

NAZH Series

Surface Mount Aluminum Electrolytic Capacitors Series



FEATURES

- CYLINDRICAL V-CHIP CONSTRUCTION FOR SURFACE MOUNTING
 - REDUCED SIZE
 - AVAILABLE WITH ANTI-VIBRATION TERMINATIONS (8mm ~ 18mm diameter)
 - SUIT FOR HIGH TEMPERATURE REFLOW SOLDERING (UP TO 260°C)
 - UP TO 5,000 HOUR LOAD LIFE @ +105°C
 - DESIGNED FOR AUTOMATIC MOUNTING AND REFLOW SOLDERING
 - MEETS THE REQUIREMENTS OF AEC-Q200* (See Highlighted Items in Standard Values Table)
- *Contact NIC for supporting test data

SAC Alloy Compatible
260°C



CHARACTERISTICS

| | | | | | | | | |
|--|---|--|------|------|------|------|------|------|
| Rated Voltage Rating | 6.3 ~ 63Vdc | | | | | | | |
| Rated Capacitance Range | 10 ~ 4,700µF | | | | | | | |
| Operating Temp. Range | -55 ~ +105°C | | | | | | | |
| Capacitance Tolerance | ±20% (M) | | | | | | | |
| Max. Leakage Current After 2 Minutes @ 20°C | 0.01CV or 3µA whichever is greater | | | | | | | |
| Tan δ @ 120Hz/20°C | W.V. (Vdc) | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 |
| | S.V. (Vdc) | 8.0 | 13 | 20 | 32 | 44 | 63 | 79 |
| | Tan δ @ 120Hz/20°C | 0.26 | 0.19 | 0.16 | 0.14 | 0.12 | 0.10 | 0.08 |
| | When rated capacitance exceeds 1,000µF add 0.02 for each additional 1,000µF | | | | | | | |
| Low Temperature Stability Impedance Ratio @ 120Hz | W.V. (Vdc) | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 |
| | Z-25°C/Z+20°C | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| | Z-40°C/Z+20°C | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| | Z-55°C/Z+20°C | 4 | 4 | 4 | 3 | 3 | 3 | 3 |
| Load Life Test @ 105°C 6.3 ~ 10x10.5 = 2,000 hours 10x14 = 3,000 hours 16mm & 18mm Dia. = 5,000 hours | Capacitance Change | Within ±30% of initial measured value | | | | | | |
| | Tan δ | Less than ±200% of the specified maximum value | | | | | | |
| | Leakage Current | Less than the specified maximum value | | | | | | |

STANDARD VALUES AND CASE SIZES (mm)

| Cap. (µF) | Code | Working Voltage (Vdc) | | | | | | | |
|-----------|------|-----------------------|---------|---------|---------|---------|---------|-------|--|
| | | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | |
| 10 | 100 | - | - | - | - | - | 4x6.1 | - | |
| | | | | | | | 5x6.1 | - | |
| 22 | 220 | - | - | - | 4x6.1 | 4x6.1 | 5x6.1 | - | |
| 33 | 330 | - | - | - | 4x6.1 | 5x6.1 | - | - | |
| 47 | 470 | - | - | 4x6.1 | 5x6.1 | 5x6.1 | 6.3x6.1 | - | |
| 68 | 680 | - | 4x6.1 | 5x6.1 | 5x6.1 | 6.3x6.1 | - | - | |
| 100 | 101 | 4x6.1 | - | 5x6.1 | 6.3x6.1 | 6.3x6.1 | 6.3x8 | - | |
| 150 | 151 | - | 5x6.1 | 6.3x6.1 | 6.3x8 | 6.3x8 | - | - | |
| 220 | 221 | 5x6.1 | 6.3x6.1 | 6.3x6.1 | 6.3x8 | - | 8x10.5 | 10X14 | |
| 330 | 331 | 6.3x6.1 | 6.3x8 | 6.3x8 | - | 8x10.5 | 10x10.5 | - | |
| 390 | 391 | - | - | - | - | 8x10.5 | - | - | |
| 470 | 471 | 6.3x8 | 6.3x8 | - | 8x10.5 | 10x10.5 | 10X14 | - | |
| 560 | 561 | - | - | - | 8x10.5 | 10x10.5 | - | - | |
| 680 | 681 | 6.3x8 | - | 8x10.5 | - | 10x10.5 | - | - | |
| 820 | 821 | - | - | 8x10.5 | 10x10.5 | 10x14 | - | - | |
| 1000 | 102 | - | 8x10.5 | 10x10.5 | 10x10.5 | - | - | - | |
| 1200 | 122 | 8x10.5 | - | 10x10.5 | 10x14 | - | - | - | |
| 1500 | 152 | 8x10.5 | 10x10.5 | - | - | - | - | - | |
| 1800 | 182 | - | - | - | - | 16x17 | - | - | |
| 2200 | 222 | 10x10.5 | - | - | - | - | - | - | |
| 2400 | 242 | - | - | - | - | 18x17.5 | - | - | |
| 2700 | 272 | - | - | - | 16x17 | 16x22 | - | - | |
| 3000 | 302 | - | - | - | - | 18x22 | - | - | |
| 3600 | 362 | - | - | - | 18x17.5 | - | - | - | |
| 3900 | 392 | - | - | - | 16x22 | - | - | - | |
| 4700 | 472 | - | - | - | 18x22 | - | - | - | |

Items in highlighted cells are available in automotive grade

PEAK REFLOW TEMPERATURE CODES

| Code | Peak Reflow Temperature |
|------|-------------------------|
| N | 260°C |
| K | 245°C |

TERMINATION FINISH & PACKAGING OPTIONS CODES

| Code | Finish & Reel Size |
|------|---------------------------|
| LBF | Sn-Bi Finish & 15" Reel |
| LSF | 100% Sn Finish & 15" Reel |

Performance Passives By Design

NIC Components Corp.
100 Baylis Road. Melville, NY 11747

Last Updated 4/24/2025. Specification subject to change without notice. Please check web site for latest information.

NAZH Series

Surface Mount Aluminum Electrolytic Capacitors Series



STANDARD VALUES, CASE SIZES AND SPECIFICATIONS

| NIC Part Number | Cap. (μF) | W.V. (Vdc) | Dissipation Factor (Tan δ) | Max. ESR (Ω) +20°C/100KHz | Max. Ripple Current (mA) +105°C/100KHz | Load Life Hours @ +105°C | |
|-------------------------|-----------|------------|----------------------------|------------------------------|---|-----------------------------|-------|
| NAZH101M6.3V4X6.1NLBF | 100 | 6.3 | 0.26 | 0.85 | 160 | 2,000 | |
| NAZH221M6.3V5X6.1NLBF | 220 | | 0.26 | 0.36 | 240 | 2,000 | |
| NAZH331M6.3V6.3X6.1NLBF | 330 | | 0.26 | 0.26 | 300 | 2,000 | |
| NAZH471M6.3V6.3X8NLBF | 470 | | 0.26 | 0.16 | 600 | 2,000 | |
| NAZH681M6.3V6.3X8NLBF | 680 | | 0.26 | 0.16 | 600 | 2,000 | |
| NAZH122M6.3V8X10.5NLBF | 1200 | | 0.26 | 0.08 | 850 | 2,000 | |
| NAZH152M6.3V8X10.5NLBF | 1500 | | 0.26 | 0.08 | 850 | 2,000 | |
| NAZH222M6.3V10X10.5NLBF | 2200 | | 0.28 | 0.06 | 1190 | 2,000 | |
| NAZH680M10V4X6.1NLBF | 68 | 10 | 0.19 | 0.85 | 160 | 2,000 | |
| NAZH151M10V5X6.1NLBF | 150 | | 0.19 | 0.36 | 240 | 2,000 | |
| NAZH221M10V6.3X6.1NLBF | 220 | | 0.19 | 0.26 | 300 | 2,000 | |
| NAZH331M10V6.3X8NLBF | 330 | | 0.19 | 0.16 | 600 | 2,000 | |
| NAZH471M10V6.3X8NLBF | 470 | | 0.19 | 0.16 | 600 | 2,000 | |
| NAZH102M10V8X10.5NLBF | 1000 | | 0.19 | 0.08 | 850 | 2,000 | |
| NAZH152M10V10X10.5NLBF | 1500 | | 0.19 | 0.06 | 1190 | 2,000 | |
| NAZH470M16V4X6.1NLBF | 47 | | 16 | 0.16 | 0.85 | 160 | 2,000 |
| NAZH680M16V5X6.1NLBF | 68 | 0.16 | | 0.36 | 240 | 2,000 | |
| NAZH101M16V5X6.1NLBF | 100 | 0.16 | | 0.36 | 240 | 2,000 | |
| NAZH151M16V6.3X6.1NLBF | 150 | 0.16 | | 0.26 | 300 | 2,000 | |
| NAZH221M16V6.3X6.1NLBF | 220 | 0.16 | | 0.26 | 300 | 2,000 | |
| NAZH331M16V6.3X8NLBF | 330 | 0.16 | | 0.16 | 600 | 2,000 | |
| NAZH681M16V8X10.5NLBF | 680 | 0.16 | | 0.08 | 850 | 2,000 | |
| NAZH821M16V8X10.5NLBF | 820 | 0.16 | | 0.08 | 850 | 2,000 | |
| NAZH102M16V10X10.5NLBF | 1000 | 0.16 | | 0.06 | 1190 | 2,000 | |
| NAZH122M16V10X10.5NLBF | 1200 | 0.16 | | 0.06 | 1190 | 2,000 | |
| NAZH220M25V4X6.1NLBF | 22 | 25 | | 0.14 | 0.85 | 160 | 2,000 |
| NAZH330M25V4X6.1NLBF | 33 | | | 0.14 | 0.85 | 160 | 2,000 |
| NAZH470M25V5X6.1NLBF | 47 | | | 0.14 | 0.36 | 240 | 2,000 |
| NAZH680M25V5X6.1NLBF | 68 | | | 0.14 | 0.36 | 240 | 2,000 |
| NAZH101M25V6.3X6.1NLBF | 100 | | 0.14 | 0.26 | 300 | 2,000 | |
| NAZH151M25V6.3X8NLBF | 150 | | 0.14 | 0.16 | 600 | 2,000 | |
| NAZH221M25V6.3X8NLBF | 220 | | 0.14 | 0.16 | 600 | 2,000 | |
| NAZH471M25V8X10.5NLBF | 470 | | 0.14 | 0.08 | 850 | 2,000 | |
| NAZH561M25V8X10.5NLBF | 560 | | 0.14 | 0.08 | 850 | 2,000 | |
| NAZH821M25V10X10.5NLBF | 820 | | 0.14 | 0.06 | 1190 | 2,000 | |
| NAZH102M25V10X10.5NLBF | 1000 | | 0.14 | 0.06 | 1190 | 2,000 | |
| NAZH122M25V10X14NLBF | 1200 | | 0.14 | 0.06 | 1500 | 3,000 | |
| NAZH272M25V16X17KLSF | 2700 | | 0.16 | 0.035 | 1800 | 5,000 | |
| NAZH362M25V18X17.5KLSF | 3600 | | 0.18 | 0.033 | 2060 | 5,000 | |
| NAZH392M25V16X22KLSF | 3900 | | 0.18 | 0.034 | 2540 | 5,000 | |
| NAZH472M25V18X22KLSF | 4700 | | 0.20 | 0.025 | 2640 | 5,000 | |
| NAZH220M35V4X6.1NLBF | 22 | 35 | 0.12 | 0.85 | 160 | 2,000 | |
| NAZH330M35V5X6.1NLBF | 33 | | 0.12 | 0.36 | 240 | 2,000 | |
| NAZH470M35V5X6.1NLBF | 47 | | 0.12 | 0.36 | 240 | 2,000 | |
| NAZH680M35V6.3X6.1NLBF | 68 | | 0.12 | 0.26 | 300 | 2,000 | |
| NAZH101M35V6.3X6.1NLBF | 100 | | 0.12 | 0.26 | 300 | 2,000 | |
| NAZH151M35V6.3X8NLBF | 150 | | 0.12 | 0.16 | 600 | 2,000 | |
| NAZH331M35V8X10.5NLBF | 330 | | 0.12 | 0.08 | 850 | 2,000 | |
| NAZH391M35V8X10.5NLBF | 390 | | 0.12 | 0.08 | 850 | 2,000 | |
| NAZH471M35V10X10.5NLBF | 470 | | 0.12 | 0.06 | 1190 | 2,000 | |
| NAZH561M35V10X10.5NLBF | 560 | | 0.12 | 0.06 | 1190 | 2,000 | |
| NAZH681M35V10X10.5NLBF | 680 | | 0.12 | 0.06 | 1190 | 2,000 | |
| NAZH821M35V10X14NLBF | 820 | | 0.12 | 0.06 | 1500 | 3,000 | |
| NAZH182M35V16X17KLSF | 1800 | | 0.12 | 0.035 | 1800 | 5,000 | |
| NAZH242M35V18X17.5KLSF | 2400 | | 0.14 | 0.033 | 2060 | 5,000 | |
| NAZH272M35V16X22KLSF | 2700 | | 0.14 | 0.034 | 2540 | 5,000 | |
| NAZH302M35V18X22KLSF | 3000 | | 0.16 | 0.025 | 2640 | 5,000 | |

Items in highlighted cells are available in automotive grade

Performance Passives By Design

NIC Components Corp.
100 Baylis Road. Melville, NY 11747

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www.niccomp.com

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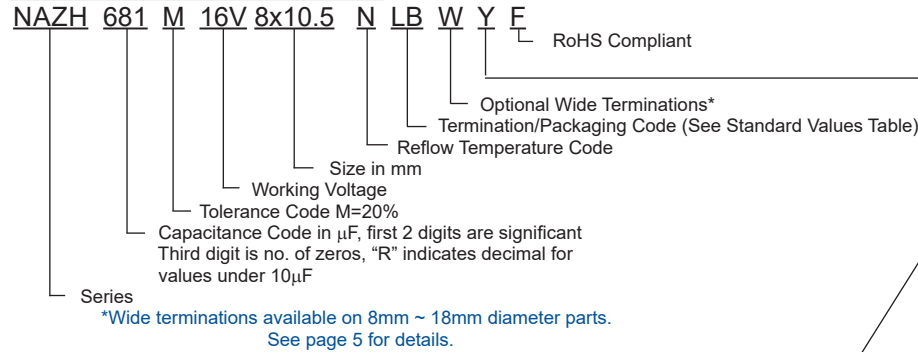


| NIC Part Number | Cap. (μF) | W.V. (Vdc) | Dissipation Factor (Tan δ) | Max. ESR (Ω) +20°C/100KHz | Max. Ripple Current (mA) +105°C/100KHz | Load Life Hours @ +105°C |
|------------------------|-----------|------------|----------------------------|---------------------------|--|--------------------------|
| NAZH100M50V4X6.1NLBF | 10 | 50 | 0.1 | 2.3 | 85 | 2,000 |
| NAZH100M50V5X6.1NLBF | 10 | | 0.1 | 0.88 | 165 | 2,000 |
| NAZH220M50V5X6.1NLBF | 22 | | 0.1 | 0.88 | 165 | 2,000 |
| NAZH470M50V6.3X6.1NLBF | 47 | | 0.1 | 0.68 | 195 | 2,000 |
| NAZH101M50V6.3X8NLBF | 100 | | 0.1 | 0.34 | 350 | 2,000 |
| NAZH221M50V8X10.5NLBF | 220 | | 0.1 | 0.18 | 670 | 2,000 |
| NAZH331M50V10X10.5NLBF | 330 | | 0.1 | 0.12 | 900 | 2,000 |
| NAZH471M50V10X14NLBF | 470 | | 0.1 | 0.12 | 750 | 2,000 |
| NAZH221M63V10X14KLB | 220 | 63 | 0.08 | 0.14 | 600 | 2,000 |

RIPPLE CURRENT FREQUENCY CORRECTION FACTORS

| Frequency | 120Hz | 1KHz | 10KHz | 100KHz~ |
|-----------------|-------|------|-------|---------|
| 10μF ~ 470μF | 0.44 | 0.80 | 0.95 | 1.00 |
| 560μF ~ 2,700μF | 0.70 | 0.90 | 0.95 | 1.00 |

PART NUMBER SYSTEM



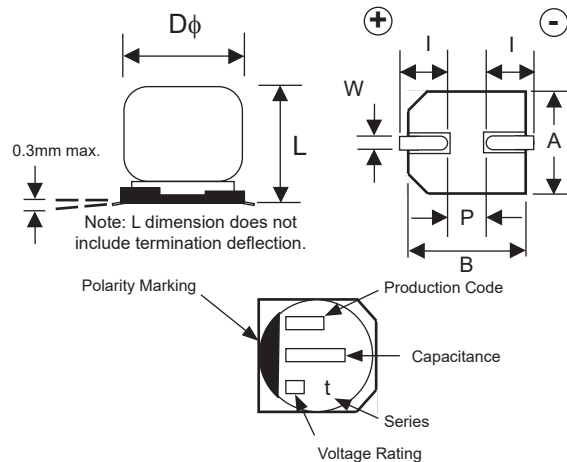
Optional: Suitable for automotive equipment, sourced to special production and inspection at IATF-16949 certified production site

COMPONENT DIMENSIONS (mm)

| Case Size | φD±0.5 | L max. | A±0.2 | B±0.2 | (l) | W | P±0.3 |
|-----------|--------|--------|-------|-------|-----|---------|-------|
| 4x6.1 | 4.0 | 6.1 | 4.3 | 4.3 | 1.8 | 0.5~0.8 | 1.0 |
| 5x6.1 | 5.0 | 6.1 | 5.3 | 5.3 | 2.2 | 0.5~0.8 | 1.5 |
| 6.3x6.1 | 6.3 | 6.1 | 6.6 | 6.6 | 2.6 | 0.5~0.8 | 1.8 |
| 6.3x8 | 6.3 | 8 | 6.6 | 6.6 | 2.6 | 0.5~0.8 | 1.8 |
| 8x10.5* | 8.0 | 10.5 | 8.3 | 8.3 | 3.4 | 0.7~1.1 | 3.1 |
| 10x10.5* | 10.0 | 10.5 | 10.3 | 10.3 | 3.5 | 0.7~1.4 | 4.6 |
| 10x14* | 10.0 | 14.0 | 10.3 | 10.3 | 3.5 | 0.7~1.4 | 4.6 |
| 16X17* | 16.0 | 17.0 | 16.3 | 16.3 | 5.2 | 1.7~2.1 | 7.0 |
| 16X22* | 16.0 | 22.0 | 16.3 | 16.3 | 5.2 | 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 |

*See page 4 wide termination component dimensions.
() indicates reference dimension

COMPONENT MARKING



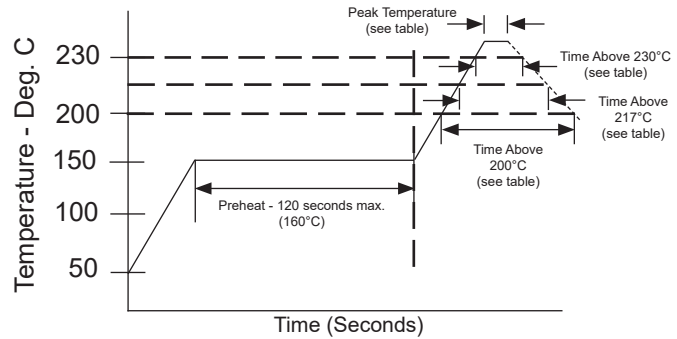
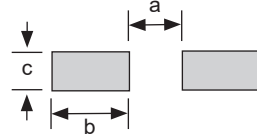
NAZH Series

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RECOMMENDED LAND PATTERN DIMENSIONS (mm)

| Case Dia. | a | b | c |
|-----------|-----|-----|-----|
| 4.0 | 1.0 | 2.5 | 1.6 |
| 5.0 | 1.5 | 2.8 | 1.6 |
| 6.3 | 1.8 | 3.2 | 1.6 |
| 8.0 | 2.8 | 4.1 | 2.1 |
| 10 | 4.3 | 4.4 | 2.5 |
| 16 | 6.6 | 6.5 | 5.0 |
| 18 | 6.6 | 7.7 | 5.0 |



RATED VOLTAGE: 6.3 ~ 50VDC

| Diameter | Peak Temperature | Duration | Time ≥ 230°C | Time ≥ 217°C | Time ≥ 200°C | Number of Reflow Passes* | | | |
|-------------|------------------|-----------------------|--------------|--------------|--------------|--------------------------|---------|---------|---------|
| 4 ~ 6.3mm φ | 260°C | Time ≥ 250°C, 5 sec. | 30 sec. | 40 sec. | 70 sec. | 2 | | | |
| | 255°C | Time ≥ 250°C, 10 sec. | | | | | | | |
| 8 ~ 10mm φ | 260°C | Time ≥ 250°C, 5 sec. | | | | 1 | | | |
| | 245°C | Time ≥ 240°C, 10 sec. | | | | | 2 | | |
| 16 ~ 18mm φ | 245°C | Time ≥ 240°C, 5 sec. | | | | 30 sec. | | 40 sec. | 50 sec. |
| | 240°C | Time ≥ 235°C, 10 sec. | | | | 20 sec. | 40 sec. | 50 sec. | 2 |

*Second reflow shall be at least one hour after natural cool to room temperature.

RATED VOLTAGE: 63VDC

| Diameter | Peak Temperature | Duration | Time ≥ 230°C | Time ≥ 217°C | Time ≥ 200°C | Number of Reflow Passes* |
|----------|------------------|-----------------------|--------------|--------------|--------------|--------------------------|
| 10mm φ | 245°C | Time ≥ 240°C, 5 sec. | 30 sec. | 40 sec. | 50 sec. | 1 |
| | 240°C | Time ≥ 235°C, 10 sec. | 20 sec. | 40 sec. | 50 sec. | 2 |

*Second reflow shall be at least one hour after natural cool to room temperature.

For Φ4 to Φ6.3, our recommended reflow condition is either of following two conditions.

1. Peak temperature 260°C, 5s(temp.≥250°C) 2 time reflow
2. Peak temperature 255°C, 10s(temp.≥250°C) 2 time reflow

For Φ8 to Φ10, our recommended reflow condition is either of following two conditions.

1. Peak temperature 260°C, 5s(temp.≥250°C) 1 time reflow
2. Peak temperature 245°C, 10s(temp.≥240°C) 2 time reflow

For “Φ10 (63Vdc)” and “Φ16 to Φ18”, our recommended reflow condition is either of following two conditions.

1. Peak temperature 245°C, 5s(temp.≥240°C) 1 time reflow
2. Peak temperature 240°C, 10s(temp.≥235°C) 2 time reflow

Two times of reflow - The 2nd reflow must be done when the capacitor becomes normal condition regarding temperature.)

Soldering Method : I.R. or I.R. + heated air (VPS Method is not allowed).

| Resistance to Soldering Heat | After reflow soldering the capacitor shall be stabilized at room temperature prior to measuring. | |
|------------------------------|--|---------------------------------------|
| | Capacitance Change | Within ±10% of initial measured value |
| | Tan δ | Less than specified maximum value |
| | Leakage Current | Less than specified maximum value |
| | Appearance | No significant change can be observed |

NAZH Series

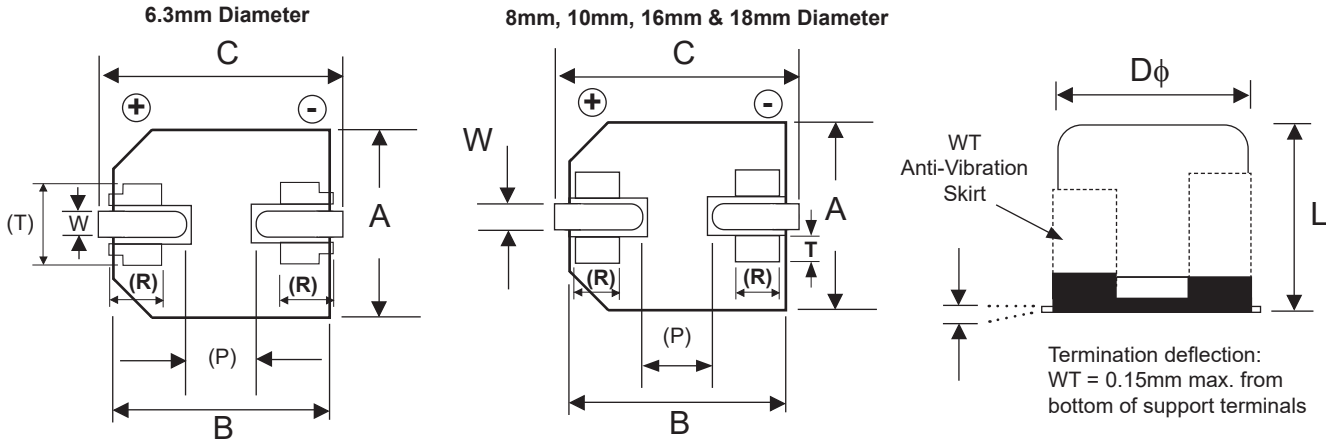
Surface Mount Aluminum Electrolytic Capacitors Series



WIDE TERMINATION (WT) DIM. (mm)

| Case Size | Dφ ± 0.5 | L max. | A, B ± 0.2 | C max. | P ref. | W | R ± 0.2 | T ± 0.2 |
|-----------|----------|--------|------------|--------|--------|-----------|---------|---------|
| 8x10.5 | 8.0 | 11.2 | 8.3 | 10.0 | (3.1) | 0.7 ~ 1.1 | 0.7 | 1.3 |
| 10x10.5 | 10.0 | 11.2 | 10.3 | 12.0 | (4.6) | 0.7 ~ 1.4 | 0.7 | 1.3 |
| 10x14 | 10.0 | 14.5 | 10.3 | 12.0 | (4.6) | 0.7 ~ 1.4 | 0.7 | 1.3 |
| 16x17 | 16.0 | 17.5 | 17.0 | 18.5 | (7.0) | 1.7 ~ 2.1 | (3.0) | (2.0) |
| 16X22 | 16.0 | 22.5 | 17.0 | 18.2 | (7.0) | 1.7 ~ 2.1 | (3.0) | (2.0) |
| 18X17.5 | 18.0 | 17.5 | 19.0 | 20.2 | (7.0) | 1.7 ~ 2.1 | (3.0) | (2.0) |
| 18X22 | 18.0 | 22.5 | 19.0 | 20.2 | (7.0) | 1.7 ~ 2.1 | (3.0) | (2.0) |

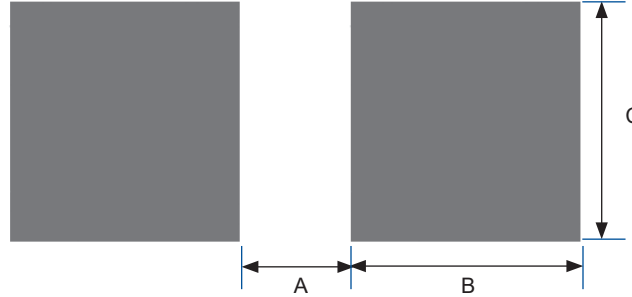
() is reference dimension



WT LAND PATTERN DIMENSIONS (mm)

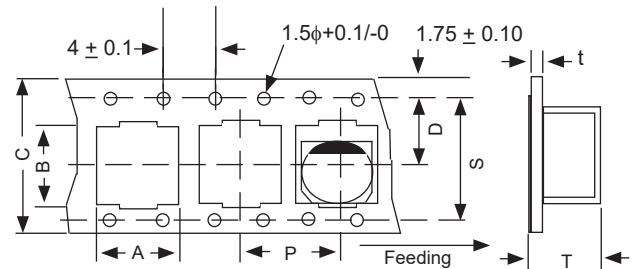
| Case Diameter | A | B | C |
|---------------|-----|-----|-----|
| φ8 | 2.5 | 4.5 | 4.7 |
| φ10 | 3.8 | 4.8 | 4.7 |
| φ16 | 5.0 | 8.0 | 9.5 |
| φ18 | 5.0 | 8.6 | 9.5 |

WIDE TERMINATION LAND PADS



CARRIER TAPE DIMENSIONS

| Case Size | A ± 0.2 | B ^{+0.3} / _{-0.2} | C ± 0.3 | D ± 0.1 | P ± 0.1 | T ± 0.2 | t ± 0.1 | S ± 0.1 |
|-----------|---------|---------------------------------------|---------|---------|---------|---------|---------|---------|
| 4x6.1 | 4.7 | 4.6 ^{+0.2} / _{-0.1} | 12.0 | 5.5 | 8.0 | 6.2 | 0.6 | n/a |
| 5x6.1 | 5.7 | 5.7 | 12.0 | 5.5 | 12.0 | 6.4 | | |
| 6.3x6.1 | 7.0 | 7.0 | 16.0 | 7.5 | 12.0 | 6.4 | | |
| 6.3x8 | 7.0 | 7.0 | 16.0 | 7.5 | 12.0 | 8.4 | | |
| 8x10.5 | 8.7 | 8.7 | 24.0 | 11.5 | 16.0 | 11.1 | | |
| 10x10.5 | 10.7 | 10.7 | 24.0 | 11.5 | 16.0 | 11.2 | | |
| 10x14 | 10.7 | 10.7 | 24.0 | 11.5 | 16.0 | 14.6 | | |
| 16x17 | 17.5 | 17.5 | 44.0 | 20.2 | 28.0 | 17.3 | | |
| 16X22 | 17.5 | 17.5 | 44.0 | 20.2 | 28.0 | 22.8 | | |
| 18X17.5 | 19.5 | 19.5 | 44.0 | 20.2 | 32.0 | 17.8 | | |
| 18X22 | 19.5 | 19.5 | 44.0 | 20.2 | 32.0 | 22.5 | | |



1. Leader and trailer will have a minimum of 10 empty pockets and 20cm of extended cover tape.
2. A maximum of 3 connections (splices) per reel.

Performance Passives By Design

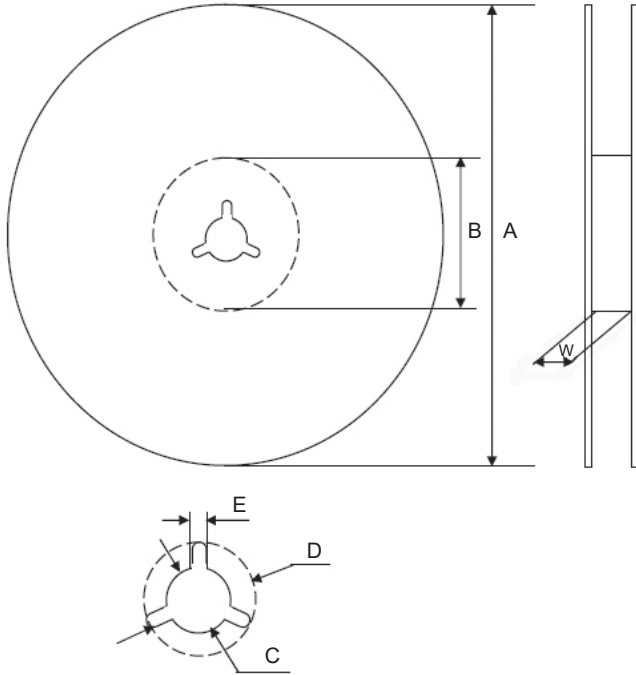
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V-Chip 15" (380mm) Reels (LB suffix)

Dimensions (mm)



| Case Size | Tape Width | W |
|----------------|------------|----|
| 4x6.1, 5x6.1 | 12.0 | 14 |
| 6.3x6.1, 6.3x8 | 16.0 | 18 |

| Case Size | A | B | C | D | E |
|------------------------------|--------------------|--------------------|-------------------|-------------------|---------------|
| 4x6.1, 5x6.1, 6.3x6.1, 6.3x8 | $\phi 380 \pm 2.0$ | $\phi 80 \sim 105$ | $\phi 13 \pm 0.5$ | $\phi 21 \pm 1.0$ | 2.0 ± 0.5 |

| Case Size | Tape Width | W |
|------------------------------|------------|------|
| 8x10.5, 10x10.5, 10x14 | 24.0 | 26.0 |
| 16x17, 16x22, 18x17.5, 18x22 | 44.0 | 46.0 |

| Case Size | A | B | C | D | E |
|--|------------------|--------------------|-------------------|-------------------|---------------|
| 8x10.5, 10x10.5, 10x14, 16x17, 16x22, 18x17.5, 18x22 | $\phi 380 \pm 2$ | $\phi 80 \sim 105$ | $\phi 13 \pm 0.5$ | $\phi 21 \pm 1.0$ | 2.0 ± 0.5 |

| Case Size | Quantity per Reel |
|-----------|-------------------|
| | 15" (380mm) |
| 4x6.1 | 2000 |
| 5x6.1 | 1000 |
| 6.3x6.1 | 1000 |
| 6.3x8 | 900 |
| 8x10.5 | 500 |
| 10x10.5 | 500 |
| 10x14 | 400 |
| 16x17 | 200 |
| 16X22 | 150 |
| 18X17.5 | 175 |
| 18X22 | 125 |