811 |
| 63 Volt | | | | | | | | | |
| 647-UHE1J150MDD | 15 | 2.300 | 55 | 5 x 11 | 2.0 | .15 | .14 | .12 | .09 |
| 647-UHE1J330MED | 33 | 1.200 | 115 | 6.3 x 11 | 2.5 | .19 | .18 | .15 | .11 |
| 647-UHE1J820MPD | 82 | 0.450 | 300 | 8 x 15 | 3.5 | .30 | .27 | .229 | .17 |
| 647-UHE1J121MPD | 120 | 0.330 | 362 | 8 x 20 | 3.5 | .37 | .34 | .278 | .206 |
| 647-UHE1J181MPD | 180 | 0.210 | 466 | 10 x 20 | 5.0 | .50 | .45 | .331 | .262 |
| 647-UHE1J221MPD | 220 | 0.200 | 531 | 10 x 25 | 5.0 | .50 | .46 | .336 | .266 |
| 647-UHE1J271MPD | 270 | 0.150 | 663 | 10 x 31.5 | 5.0 | .66 | .598 | .427 | .331 |
| 647-UHE1J331MHD | 330 | 0.120 | 784 | 12.5 x 25 | 5.0 | .76 | .689 | .445 | .381 |
| 647-UHE1J471MHD | 470 | 0.100 | 905 | 12.5 x 31.5 | 5.0 | .72 | .52 | .47 | .403 |
| 647-UHE1J681MHD | 680 | 0.071 | 1180 | 12.5 x 40 | 5.0 | .98 | .819 | .546 | .464 |
| 647-UHE1J821MHD | 820 | 0.054 | 1570 | 16 x 31.5 | 7.5 | 1.37 | 1.14 | .764 | .649 |
| 647-UHE1J102MHD | 1000 | 0.045 | 1790 | 16 x 35.5 | 7.5 | 1.37 | 1.14 | .764 | .649 |
| 647-UHE1J102MHD6 | 1000 | 0.047 | 1630 | 18 x 31.5 | 7.5 | 1.37 | 1.14 | .764 | .649 |
| 647-UHE1J122MHD | 1200 | 0.040 | 2020 | 16 x 40 | 7.5 | 1.54 | 1.29 | .862 | .732 |
| 100 Volt | | | | | | | | | |
| 647-UHE2A6R8MDD | 6.8 | 2.300 | 55 | 5 x 11 | 2.0 | .15 | .14 | .105 | .09 |
| 647-UHE2A150MED | 15 | 1.200 | 115 | 6.3 x 11 | 2.5 | .19 | .18 | .15 | .11 |
| 647-UHE2A390MPD | 39 | 0.450 | 300 | 8 x 15 | 3.5 | .24 | .21 | .18 | .14 |
| 647-UHE2A470MPD | 47 | 0.430 | 288 | 10 x 12.5 | 5.0 | .24 | .21 | .18 | .14 |
| 647-UHE2A680MPD | 68 | 0.310 | 357 | 10 x 16 | 5.0 | .30 | .27 | .229 | .17 |
| 647-UHE2A820MPD | 82 | 0.210 | 466 | 10 x 20 | 5.0 | .30 | .27 | .229 | .17 |
| 647-UHE2A101MPD | 100 | 0.200 | 531 | 10 x 25 | 5.0 | .32 | .29 | .24 | .178 |
| 647-UHE2A121MPD | 120 | 0.150 | 663 | 10 x 31.5 | 5.0 | .40 | .36 | .302 | .224 |
| 647-UHE2A181MHD | 180 | 0.120 | 784 | 12.5 x 25 | 5.0 | .50 | .46 | .336 | .266 |
| 647-UHE2A211MHD | 220 | 0.100 | 905 | 12.5 x 31.5 | 5.0 | .63 | .57 | .389 | .336 |
| 647-UHE2A331MHD | 330 | 0.071 | 1180 | 12.5 x 40 | 5.0 | 1.35 | 1.12 | .752 | .639 |
| 647-UHE2A391MHD | 390 | 0.054 | 1570 | 16 x 31.5 | 7.5 | 1.37 | 1.14 | .859 | .649 |
| 647-UHE2A471MHD | 470 | 0.045 | 1790 | 16 x 35.5 | 7.5 | 1.14 | .859 | .764 | .649 |
| 647-UHE2A561MHD | 560 | 0.040 | 2020 | 16 x 40 | 7.5 | 1.54 | 1.29 | .862 | .732 |
| 647-UHE2A681MHD | 680 | 0.040 | 1790 | 18 x 35.5 | 7.5 | 1.54 | 1.29 | .862 | .732 |
| 647-UHE2A821MHD | 820 | 0.036 | 2330 | 18 x 40 | 7.5 | 1.76 | 1.42 | .934 | .83 |

