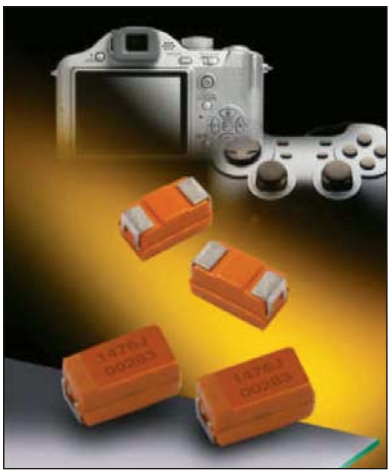
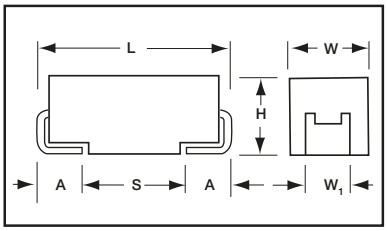
# OxiCap® NLJ Series

## Niobium Oxide Capacitors High CV Consumer Series



- High Volumetric efficiency
- Environmentally friendly
- 3xreflow 260°C compatible
- Consumer applications
- OxiCap® non-burn technology
- RoHS compliance
- Lead-free solution
- 6 case sizes available
- CV range: 22-150µF / 4-10V

Elektra Award
2005




For part marking see page 151

## CASE DIMENSIONS: millimeters (inches)

| Code | EIA Code | EIA Metric | L±0.20 (0.008) | W+0.20 (0.008) –0.10 (0.004) | H+0.20 (0.008) –0.10 (0.004) | $W_1$±0.20 (0.008) | A+0.30 (0.012) –0.20 (0.008) | S Min. |
|---|---|---|---|---|---|---|---|---|
| A | 1206 | 3216-18 | 3.20 (0.126) | 1.60 (0.063) | 1.60 (0.063) | 1.20 (0.047) | 0.80 (0.031) | 1.10 (0.043) |
| B | 1210 | 3528-21 | 3.50 (0.138) | 2.80 (0.110) | 1.90 (0.075) | 2.20 (0.087) | 0.80 (0.031) | 1.40 (0.055) |
| C | 2312 | 6032-28 | 6.00 (0.236) | 3.20 (0.126) | 2.60 (0.102) | 2.20 (0.087) | 1.30 (0.051) | 2.90 (0.114) |
| D | 2917 | 7343-31 | 7.30 (0.287) | 4.30 (0.169) | 2.90 (0.114) | 2.40 (0.094) | 1.30 (0.051) | 4.40 (0.173) |
| G | 1206 | 3216-15 | 3.20 (0.126) | 1.60 (0.063) | 1.50 (0.059) max | 1.20 (0.047) | 0.80 (0.031) | 1.10 (0.043) |
| P | 0805 | 2012-15 | 2.05 (0.081) | 1.35 (0.053) | 1.50 (0.059) max | 1.00±0.10 (0.039±0.004) | 0.50 (0.020) | 0.85 (0.033) |
| S | 1206 | 3216-12 | 3.20 (0.126) | 1.60 (0.063) | 1.20 (0.047) max | 1.20 (0.047) | 0.80 (0.031) | 1.10 (0.043) |
| T | 1210 | 3528-12 | 3.50 (0.138) | 2.80 (0.110) | 1.20 (0.047) max | 2.20 (0.087) | 0.80 (0.031) | 1.40 (0.055) |
| W | 2312 | 6032-15 | 6.00 (0.236) | 3.20 (0.126) | 1.50 (0.059) max | 2.20 (0.087) | 1.30 (0.051) | 2.90 (0.114) |
| Y | 2917 | 7343-20 | 7.30 (0.287) | 4.30 (0.169) | 2.00 (0.079) max | 2.40 (0.094) | 1.30 (0.051) | 4.40 (0.173) |
| $W_1$ dimension applies to the termination width for A dimensional area only. | | | | | | | | |

Under development

## HOW TO ORDER

| NLJ | A | 476 | M | 006 | R | 1600 |
|---|---|---|---|---|---|---|
| **Type** | **Case Size**<br>See table above | **Capacitance Code**<br>1st two digits represent significant figures, 3rd digit represents multiplier in pF | **Tolerance**<br>M=±20% | **Rated DC Voltage**<br>004 = 4Vdc<br>006 = 6.3Vdc<br>010 = 10Vdc | **Packaging**<br>R = Pure Tin 7" Reel<br>S = Pure Tin 13" Reel | **ESR in mΩ** |

## TECHNICAL SPECIFICATIONS

| | | | | | |
|---|---|---|---|---|---|
| Technical Data: | | All technical data relate to an ambient temperature of +25°C | | | |
| Capacitance Range: | | 6.8 µF to 1000 µF | | | |
| Capacitance Tolerance: | | ±20% | | | |
| Leakage Current DCL: | | 0.1CV | | | |
| Rated Voltage DC ($V_R$) | -55°C ≤ +40°C: | 4 | 6.3 | 10 | |
| Category Voltage ($V_C$) | at 85°C: | 2 | 3.15 | 5 | |
| Category Voltage ($V_C$) | at 105°C: | 1.32 | 2 | 3.3 | |
| Temperature Range: | | -55°C to +105°C with category voltage | | | |
| Reliability: | | 0.2% per 1000 hours at 85°C, 0.5x$V_R$, 0.1Ω/V series impedance with 60% confidence level | | | |

# OxiCap® NLJ Series

## Niobium Oxide Capacitors High CV Consumer Series

### CAPACITANCE AND RATED VOLTAGE RANGE (LETTER DENOTES CASE SIZE)

| Capacitance | | Rated Voltage DC to 40°C / 0.5DC to 85°C / 0.33DC to 105°C | | |
|---|---|---|---|---|
| µF | Code | 4V (G) | 6.3V (J) | 10V (A) |
| 6.8 | 685 | | | K(4000)*/P(5000)* |
| 10 | 106 | | K(4000)* | K(2200)*/P(6000)* |
| 15 | 156 | K(4000)*/P(4000)* | P(3500)* | L(2800)*/S(2000)* |
| 22 | 226 | P(4000) | L(2500)*/S(1800) | A(4000)/G(3000) L(2200)* |
| 33 | 336 | A(3000)*/S(1700)* | G(2200)/L(2500)* | A(1700)/T(1800)* |
| 47 | 476 | A(2600)*/G(2600)* L(1600)* | A(1600)/T(1600) | B(1000)/H(1000)* W(400)* |
| 68 | 686 | A(1500)*/T(1500)* | H(900)* | B(1400)* |
| 100 | 107 | H(900)* | B(1700)/W(600)* | C(1200)*/Y(1200)* |
| 150 | 157 | B(1500)/W(400)* | | |
| 220 | 227 | | | D(1000)* |
| 330 | 337 | | C(500)*/Y(500)* | |
| 470 | 477 | C(500)*/Y(500)* | | |
| 680 | 687 | | D(500)* | |
| 1000 | 108 | D(500)* | | |

Available Ratings, (ESR ratings in mOhms in brackets)

Engineering samples - please contact manufacturer

*Codes under development - subject to change

Note: Voltage ratings are minimum values. AVX reserves the right to supply higher ratings in the same case size, to the same reliability standards.

LEAD-FREE

**LEAD-FREE COMPATIBLE COMPONENT**

RoHS COMPLIANT

**NON-BURN NON-SMOKE**

### RATINGS & PART NUMBER REFERENCE

| AVX Part No. | Case Size | Capacitance (µF) | Rated Voltage (V) | Maximum Surge Current (A)* | DCL (µA) Max. | ESR Max. (mΩ) @100kHz | MSL | 100kHz Ripple Current (mA) | | | 100kHz Ripple Voltage (mV) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 25°C | 85°C | 105°C | 25°C | 85°C | 105°C |
| **4 Volt @ 85°C (1.32 Volt @ 105°C)** | | | | | | | | | | | | | |
| NLJP226M004#4000 | P | 22 | 4 | 0.4 | 8.8 | 4000 | 3 | 134 | 121 | 54 | 537 | 483 | 215 |
| NLJB157M004#1500 | B | 150 | 4 | 1.0 | 60.0 | 1500 | 3 | 261 | 235 | 104 | 391 | 352 | 156 |
| NLJW157M004#0400 | W | 150 | 4 | 2.4 | 60.0 | 400 | 3 | 520 | 468 | 208 | 208 | 187 | 83 |
| NLJC477M004#0500 | C | 470 | 4 | 2.1 | 188.0 | 500 | 3 | 514 | 462 | 206 | 257 | 231 | 103 |
| NLJY477M004#0500 | Y | 470 | 4 | 2.1 | 188.0 | 500 | 3 | 548 | 493 | 219 | 274 | 246 | 110 |
| NLJD108M004#0500 | D | 1000 | 4 | 2.1 | 400.0 | 500 | 3 | 600 | 540 | 240 | 300 | 270 | 120 |
| **6.3 Volt @ 85°C (2 Volt @ 105°C)** | | | | | | | | | | | | | |
| NLJS226M006#1800 | S | 22 | 6.3 | 1.4 | 13.2 | 1800 | 3 | 208 | 187 | 83 | 375 | 337 | 150 |
| NLJG336M006#2200 | G | 33 | 6.3 | 1.2 | 19.8 | 2200 | 3 | 195 | 176 | 78 | 430 | 387 | 172 |
| NLJA476M006#1600 | A | 47 | 6.3 | 1.5 | 28.2 | 1600 | 3 | 237 | 213 | 98 | 379 | 342 | 152 |
| NLJT476M006#1600 | T | 47 | 6.3 | 1.5 | 28.2 | 1600 | 3 | 245 | 220 | 98 | 392 | 353 | 157 |
| NLJB107M006#1700 | B | 100 | 6.3 | 1.5 | 60.0 | 1700 | 3 | 245 | 220 | 98 | 416 | 375 | 167 |
| NLJW107M006#0600 | W | 100 | 6.3 | 3.0 | 60.0 | 600 | 3 | 424 | 382 | 170 | 255 | 229 | 102 |
| NLJC337M006#0500 | C | 330 | 6.3 | 3.3 | 198.0 | 500 | 3 | 514 | 462 | 206 | 257 | 231 | 103 |
| NLJY337M006#0500 | Y | 330 | 6.3 | 3.3 | 198.0 | 500 | 3 | 548 | 493 | 219 | 274 | 246 | 110 |
| NLJD687M006#0500 | D | 680 | 6.3 | 3.3 | 408.0 | 500 | 3 | 600 | 540 | 240 | 300 | 270 | 120 |
| **10 Volt @ 85°C (3.3 Volt @ 105°C)** | | | | | | | | | | | | | |
| NLJA226M010#4000 | A | 22 | 10 | 1.1 | 22.0 | 4000 | 3 | 150 | 135 | 60 | 600 | 540 | 240 |
| NLJG226M010#3000 | G | 22 | 10 | 1.4 | 22.0 | 3000 | 3 | 167 | 151 | 67 | 502 | 452 | 201 |
| NLJA336M010#1700 | A | 33 | 10 | 2.3 | 33.0 | 1700 | 3 | 230 | 207 | 92 | 391 | 352 | 156 |
| NLJB476M010#1000 | B | 47 | 10 | 3.4 | 47.0 | 1000 | 3 | 319 | 287 | 128 | 319 | 287 | 128 |
| NLJW476M010#0400 | W | 47 | 10 | 5.9 | 47.0 | 400 | 3 | 520 | 468 | 208 | 208 | 187 | 83 |
| NLJC107M010#1200 | C | 100 | 10 | 3.0 | 100.0 | 1200 | 3 | 332 | 298 | 133 | 398 | 358 | 159 |
| NLJY107M010#1200 | Y | 100 | 10 | 3.0 | 100.0 | 1200 | 3 | 354 | 318 | 141 | 424 | 382 | 170 |
| NLJD227M010#1000 | D | 220 | 10 | 3.4 | 220.0 | 1000 | 3 | 424 | 382 | 170 | 424 | 382 | 170 |

Moisture Sensitivity Level (MSL) is defined according to J-STD-020.

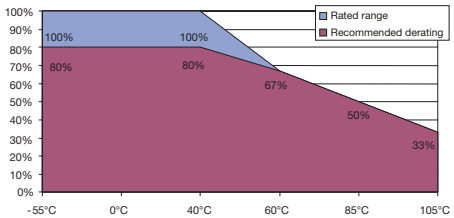
All technical data relates to an ambient temperature of +25°C. Capacitance and DF are measured at 120Hz, 0.5V RMS with a maximum DC bias of 2.2 volts. DCL is measured at rated voltage after 5 minutes.

ESR allowed to move up to 1.25 times catalogue limit post mounting
DCL allowed to move up to 2.00 times catalogue limit post mounting

For typical weight and composition see page 144.

**NOTE: AVX reserves the right to supply a higher voltage rating or tighter tolerance part in the same case size, to the same reliability standards.**

Voltage vs Temperature Rating



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**Данный компонент на территории Российской Федерации**

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Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

http://moschip.ru/get-element

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

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