

Surface Mount Aluminum Electrolytic Capacitors NACEW Series

FEATURES

- CYLINDRICAL V-CHIP CONSTRUCTION
- WIDE TEMPERATURE -55 ~ +105°C
- DESIGNED FOR REFLOW SOLDERING
- MEETS THE REQUIREMENTS OF AEC-Q200*

New Expanded Value Range (Up to 12,000µF)

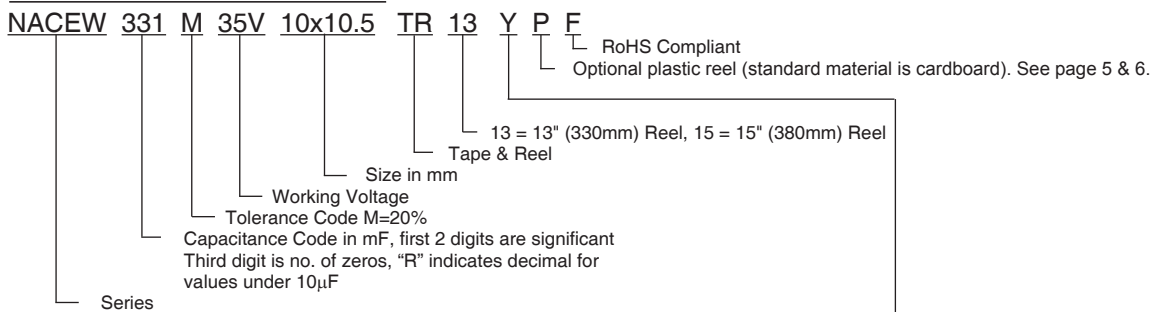


*Contact NIC for supporting test data

CHARACTERISTICS

| | | | | | | | | | | |
|---|--|----------------------|------|--|------|------|------|------|------|------|
| Rated Voltage Range | 6.3 ~ 100Vdc** | | | | | | | | | |
| Rate Capacitance Range | 1.0 ~ 12,000µF | | | | | | | | | |
| Operating Temp. Range | -55°C ~ +105°C (100V -40°C ~ +105 °C) | | | | | | | | | |
| Capacitance Tolerance | ±20% (M) | | | | | | | | | |
| Max. Leakage Current After 2 Minutes @ 20°C | 0.01CV or 3µA whichever is greater | | | | | | | | | |
| Max. Tan δ @ 120Hz/20°C | W.V. (Vdc) | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 100 | |
| | S.V. (Vdc) | 8 | 13 | 20 | 32 | 44 | 63 | 79 | 125 | |
| | 4 ~ 6.3mm Dia. | 0.24 | 0.20 | 0.16 | 0.14 | 0.12 | 0.10 | 0.12 | 0.10 | |
| | 8 & larger | C ≤ 1,000µF | 0.28 | 0.24 | 0.20 | 0.16 | 0.14 | 0.12 | 0.12 | 0.10 |
| | | C = 1,500µF | 0.28 | - | 0.20 | - | 0.14 | 0.12 | - | - |
| | | C = 2,200µF, 2,700µF | - | 0.26 | - | 0.18 | 0.16 | - | - | - |
| | | C = 3,300µF, 3,900µF | 0.32 | - | 0.24 | 0.20 | - | - | - | - |
| | | C = 4,700µF | - | 0.30 | 0.26 | - | - | - | - | - |
| | | C = 5,600µF | - | - | 0.28 | - | - | - | - | - |
| | | C = 6,800µF | 0.38 | 0.34 | - | - | - | - | - | - |
| C = 8,200µF | | - | 0.38 | - | - | - | - | - | - | |
| C = 10,000µF | 0.46 | - | - | - | - | - | - | - | | |
| C = 12,000µF | 0.50 | - | - | - | - | - | - | - | | |
| Low Temperature Stability Impedance Ratio @ 120Hz | W.V. (Vdc) | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 100 | |
| | Z-40°C/Z+20°C | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 3 | |
| | Z-55°C/Z+20°C | 8 | 6 | 4 | 4 | 3 | 3 | 3 | - | |
| Load Life Test | 4 ~ 6.3mm Dia. & 10x8mm +105°C 1,000 hours | Capacitance Change | | Within ± 25% of initial measured value | | | | | | |
| | | Tan δ | | Less than 200% of specified max. value | | | | | | |
| | 8 ~ 16mm Dia. +105°C 2,000 hours | Leakage Current | | Less than specified max. value | | | | | | |

PART NUMBER SYSTEM



Optional: Suitable for automotive equipment, sourced to special production and inspection at TS-16949 certified production site

| Case Diameter | Termination Material |
|---------------|----------------------|
| 4 ~ 10mm φ | 97% Sn, 3% Bi |
| 12.5mm | 99.3% Sn, 0.7% Bi |
| 16mm | 100% Sn |

PRECAUTIONS

Please review the notes on correct use, safety and precautions found on pages T10 & T11 of NIC's Electrolytic Capacitor catalog. Also found at www.niccomp.com/precautions. If in doubt or uncertainty, please review your specific application - process details with NIC's technical support personnel: tpmg@niccomp.com



Surface Mount Aluminum Electrolytic Capacitors NACEW Series

STANDARD VALUES, CASE SIZES AND SPECIFICATIONS

| NIC Part Number | Cap. (μF) | W.V. (Vdc) | Dissipation Factor (Tan δ) | Max. Ripple Current (mA) +105°C/120Hz | Maximum ESR (Ω) +20°C/120Hz | Load Life Hours @ +105°C | |
|---------------------------|-----------|------------|----------------------------|---------------------------------------|-----------------------------|--------------------------|-------|
| NACEW220M6.3V4X5.5TR13F | 22 | 6.3 | 0.24 | 22 | 18.1 | 1,000 | |
| NACEW330M6.3V5X5.5TR13F | 33 | | 0.24 | 27 | 12.1 | 1,000 | |
| NACEW470M6.3V5X5.5TR13F | 47 | | 0.24 | 33 | 8.47 | 1,000 | |
| NACEW101M6.3V6.3X5.5TR13F | 100 | | 0.24 | 50 | 3.98 | 1,000 | |
| NACEW221M6.3V6.3X6.3TR13F | 220 | | 0.24 | 67 | 1.81 | 1,000 | |
| NACEW331M6.3V6.3X8TR13F | 330 | | 0.24 | 105 | 1.21 | 1,000 | |
| NACEW471M6.3V8X10.5TR13F | 470 | | 0.28 | 210 | 0.99 | 2,000 | |
| NACEW681M6.3V8X10.5TR13F | 680 | | 0.28 | 210 | 0.68 | 2,000 | |
| NACEW681M6.3V10X8TR13F | 680 | | 0.28 | 210 | 0.68 | 1,000 | |
| NACEW102M6.3V8X10.5TR13F | 1000 | | 0.28 | 280 | 0.46 | 2,000 | |
| NACEW152M6.3V10X10.5TR13F | 1500 | | 0.28 | 310 | 0.31 | 2,000 | |
| NACEW332M6.3V12.5X14TR15F | 3300 | | 0.32 | 520 | 0.14 | 2,000 | |
| NACEW682M6.3V16X17TR15F | 6800 | | 0.38 | 930 | 0.093 | 2,000 | |
| NACEW103M6.3V18X17.5TR15F | 10000 | | 0.46 | 1200 | 0.076 | 2,000 | |
| NACEW123M6.3V18X22TR15F | 12000 | | 0.50 | 1350 | 0.069 | 2,000 | |
| NACEW220M10V5X5.5TR13F | 22 | 10 | 0.20 | 25 | 15.1 | 1,000 | |
| NACEW330M10V5X5.5TR13F | 33 | | 0.20 | 30 | 10.1 | 1,000 | |
| NACEW470M10V6.3X5.5TR13F | 47 | | 0.20 | 41 | 7.06 | 1,000 | |
| NACEW151M10V6.3X6.3TR13F | 150 | | 0.20 | 62 | 2.21 | 1,000 | |
| NACEW221M10V6.3X8TR13F | 220 | | 0.20 | 105 | 1.51 | 1,000 | |
| NACEW331M10V8X10.5TR13F | 330 | | 0.24 | 195 | 1.21 | 2,000 | |
| NACEW471M10V8X10.5TR13F | 470 | | 0.24 | 210 | 0.85 | 2,000 | |
| NACEW471M10V10X8TR13F | 470 | | 0.24 | 210 | 0.85 | 1,000 | |
| NACEW102M10V10X10.5TR13F | 1000 | | 0.24 | 310 | 0.40 | 2,000 | |
| NACEW222M10V12.5X14TR15F | 2200 | | 0.24 | 510 | 0.18 | 2,000 | |
| NACEW472M10V16X17TR15F | 4700 | | 0.24 | 880 | 0.11 | 2,000 | |
| NACEW682M10V18X17.5TR15F | 6800 | | 0.34 | 1150 | 0.083 | 2,000 | |
| NACEW822M10V18X22TR15F | 8200 | | 0.38 | 1350 | 0.077 | 2,000 | |
| NACEW100M16V4X5.5TR13F | 10 | | 16 | 0.16 | 18 | 26.5 | 1,000 |
| NACEW220M16V5X5.5TR13F | 22 | | | 0.16 | 27 | 12.1 | 1,000 |
| NACEW330M16V6.3X5.5TR13F | 33 | 0.16 | | 40 | 8.04 | 1,000 | |
| NACEW470M16V6.3X5.5TR13F | 47 | 0.16 | | 48 | 5.65 | 1,000 | |
| NACEW101M16V6.3X5.5TR13F | 100 | 0.16 | | 60 | 2.66 | 1,000 | |
| NACEW151M16V6.3X8TR13F | 150 | 0.16 | | 95 | 1.77 | 1,000 | |
| NACEW221M16V6.3X8TR13F | 220 | 0.16 | | 105 | 1.21 | 1,000 | |
| NACEW331M16V8X10.5TR13F | 330 | 0.20 | | 195 | 1.00 | 2,000 | |
| NACEW331M16V10X8TR13F | 330 | 0.20 | | 195 | 1.00 | 1,000 | |
| NACEW471M16V8X10.5TR13F | 470 | 0.20 | | 230 | 0.71 | 2,000 | |
| NACEW681M16V10X10.5TR13F | 680 | 0.20 | | 310 | 0.49 | 2,000 | |
| NACEW152M16V12.5X14TR15F | 1500 | 0.20 | | 500 | 0.23 | 2,000 | |
| NACEW332M16V16X17TR15F | 3300 | 0.20 | | 840 | 0.12 | 2,000 | |
| NACEW472M16V18X17.5TR15F | 4700 | 0.26 | | 1090 | 0.092 | 2,000 | |
| NACEW562M16V18X22TR15F | 5600 | 0.28 | | 1300 | 0.083 | 2,000 | |
| NACEW4R7M25V4X5.5TR13F | 4.7 | 25 | 0.14 | 13 | 49.4 | 1,000 | |
| NACEW100M25V5X5.5TR13F | 10 | | 0.14 | 20 | 23.2 | 1,000 | |
| NACEW220M25V6.3X5.5TR13F | 22 | | 0.14 | 36 | 10.6 | 1,000 | |
| NACEW330M25V6.3X5.5TR13F | 33 | | 0.14 | 44 | 7.04 | 1,000 | |
| NACEW470M25V6.3X6.3TR13F | 47 | | 0.14 | 48 | 4.95 | 1,000 | |
| NACEW101M25V6.3X8TR13F | 100 | | 0.14 | 91 | 2.32 | 1,000 | |
| NACEW151M25V8X10.5TR13F | 150 | | 0.16 | 140 | 1.77 | 2,000 | |
| NACEW221M25V8X10.5TR13F | 220 | | 0.16 | 175 | 1.21 | 2,000 | |
| NACEW221M25V10X8TR13F | 220 | | 0.16 | 175 | 1.21 | 1,000 | |
| NACEW331M25V8X10.5TR13F | 330 | | 0.16 | 220 | 0.80 | 2,000 | |
| NACEW471M25V10X10.5TR13F | 470 | | 0.16 | 300 | 0.57 | 2,000 | |
| NACEW102M25V12.5X14TR15F | 1000 | | 0.16 | 460 | 0.27 | 2,000 | |
| NACEW222M25V16X17TR15F | 2200 | | 0.16 | 805 | 0.14 | 2,000 | |
| NACEW332M25V18X17.5TR15F | 3300 | | 0.20 | 1040 | 0.10 | 2,000 | |
| NACEW392M25V18X22TR15F | 3900 | | 0.20 | 1280 | 0.085 | 2,000 | |

For Automotive Equipment see part number system



Surface Mount Aluminum Electrolytic Capacitors NACEW Series

STANDARD VALUES, CASE SIZES AND SPECIFICATIONS

| NIC Part Number | Cap. (μF) | W.V. (Vdc) | Dissipation Factor (Tan δ) | Max. Ripple Current (mA) +105°C/120Hz | Maximum ESR (Ω) +20°C/120Hz | Load Life Hours @ +105°C |
|---------------------------|-----------|------------|----------------------------|---------------------------------------|-----------------------------|--------------------------|
| NACEW4R7M35V4X5.5TR13F | 4.7 | 35 | 0.12 | 14 | 42.3 | 1,000 |
| NACEW100M35V5X5.5TR13F | 10 | | 0.12 | 21 | 19.9 | 1,000 |
| NACEW220M35V6.3X5.5TR13F | 22 | | 0.12 | 38 | 9.05 | 1,000 |
| NACEW330M35V6.3X6.3TR13F | 33 | | 0.12 | 42 | 6.04 | 1,000 |
| NACEW470M35V6.3X6.3TR13F | 47 | | 0.12 | 49 | 4.24 | 1,000 |
| NACEW101M35V6.3X8TR13F | 100 | | 0.12 | 84 | 2.32 | 1,000 |
| NACEW151M35V8X10.5TR13F | 150 | | 0.14 | 155 | 1.55 | 2,000 |
| NACEW151M35V10X8TR13F | 150 | | 0.14 | 155 | 1.55 | 1,000 |
| NACEW221M35V8X10.5TR13F | 220 | | 0.14 | 190 | 1.06 | 2,000 |
| NACEW331M35V10X10.5TR13F | 330 | | 0.14 | 300 | 0.70 | 2,000 |
| NACEW471M35V12.5X14TR15F | 470 | | 0.14 | 410 | 0.49 | 2,000 |
| NACEW681M35V12.5X14TR15F | 680 | | 0.14 | 430 | 0.34 | 2,000 |
| NACEW102M35V16X17TR15F | 1000 | | 0.14 | 700 | 0.23 | 2,000 |
| NACEW152M35V16X17TR15F | 1500 | | 0.14 | 740 | 0.15 | 2,000 |
| NACEW222M35V18X17.5TR15F | 2200 | | 0.16 | 950 | 0.12 | 2,000 |
| NACEW272M35V18X22TR15F | 2700 | | 0.16 | 1200 | 0.098 | 2,000 |
| NACEW1R0M50V4X5.5TR13F | 1.0 | 50 | 0.10 | 7.0 | 166 | 1,000 |
| NACEW2R2M50V4X5.5TR13F | 2.2 | | 0.10 | 11 | 75.4 | 1,000 |
| NACEW3R3M50V4X5.5TR13F | 3.3 | | 0.10 | 13 | 50.3 | 1,000 |
| NACEW4R7M50V5X5.5TR13F | 4.7 | | 0.10 | 16 | 35.3 | 1,000 |
| NACEW100M50V6.3X5.5TR13F | 10 | | 0.10 | 24 | 16.6 | 1,000 |
| NACEW220M50V6.3X6.3TR13F | 22 | | 0.10 | 32 | 7.64 | 1,000 |
| NACEW330M50V6.3x8TR13F | 33 | | 0.10 | 60 | 5.03 | 1,000 |
| NACEW470M50V6.3x8TR13F | 47 | | 0.10 | 63 | 3.53 | 1,000 |
| NACEW101M50V8x10.5TR13F | 100 | | 0.12 | 140 | 1.99 | 2,000 |
| NACEW221M50V10X10.5TR13F | 220 | | 0.12 | 220 | 0.91 | 2,000 |
| NACEW102M50V16X17TR15F | 1000 | | 0.12 | 655 | 0.20 | 2,000 |
| NACEW152M50V18X22TR15F | 1500 | | 0.12 | 1100 | 0.13 | 2,000 |
| NACEW1R0M63V4X5.5TR13F | 1.0 | 63 | 0.12 | 7.0 | 199 | 1,000 |
| NACEW2R2M63V4X5.5TR13F | 2.2 | | 0.12 | 11 | 90.5 | 1,000 |
| NACEW3R3M63V4X5.5TR13F | 3.3 | | 0.12 | 14 | 60.3 | 1,000 |
| NACEW4R7M63V5X5.5TR13F | 4.7 | | 0.12 | 16 | 42.3 | 1,000 |
| NACEW100M63V6.3X5.5TR13F | 10 | | 0.12 | 24 | 19.9 | 1,000 |
| NACEW220M63V6.3X8TR13F | 22 | | 0.12 | 49 | 9.04 | 1,000 |
| NACEW330M63V8X10.5TR13F | 33 | | 0.12 | 112 | 6.03 | 1,000 |
| NACEW470M63V8X10.5TR13F | 47 | | 0.12 | 119 | 4.24 | 1,000 |
| NACEW101M63V10X10.5TR13F | 100 | | 0.12 | 196 | 1.99 | 2,000 |
| NACEW221M63V12.5X14TR15F | 220 | | 0.12 | 287 | 0.91 | 2,000 |
| NACEW471M63V16X17TR15F | 470 | | 0.12 | 630 | 0.42 | 2,000 |
| NACEW681M63V18X17.5TR15F | 680 | | 0.12 | 750 | 0.29 | 2,000 |
| NACEW102M63V18X22TR15F | 1000 | 0.12 | 900 | 0.20 | 2,000 | |
| NACEW1R0M100V4X6.3TR13F | 1.0 | 100V | 0.10 | 7.0 | 166 | 1,000 |
| NACEW2R2M100V6.3X6.3TR13F | 2.2 | | 0.10 | 14 | 75.4 | 1,000 |
| NACEW3R3M100V6.3X6.3TR13F | 3.3 | | 0.10 | 20 | 50.3 | 1,000 |
| NACEW4R7M100V6.3X6.3TR13F | 4.7 | | 0.10 | 25 | 35.3 | 1,000 |
| NACEW100M100V6.3X8TR13F | 10 | | 0.10 | 35 | 16.6 | 1,000 |
| NACEW220M100V8X10.5TR13F | 22 | | 0.10 | 84 | 7.64 | 2,000 |
| NACEW330M100V10x10.5TR13F | 33 | | 0.10 | 133 | 5.03 | 2,000 |
| NACEW470M100V12.5X14TR15F | 47 | | 0.10 | 240 | 3.53 | 2,000 |
| NACEW151M100V16X17TR15F | 150 | | 0.10 | 500 | 1.10 | 2,000 |
| NACEW221M100V18X17.5TR15F | 220 | | 0.10 | 650 | 0.75 | 2,000 |
| NACEW331M100V18X22TR15F | 330 | | 0.10 | 700 | 0.50 | 2,000 |

For Automotive Equipment see part number system



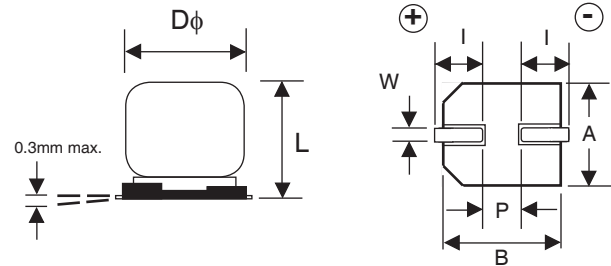
Surface Mount Aluminum Electrolytic Capacitors NACEW Series

RIPPLE CURRENT FREQUENCY CORRECTION FACTOR

| Frequency (Hz) | 100 > f ≤ 1K | 1K > f ≤ 10K | 10K < 100K | f ≥ 100K |
|-----------------|--------------|--------------|------------|----------|
| C ≤ 4.7μF | 1.00 | 1.30 | 1.50 | 1.80 |
| 4.7μF ≤ 33μF | 1.00 | 1.20 | 1.30 | 1.45 |
| 33μF < 12,000μF | 1.00 | 1.10 | 1.20 | 1.30 |

DIMENSIONS (mm)

| Case Size | Dφ ±0.5 | L max. | A ±0.2 | B ±0.2 | I ±0.2 | W | P ±0.2 |
|-----------|---------|--------|--------|--------|--------|-----------|--------|
| 4x5.5 | 4.0 | 5.5 | 4.3 | 4.3 | 2.0 | 0.5 ~ 0.8 | 1.0 |
| 4x6.3 | 4.0 | 6.3 | 4.3 | 4.3 | 2.0 | 0.5 ~ 0.8 | 1.0 |
| 5x5.5 | 5.0 | 5.5 | 5.3 | 5.3 | 2.1 | 0.5 ~ 0.8 | 1.4 |
| 6.3x5.5 | 6.3 | 5.5 | 6.6 | 6.6 | 2.5 | 0.5 ~ 0.8 | 2.2 |
| 6.3x6.3 | 6.3 | 6.3 | 6.6 | 6.6 | 2.5 | 0.5 ~ 0.8 | 2.2 |
| 6.3x8 | 6.3 | 8.0 | 6.6 | 6.6 | 2.5 | 0.5 ~ 0.8 | 2.2 |
| 8x6.5 | 8.0 | 6.5 | 8.3 | 8.3 | 3.4 | 0.5 ~ 0.8 | 2.2 |
| 8x10.5 | 8.0 | 10.5 | 8.3 | 8.3 | 2.9 | 0.7 ~ 1.1 | 3.2 |
| 10x8 | 10.0 | 8.0 | 10.3 | 10.3 | 3.2 | 0.7 ~ 1.4 | 4.6 |
| 10x10.5 | 10.0 | 10.5 | 10.3 | 10.3 | 3.2 | 0.7 ~ 1.4 | 4.6 |
| 12.5x14 | 12.5 | 14.0 | 12.8 | 12.8 | 4.5 | 1.0 ~ 1.4 | 4.6 |
| 16x17 | 16.0 | 17.0 | 16.3 | 16.3 | 5.0 | 1.7 ~ 2.1 | 7.0 |
| 18x17.5 | 18.0 | 17.5 | 19.0 | 19.0 | 6.5 | 1.7 ~ 2.1 | 7.0 |
| 18x22 | 18.0 | 22.0 | 19.0 | 19.0 | 6.5 | 1.7 ~ 2.1 | 7.0 |

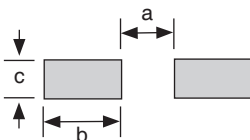
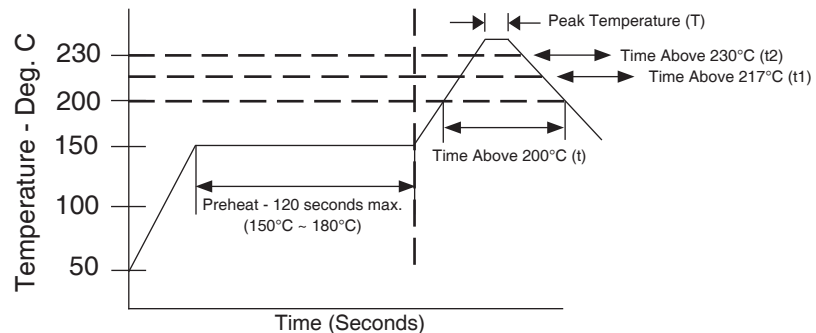


PEAK REFLOW TEMPERATURE AND DURATION

| Voltage | Diameter | Peak Temperature (T) 5 seconds | Time Above +200°C (t) | Time Above +217°C (t1) | Time Above +230°C (t2) |
|-------------|-----------|-----------------------------------|--------------------------|---------------------------|---------------------------|
| 6.3V to 63V | φ4 ~ 6.3 | +250°C | 70 sec. max | 60 sec. max. | 40 sec. max. |
| | φ8 | +245°C | 60 sec. max | 50 sec. max. | 30 sec. max. |
| | φ10, 12.5 | +240°C | 50 sec. max | 40 sec. max. | 20 sec. max. |
| | φ16, 18 | +235°C | 50 sec. max | 30 sec. max. | 15 sec. max. |
| 100V | φ4 ~ 6.3 | +250°C | 60 sec. max | 50 sec. max. | 40 sec. max. |
| | φ8 | +240°C | 60 sec. max | 40 sec. max. | 30 sec. max. |
| | φ10 | +240°C | 50 sec. max | 30 sec. max. | 20 sec. max. |
| | φ12.5 | +235°C | 50 sec. max | 30 sec. max. | 20 sec. max. |
| | φ16, 18 | +235°C | 45 sec. max | 20 sec. max. | 10 sec. max. |

RECOMMENDED LAND PATTERN DIMENSIONS (mm)

| Diameter | a | b | c |
|----------|-----|-----|-----|
| φ4 | 1.0 | 2.6 | 1.8 |
| φ5 | 1.4 | 3.0 | 1.8 |
| φ6.3 | 1.8 | 3.6 | 1.8 |
| φ8 | 2.8 | 4.1 | 2.1 |
| φ10 | 4.3 | 4.4 | 2.5 |
| φ12.5 | 4.3 | 5.8 | 2.5 |
| φ16 | 6.6 | 6.5 | 5.0 |
| φ18 | 6.6 | 7.7 | 5.0 |



Review & Compare Reflow Soldering Heat Limits
V-chip SMT Aluminum Electrolytic Capacitors
www.niccomp.com/RSL



Surface Mount Aluminum Electrolytic Capacitors NACEW Series

TR13 330mm (13") CARDBOARD REEL
TR15 380mm (15") CARDBOARD REEL
 (See page 6 for plastic reel dimensions)

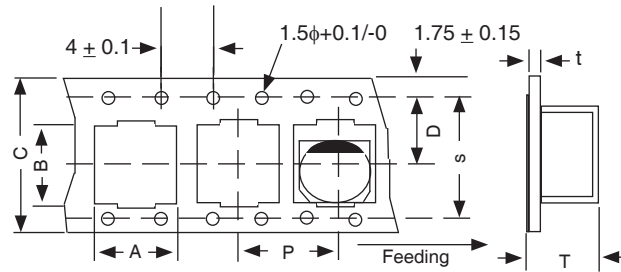
CARRIER TAPE

| Case Size | A ±0.5 | B ±0.2 | C ±0.3 | D ±0.1 | P ±0.1 | T ±0.2 | t max. | S ± 0.1 |
|-----------|--------|--------|--------|--------|--------|--------|--------|---------|
| 4x5.5 | 4.7 | 4.7 | 12.0 | 5.5 | 8.0 | 5.8 | 0.6 | - |
| 4x6.3 | 4.7 | 4.7 | 12.0 | 5.5 | 8.0 | 6.4 | 0.6 | - |
| 5x5.5 | 5.7 | 5.7 | 12.0 | 5.5 | 12.0 | 5.8 | 0.6 | - |
| 6.3x5.5 | 7.0 | 7.0 | 16.0 | 7.5 | 12.0 | 5.8 | 0.6 | - |
| 6.3x6.3 | 7.0 | 7.0 | 16.0 | 7.5 | 12.0 | 6.5 | 0.6 | - |
| 6.3x8 | 7.0 | 7.0 | 16.0 | 7.5 | 12.0 | 8.2 | 0.6 | - |
| 8x6.5 | 8.7 | 8.7 | 16.0 | 7.5 | 12.0 | 6.8 | 0.6 | - |
| 8x10.5 | 8.7 | 8.7 | 24.0 | 7.5 | 12.0 | 11.1 | 0.6 | - |
| 10x8 | 10.7 | 10.7 | 24.0 | 11.5 | 16.0 | 8.3 | 0.6 | - |
| 10x10.5 | 10.7 | 10.7 | 24.0 | 11.5 | 16.0 | 11.2 | 0.6 | - |
| 12.5x14 | 13.2 | 13.2 | 32.0 | 14.2 | 24.0 | 14.2 | 0.6 | 28.4 |
| 16x17 | 17.5 | 17.5 | 44.0 | 20.2 | 28.0 | 17.3 | 0.6 | 40.4 |
| 18x17.5 | 19.5 | 19.5 | 44.0 | 20.2 | 32.0 | 17.8 | 0.6 | 40.4 |
| 18x22 | 19.5 | 19.5 | 44.0 | 20.2 | 32.0 | 22.5 | 0.6 | 40.4 |

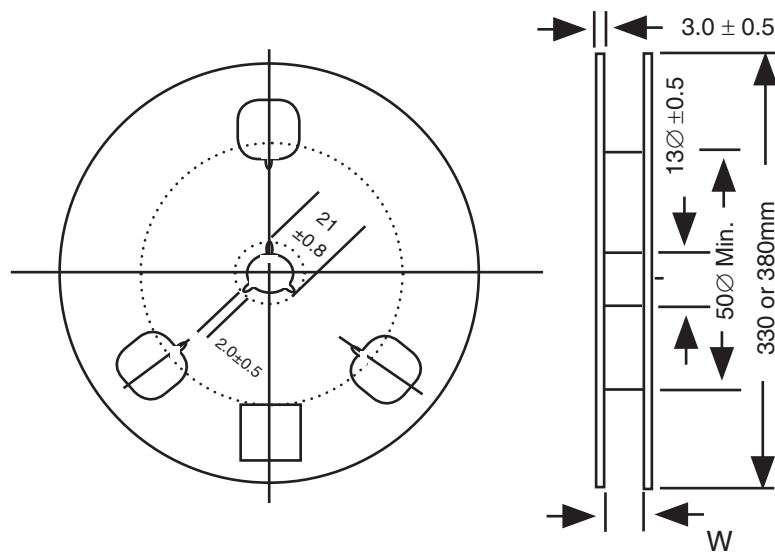
| Case Size | W ±1.0 | Quantity Per Reel | |
|-----------|--------|-------------------|-----------|
| | | 13" Reel | 15" Reel |
| 4x5.5 | 14.0 | 1,500 pcs | 2,000 pcs |
| 4x6.3 | 14.0 | 1,200 pcs | 2,000 pcs |
| 5x5.5 | 14.0 | 1,000 pcs | 1,000 pcs |
| 6.3x5.5 | 18.0 | 1,000 pcs | 1,000 pcs |
| 6.3x6.3 | 18.0 | 800 pcs | 1,000 pcs |
| 6.3x8 | 18.0 | 500 pcs | 900 pcs |
| 8x6.5 | 18.0 | 800 pcs | 1,000 pcs |
| 8x10.5 | 26.0 | 300 pcs | 500 pcs |
| 10x8 | 26.0 | 400 pcs | 500 pcs |
| 10x10.5 | 26.0 | 300 pcs | 500 pcs |
| 12.5x14 | 34.0 | N/A | 250 pcs |
| 16x17 | 46.0 | N/A | 200 pcs |
| 18x17.5 | 46.0 | N/A | 175 |
| 18x22 | 46.0 | N/A | 125 |

TAPING SPECIFICATIONS (mm)

- Both Leader and Trailer tape: Minimum 40mm (1.57") empty carrier tape pockets.
- Leader tape: Approximately 20cm of cover tape at leader.
- Connection: Maximum 3 connections (slices) per reel.

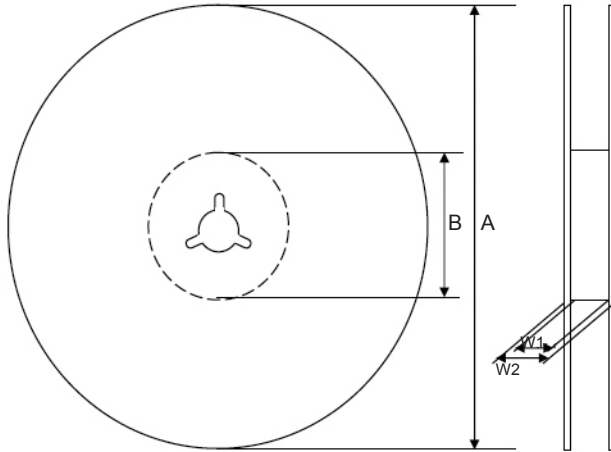


REEL



Surface Mount Aluminum Electrolytic Capacitors NACEW Series

Optional V-Chip 330mm Plastic Reels (TR13PF suffix)

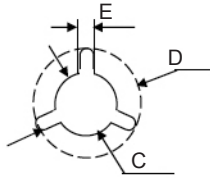


Dimensions (mm)

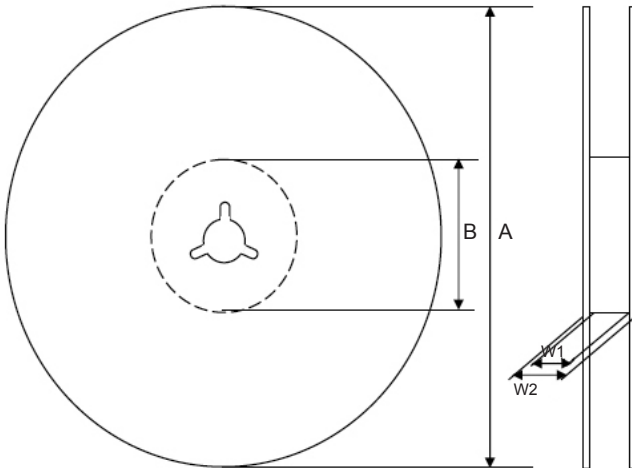
| Case Size | Tape Width | W1 | W2 |
|--------------------------------|------------|-------------|-------------|
| 4x5.5, 4x6.3, 5x5.5 | 12.0 | 12.4 ~ 14.4 | 15.5 ~ 20.0 |
| 6.3x5.5, 6.3x6.3, 6.3x8, 8x6.5 | 16.0 | 16.4 ~ 18.4 | 19.5 ~ 24.0 |
| 8x10.5, 10x8, 10x10.5 | 24.0 | 24.4 ~ 26.4 | 27.5 ~ 32.0 |

| Case Size | Tape Width | A | B | C | D | E |
|--------------------------------|------------|------------------|--------------------|-------------------|-------------------|---------------|
| 4x5.5, 4x6.3, 5x5.5 | 12.0 | $\phi 330 \pm 2$ | $\phi 50 \sim 105$ | $\phi 13 \pm 0.5$ | $\phi 21 \pm 1.0$ | 2.0 ± 0.5 |
| 6.3x5.5, 6.3x6.3, 6.3x8, 8x6.5 | 16.0 | | | | | |
| 8x10.5, 10x8, 10x10.5 | 24.0 | | | | | |

| Color |
|---------------|
| Black or Blue |



Optional V-Chip 380mm Plastic Reels (TR15PF suffix)

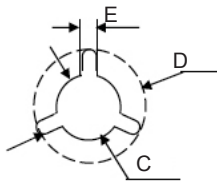


Dimensions (mm)

| Case Size | Tape Width | W1 | W2 |
|--------------------------------|------------|-------------|-------------|
| 4x5.5, 4x6.3, 5x5.5 | 12.0 | 12.5 ~ 14.0 | 15.5 ~ 20.0 |
| 6.3x5.5, 6.3x6.3, 6.3x8, 8x6.5 | 16.0 | 16.5 ~ 18.0 | 19.5 ~ 24.0 |
| 8x10.5, 10x8, 10x10.5 | 24.0 | 24.5 ~ 26.0 | 27.5 ~ 32.0 |
| 12.5x14 | 32.0 | 33.0 ~ 34.0 | 36.5 ~ 38.5 |
| 16x17, 18x17.5, 18x22 | 44.0 | 45.0 ~ 46.0 | 48.5 ~ 50.5 |

| Case Size | Tape Width | A | B | C | D | E |
|--------------------------------|------------|------------------|--------------------|-------------------|-------------------|---------------|
| 4x5.5, 4x6.3, 5x5.5 | 12.0 | $\phi 380 \pm 2$ | $\phi 80 \sim 105$ | $\phi 13 \pm 0.5$ | $\phi 21 \pm 1.0$ | 2.0 ± 0.5 |
| 6.3x5.5, 6.3x6.3, 6.3x8, 8x6.5 | 16.0 | | | | | |
| 8x10.5, 10x8, 10x10.5 | 24.0 | | | | | |
| 12.5x14 | 32.0 | | | | | |
| 16x17, 18x17.5, 18x22 | 44.0 | | | | | |

| Color |
|---------------|
| Black or Blue |



| Case Size | Quantity Per Reel | |
|-----------|-------------------|-----------|
| | 13" Reel | 15" Reel |
| 4x5.5 | 1,500 pcs | 2,000 pcs |
| 4x6.3 | 1,200 pcs | 2,000 pcs |
| 5x5.5 | 1,000 pcs | 1,000 pcs |
| 6.3x5.5 | 1,000 pcs | 1,000 pcs |
| 6.3x6.3 | 800 pcs | 1,000 pcs |
| 6.3x8 | 500 pcs | 900 pcs |
| 8x6.5 | 800 pcs | 1,000 pcs |
| 8x10.5 | 300 pcs | 500 pcs |
| 10x8 | 400 pcs | 500 pcs |
| 10x10.5 | 300 pcs | 500 pcs |
| 12.5x14 | N/A | 250 pcs |
| 16x17 | N/A | 200 pcs |
| 18x17.5 | N/A | 175 pcs |
| 18x22 | N/A | 125 pcs |



X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [nic manufacturer](#):

Other Similar products are found below :

[NMC0603NPO0R6B50TRPF](#) [NMC0603NPO270J100TRPF](#) [NMC1206X5R226K6.3TRPLP2KF](#) [NRE-S100M25V4X7F](#) [NRE-
HS102M25V12.5X16F](#) [NRCA12F1001TRQYF](#) [NRC-S06F2212TRF](#) [NCD180J1KVNPOJTRF](#) [NRC-S06F1692TRF](#)
[NCD102M1KVZ5U.250STRF](#) [NTC-T105K20TRAF](#) [NMC-P1206X7R104K100TRPF](#) [NMC-H1206NPO471K1KVTRPLPF](#) [NML04J9N1TRF](#)
[NRSNA4I4J150TR40KF](#) [NCC0805F261HTRF](#) [NRWA470M35V6.3X11TBF](#) [NACE221M16V6.3X8TR13F](#) [NRSS332M50V18X35.5F](#)
[NDTM106K25F1TRF](#) [NACZ221M50V10X10.5TR13F](#) [NCM15X7R103K50F](#) [NCD103M1KVZ5UF](#) [NRSS682M25V18X35.5F](#)
[NEXC224Z5.5V10.5X8.5TRF](#) [NRLRW221M450V30X35SF](#) [NDTM225K50F2TRF](#) [NRSZ471M50V12.5X20F](#) [NTCL106K35TRDF](#)
[NRWA331M25V10X12.5F](#) [NRSY472M25V16X31.5F](#) [NEXS105Z5.5V28.5X14F](#) [NRLR181M400V25X30SF](#) [NRSZ102M25V12.5X20F](#)
[NUVA33T385TRF](#) [NUVA33V405TRF](#) [NRLMW331M250V30X25F](#) [NRLF103M25V35X20F](#) [NDTM106K35F](#) [NRLMW102M200V35X35F](#)
[NPIS43LS220MTRF](#) [NDTM476K35F2F](#) [NTC-T475K50TRDF](#) [NCD222M1KVZ5UKF](#) [NRLR472M63V25X40SF](#) [NTP157M10TRD\(40\)F](#)
[NPIM74C3R3MTRF](#) [NPI104C100MTRF](#) [NRLM102M100V25X25F](#) [NRLM223M50V 35X50F](#)