

Miniature Aluminum Electrolytic Capacitors

NSRW Series

SUPER LOW PROFILE, WIDE TEMPERATURE,
RADIAL LEADS, POLARIZED

FEATURES

- 5mm MAX. HEIGHT
- EXTENDED TEMPERATURE -55 TO +105°C

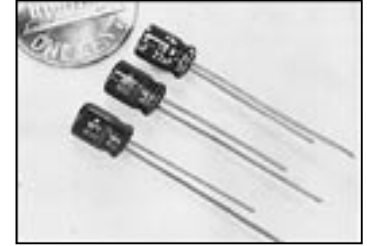
CHARACTERISTICS

| | | | | | | | |
|---|---------------------------------------|---|------|------|------|------|------|
| Rated Working Voltage Range | 6.3 ~ 50Vdc | | | | | | |
| Capacitance Range | 0.1 ~ 100μF | | | | | | |
| Operating Temperature Range | -55°C~+105°C | | | | | | |
| Capacitance Tolerance | ±20% (M) | | | | | | |
| Max. Leakage Current After 2 minutes At 20°C | 0.01CV or 3μA Whichever is greater | | | | | | |
| Surge Voltage & Dissipation Factor (Tan δ) | W.V. (Vdc) | 6.3 | 10 | 16 | 25 | 35 | 50 |
| | S.V. (Vdc) | 8 | 13 | 20 | 32 | 44 | 63 |
| | Tan δ @ 120Hz | 0.26 | 0.22 | 0.16 | 0.14 | 0.12 | 0.10 |
| Low Temperature Stability (Impedance Ratio @ 120Hz) | W.V. (Vdc) | 6.3 | 10 | 16 | 25 | 35 | 50 |
| | Z-40°C/Z+20°C | 4 | 3 | 2 | 2 | 2 | 2 |
| | Z-55°C/Z+20°C | 6 | 5 | 4 | 3 | 3 | 3 |
| Life Test @ +105°C 1,000 hours | Capacitance Change | Within ±25% of initial value | | | | | |
| | Dissipation Factor | Less than 200% of specified maximum value | | | | | |
| | Leakage Current | Less than specified maximum value | | | | | |

**RoHS
Compliant**

includes all homogeneous materials

*See Part Number System for Details



MAXIMUM E.S.R. (Ω AT 120Hz AND 20°C)

| Cap (μF) | Working Voltage (Vdc) | | | | | |
|----------|-----------------------|------|------|------|------|------|
| | 6.3 | 10 | 16 | 25 | 35 | 50 |
| 0.1 | - | - | - | - | - | 1660 |
| 0.22 | - | - | - | - | - | 755 |
| 0.33 | - | - | - | - | - | 503 |
| 0.47 | - | - | - | - | - | 353 |
| 1.0 | - | - | - | - | - | 166 |
| 2.2 | - | - | - | - | - | 166 |
| 3.3 | - | - | - | - | - | 75.5 |
| 4.7 | - | - | - | 49.4 | 42.4 | 35.3 |
| 10 | - | - | 26.6 | 23.3 | 19.9 | 16.6 |
| 22 | 19.6 | 16.6 | 12.1 | 10.6 | 9.1 | - |
| 33 | 13.1 | 11.1 | 8.1 | 7.1 | - | - |
| 47 | 9.2 | 7.8 | 5.7 | - | - | - |
| 100 | 4.4 | - | - | - | - | - |

STANDARD PRODUCT AND CASE SIZE TABLE Dφ x L (mm)

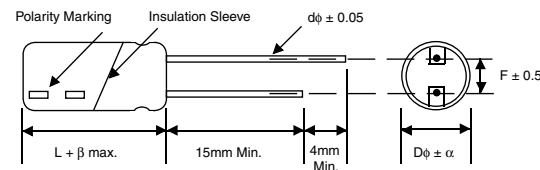
| Cap(μF) | Code | Working Voltage (Vdc) | | | | | |
|---------|------|-----------------------|---------|---------|---------|---------|---------|
| | | 6.3 | 10 | 16 | 25 | 35 | 50 |
| 0.1 | R10 | - | - | - | - | - | 4 x 5 |
| 0.22 | R22 | - | - | - | - | - | 4 x 5 |
| 0.33 | R33 | - | - | - | - | - | 4 x 5 |
| 0.47 | R47 | - | - | - | - | - | 4 x 5 |
| 1.0 | 1R0 | - | - | - | - | - | 4 x 5 |
| 2.2 | 2R2 | - | - | - | - | - | 4 x 5 |
| 3.3 | 3R3 | - | - | - | - | - | 4 x 5 |
| 4.7 | 4R7 | - | - | - | 4 x 5 | 4 x 5 | 5 x 5 |
| 10 | 100 | - | - | 4 x 5 | 5 x 5 | 5 x 5 | 6.3 x 5 |
| 22 | 220 | 4 x 5 | 5 x 5 | 5 x 5 | 6.3 x 5 | 6.3 x 5 | - |
| 33 | 330 | 5 x 5 | 5 x 5 | 6.3 x 5 | 6.3 x 5 | - | - |
| 47 | 470 | 5 x 5 | 6.3 x 5 | 6.3 x 5 | - | - | - |
| 100 | 101 | 6.3 x 5 | - | - | - | - | - |

MAXIMUM PERMISSIBLE RIPPLE CURRENT (mA rms AT 120Hz AND 105°C)

| Cap (μF) | Working Voltage (Vdc) | | | | | |
|----------|-----------------------|----|----|----|----|-----|
| | 6.3 | 10 | 16 | 25 | 35 | 50 |
| 0.1 | - | - | - | - | - | 0.7 |
| 0.22 | - | - | - | - | - | 1.6 |
| 0.33 | - | - | - | - | - | 2.5 |
| 0.47 | - | - | - | - | - | 3.5 |
| 1.0 | - | - | - | - | - | 7.0 |
| 2.2 | - | - | - | - | - | 11 |
| 3.3 | - | - | - | - | - | 13 |
| 4.7 | - | - | - | 14 | 14 | 16 |
| 10 | - | - | 18 | 20 | 21 | 24 |
| 22 | 22 | 25 | 27 | 36 | 38 | - |
| 33 | 27 | 30 | 40 | 44 | - | - |
| 47 | 33 | 41 | 48 | - | - | - |
| 100 | 50 | - | - | - | - | - |

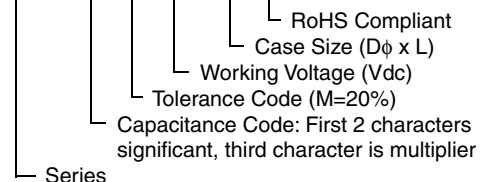
LEAD SPACING AND DIAMETER (mm)

| Case Dia. (Dφ) | 4 | 5 | 6.3 |
|------------------|------|------|------|
| Leads Dia. (dφ) | 0.45 | 0.45 | 0.45 |
| Lead Spacing (F) | 1.5 | 2.0 | 2.5 |
| Dim. α | 0.5 | 0.5 | 0.5 |
| Dim. β | 1.0 | 1.0 | 1.0 |



PART NUMBER SYSTEM

NSRW 100 M 16V 4X5 F



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

