

+105°C ALUMINUM ELECTROLYTIC

VHT SERIES

SUBMINIATURE (Radial Lead, 105°C Max)

The NTE VHT series of aluminum electrolytic capacitors are designed for use in automotive, commercial, and industrial applications. These high temperature, radial lead capacitors are especially suitable for applications that require extended life and higher temperature operation.

RATINGS

Capacitance Range: 0.1µf to 10000µf

Tolerance: ±20%

Voltage Range: 6.3V to 450 Volts

PERFORMANCE SPECIFICATIONS

Operating Temperature Range:

6.3V to 63V: -40 °C to +105°C (-40 °F to +220.9°F)

160V to 450V: -25 °C to +105°C (-13 °F to +220.9°F)

Leakage Current:

6.3V to 100V: ≤ 0.01CV (+3µA)

160V to 250V: ≤ 0.03CV (+15µA)

350V to 450V: ≤ 0.03CV (+10µA)

Capacitance Tolerance: ±20% (M)
measured at +20°C (+68°F), 120Hz

High Temperature Load Test:

1000 Hrs @ +105°C (+220.9°F) and rated voltage

Ripple Current:

The ripple current multipliers (See Table) adjust the current to make the capacitors operating temperature the same for different ambient temperatures and ripple frequencies.

| Temperature | 45°C | 55°C | 65°C | 75°C | 85°C | 95°C | 105°C |
|-------------|------|------|------|------|------|------|-------|
| Multiplier | 1.5 | 1.46 | 1.32 | 1.17 | 1.0 | 0.79 | 0.5 |

Load Life: 1000 Hrs @ +105°C (+220.9°F),
no voltage applied

Shelf Life: 1000 Hrs @ +105°C (+220.9°F),
no voltage applied

MECHANICAL SPECIFICATIONS

Lead Solderability:

Meets the requirements of MIL-STD 202,
Method 208

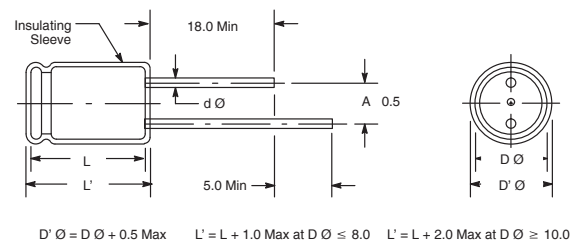
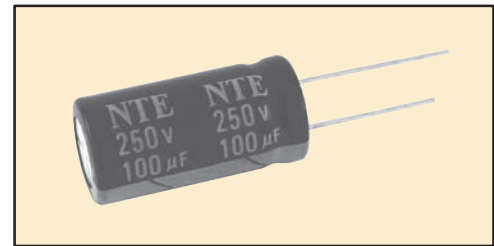
Marking:

Consists of series type, nominal capacitance,
rated voltage, temperature range, anode and/or
cathode identification, vendor identification.

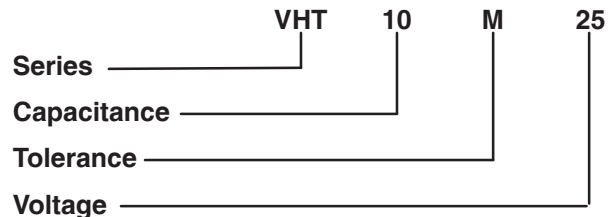
Recommended Cleaning Solvents:

Methanol, isopropanol ethanol, isobutanol, petro-
leum ether, propanol and/or commercial deter-
gents. Halogenated hydrocarbon cleaning
agents such as Freon (MF, TF, or TC), trichloro-
ethylene, trichloroethane, or methylchloride are
not recommended as they may damage the ca-
pacitor.

CASE SIZE AND DIMENSIONS:



ORDERING INFORMATION



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VHT Series Dimensions: Diameter (D Ø) x Length (L): mm

| Cap (µf) \ WV | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 160 | 250 | 350 | 450 |
|---------------|---------|---------|-----------|-----------|-----------|----------|-----------|-----------|-----------|---------|---------|
| 0.1 | | | | | | 5 x 11 | 5 x 11 | | | | |
| 0.22 | | | | | | 5 x 11 | 5 x 11 | | | | |
| 0.33 | | | | | | 5 x 11 | 5 x 11 | | | | |
| 0.47 | | | | | | 5 x 11 | 5 x 11 | 5 x 11 | 5 x 11 | | 6 x 11 |
| 1.0 | | | | | | 5 x 11 | 5 x 11 | 6 x 11 | 6 x 11 | 8 x 11 | 8 x 11 |
| 2.2 | | | | | | 5 x 11 | 5 x 11 | 6 x 11 | 8 x 11.5 | 10 x 12 | 10 x 12 |
| 3.3 | | | | | | 5 x 11 | 5 x 11 | 8 x 11.5 | 10 x 12.5 | 10 x 16 | 10 x 16 |
| 4.7 | | | | 5 x 11 | 5 x 11 | 5 x 11 | 5 x 11 | 8 x 11.5 | 10 x 12.5 | 10 x 16 | 10 x 20 |
| 6.8 | | | | | | 5 x 11 | 5 x 11 | 8 x 11 | 10 x 12 | 10 x 15 | 10 x 20 |
| 10 | | | 5 x 11 | 5 x 11 | 5 x 11 | 5 x 11 | 6 x 11 | 10 x 12.5 | 10 x 20 | 10 x 20 | 13 x 25 |
| 22 | | | 5 x 11 | 5 x 11 | 6 x 11 | 6 x 11 | 8 x 11.5 | 10 x 20 | 13 x 25 | 13 x 25 | 16 x 25 |
| 33 | | 5 x 11 | 5 x 11 | 6 x 11 | 6 x 11 | 8 x 11.5 | 8 x 11.5 | 13 x 21 | 13 x 25 | 16 x 25 | 16 x 25 |
| 47 | | 5 x 11 | 6 x 11 | 6 x 11 | 8 x 11.5 | 8 x 11.5 | 10 x 12.5 | 13 x 25 | 16 x 25 | 16 x 33 | 18 x 36 |
| 68 | | 5 x 11 | | 6 x 11 | | 8 x 11 | | 13 x 26 | 16 x 26 | 16 x 31 | 18 x 31 |
| 100 | | 5 x 11 | 8 x 11.5 | 8 x 11.5 | 10 x 12.5 | 10 x 16 | 10 x 20 | 16 x 25 | 18 x 36 | 18 x 36 | 22 x 40 |
| 220 | 5 x 11 | 6 x 11 | 10 x 12.5 | 6 x 11 | 10 x 20 | 13 x 20 | 13 x 20 | 16 x 36 | 18 x 40 | | |
| 330 | 6 x 11 | 8 x 11 | 10 x 16 | 10 x 20 | 13 x 20 | 13 x 20 | 13 x 25 | 18 x 32 | | | |
| 470 | 6 x 11 | 8 x 11 | 10 x 20 | 13 x 20 | 13 x 25 | 16 x 25 | 16 x 25 | 22 x 41 | | | |
| 560 | | 8 x 11 | | 10 x 15 | | 13 x 21 | 13 x 21 | | | | |
| 680 | 8 x 11 | 8 x 11 | 8 x 14 | 10 x 12 | | 13 x 21 | 16 x 26 | | | | |
| 820 | 8 x 11 | 10 x 12 | 10 x 15 | 10 x 15 | | 13 x 26 | 16 x 26 | | | | |
| 1000 | 8 x 11 | 10 x 16 | 13 x 25 | 16 x 25 | 16 x 25 | 16 x 25 | 18 x 31.5 | | | | |
| 1500 | 10 x 15 | 10 x 17 | 10 x 20 | 13 x 21 | | 16 x 26 | 18 x 36 | | | | |
| 2200 | 10 x 17 | 10 x 20 | 16 x 25 | 16 x 31.5 | 18 x 31.5 | 16 x 32 | 18 x 36 | | | | |
| 2700 | 10 x 20 | 13 x 21 | 13 x 21 | 16 x 31 | | 18 x 36 | 22 x 42 | | | | |
| 3300 | 10 x 20 | 13 x 20 | 16 x 31.5 | 18 x 31.5 | 16 x 32 | 18 x 40 | 22 x 41 | | | | |
| 4700 | 10 x 25 | 16 x 25 | 18 x 31.5 | 16 x 32 | 18 x 36 | 20 x 40 | 25 x 44 | | | | |
| 5600 | 13 x 26 | | | 18 x 36 | | 25 x 42 | | | | | |
| 6800 | | 16 x 31 | 16 x 32 | 18 x 36 | 22 x 36 | 25 x 44 | | | | | |
| 8200 | 16 x 26 | 16 x 31 | | 18 x 36 | | | | | | | |
| 10000 | 16 x 31 | 16 x 36 | 18 x 36 | 22 x 41 | | 25 x 42 | | | | | |
| 15000 | 16 x 36 | 18 x 36 | | 22 x 42 | | | | | | | |

* These dimensions are for reference only, please consult the factory for actual size.

VHT Mechanical Specs: Dimensions (mm)

| | | | | | | | | | | |
|------------------|-----|-----|-----|-----|------|------|------|------|------|------|
| Outside Diameter | D Ø | 5.0 | 6.0 | 8.0 | 10.0 | 13.0 | 16.0 | 18.0 | 20.0 | 22.0 |
| Lead Spacing | A | 2.0 | 2.5 | 3.5 | 5.0 | | 7.5 | | 10 | |
| Lead Wire | d Ø | 0.5 | | | 0.6 | | 0.65 | 0.8 | 2.0 | |

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