

NPS

+85°C Non-Polar Surface Mount Chip Aluminum Electrolytic Capacitors



FEATURES

- **Audio Coupling**
- **Wide Capacitance Range: .1 to 47 μ F**
- **Standard Case Sizes**
- **Solvent Proof**
- **Operating Voltage Range: 6.3WVDC to 50 WVDC**

SPECIFICATIONS

| | | | | | | | |
|---|--|--|-----|-----|-----|-----|-----|
| Capacitance Tolerance | | \pm20% at 120Hz, 20°C | | | | | |
| Operating Temperature Range | | -40°C to +85°C | | | | | |
| Dissipation Factor 120Hz 20°C (Max) | WVDC | 6.3 | 10 | 16 | 25 | 35 | 50 |
| | tan δ | .24 | .20 | .18 | .18 | .14 | .14 |
| Leakage current | Time | 1 minutes | | | | | |
| | | 0.03 CV+6 μ A | | | | | |
| Impedance Ratio at Low Temperature (120Hz) | -25°C/20°C | 4 | 3 | 2 | 2 | 2 | 2 |
| | -40°C/20°C | 8 | 6 | 4 | 4 | 3 | 3 |
| Load Life | 2,000 hours at 85°C with rated voltage | | | | | | |
| | Capacitance change Dissipation factor Leakage current | \leq 20% of initial measured values \leq 200% initial specified value \leq 100% Initial specified value | | | | | |
| Shelf Life | 1,000 hours at 85°C with no applied voltage. | | | | | | |
| Resistance to Soldering Heat | Capacitors placed on a 250°C hot plate for 30 seconds with their electrode terminals facing downward will fulfill the following conditions after being cooled to room temperature. | | | | | | |
| | Capacitance change Dissipation factor Leakage current | \leq 10% of the initial measured value \leq The initial specified value \leq The Initial specified value | | | | | |

STANDARD PART LISTING

| Capacitance (μF) | WVDC | IC PART NUMBER | Maximum ESR Ω 120Hz, +20°C | Maximum RMS Ripple Current (mA) at 120Hz, +85°C | Dimensions DxL (mm) |
|------------------|------|----------------|----------------------------------|--|---------------------------|
| 0.1 | 50 | 104NPS050M | 2321.01 | 1 | 4x5.4 |
| 0.22 | 50 | 224NPS050M | 1055.00 | 2.3 | 4x5.4 |
| 0.33 | 50 | 334NPS050M | 703.34 | 3.5 | 4x5.4 |
| 0.47 | 50 | 474NPS050M | 493.83 | 5 | 4x5.4 |
| 1 | 50 | 105NPS050M | 232.10 | 10 | 4x5.4 |
| 2.2 | 35 | 225NPS035M | 105.50 | 8.4 | 4x5.4 |
| 2.2 | 50 | 225NPS050M | 105.50 | 15 | 5x5.4 |
| 3.3 | 50 | 335NPS050M | 70.33 | 18 | 5x5.4 |
| 4.7 | 16 | 475NPS016M | 63.49 | 12 | 4x5.4 |

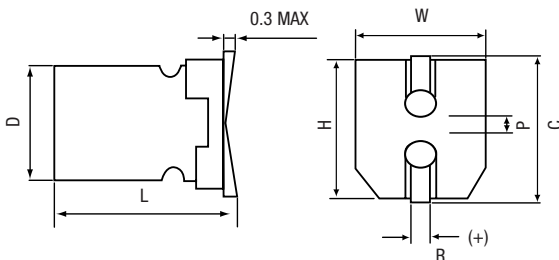
| Capacitance (μF) | WVDC | IC PART NUMBER | Maximum ESR Ω 120Hz, +20°C | Maximum RMS Ripple Current (mA) at 120Hz, +85°C | Dimensions DxL (mm) |
|------------------|------|----------------|----------------------------------|--|---------------------------|
| 4.7 | 35 | 475NPS035M | 49.38 | 23 | 5x5.4 |
| 4.7 | 50 | 475NPS050M | 49.38 | 23 | 6.3x5.4 |
| 10 | 10 | 106NPS010M | 33.157 | 17 | 4x5.4 |
| 10 | 16 | 106NPS016M | 29.842 | 25 | 5x5.4 |
| 10 | 35 | 106NPS035M | 23.210 | 30 | 6.3x5.4 |
| 22 | 6.3 | 226NPS6R3M | 18.086 | 31 | 5x5.4 |
| 22 | 16 | 226NPS016M | 13.564 | 39 | 6.3x5.4 |
| 33 | 16 | 336NPS016M | 9.043 | 57 | 6.3x5.4 |
| 47 | 6.3 | 476NPS6R3M | 8.466 | 47 | 6.3x5.4 |

PHYSICAL DIMENSIONS

| WVDC (SV) (μF) | 6.3 (7.9) | 10 (13) | 16 (20) | 25 (32) | 35 (44) | 50 (63) |
|-------------------|--------------|------------|------------|------------|------------|------------|
| 0.1 | | | | | | 4x5.4 |
| 0.22 | | | | | | 4x5.4 |
| 0.33 | | | | | | 4x5.4 |
| 0.47 | | | | | | 4x5.4 |
| 1 | | | | | | 4x5.4 |
| 2.2 | | | | | 4x5.4 | 5x5.4 |
| 3.3 | | | | | | 5x5.4 |
| 4.7 | | | 4x5.4 | | 5x5.4 | 6.3x5.4 |
| 10 | | 4x5.4 | 5x5.4 | | 6.3x5.4 | |
| 22 | 5x5.4 | | 6.3x5.4 | | | |
| 33 | | | 6.3x5.4 | | | |
| 47 | 6.3x5.4 | | | | | |

(mm)

DIMENSIONS



| D+0.5 MAX | L | W±0.2 | H±0.2 | C±0.2 | R | P±0.2 |
|-----------|---------------|-------|-------|-------|---------|-------|
| 4 | 5.4 +0.1/-0.2 | 4.3 | 4.3 | 5.0 | 0.5-0.8 | 1.0 |
| 5 | 5.4 +0.1/-0.2 | 5.3 | 5.3 | 6.0 | 0.5-0.8 | 1.4 |
| 6.3 | 5.4 +0.1/-0.2 | 6.6 | 6.6 | 7.3 | 0.5-0.8 | 2.2 |

(mm)