

ULTRA LOW IMPEDANCE, RADIAL LEADS, POLARIZED, ALUMINUM ELECTROLYTIC

### FEATURES

- VERY LOW IMPEDANCE & HIGH RIPPLE CURRENT
- LONG LIFE AT 105°C (6000 ~ 10,000 hrs.)
- HIGH STABILITY AT LOW TEMPERATURE
- IDEALLY FOR SWITCHING POWER SUPPLIES & CONVERTERS
- **MEETS THE REQUIREMENTS OF AEC-Q200\***

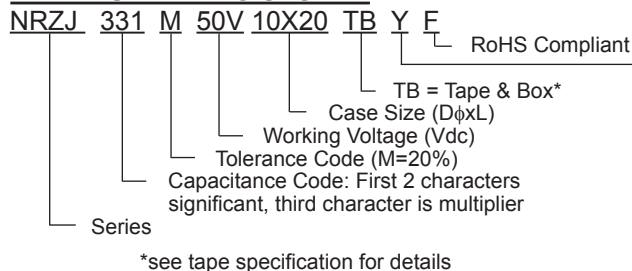
\*Contact NIC for supporting test data. [Application review by NIC is required before using NRZJ parts in automotive applications.](#)



### CHARACTERISTICS

|                                                         |                                        |                                                        |      |      |           |      |      |            |      |      |
|---------------------------------------------------------|----------------------------------------|--------------------------------------------------------|------|------|-----------|------|------|------------|------|------|
| Rated Voltage Range                                     | 6.3 ~ 100Vdc                           |                                                        |      |      |           |      |      |            |      |      |
| Capacitance Range                                       | 8.2 ~ 8,200μF                          |                                                        |      |      |           |      |      |            |      |      |
| Operating Temperature Range                             | -40°C ~ +105°C                         |                                                        |      |      |           |      |      |            |      |      |
| Capacitance Tolerance                                   | ±20% (M)                               |                                                        |      |      |           |      |      |            |      |      |
| Maximum Leakage Current After 2 Minutes at 20°C         | 0.01CV or 3μA whichever is greater     |                                                        |      |      |           |      |      |            |      |      |
| Max. Tan δ at 120Hz/20°C                                | W.V. (Vdc)                             | 6.3                                                    | 10   | 16   | 25        | 35   | 50   | 63         | 80   | 100  |
|                                                         | S.V. (Vdc)                             | 8                                                      | 13   | 20   | 32        | 44   | 63   | 79         | 100  | 125  |
|                                                         | C ≤ 1,000μF                            | 0.22                                                   | 0.19 | 0.16 | 0.14      | 0.12 | 0.10 | 0.09       | 0.08 | 0.08 |
|                                                         | C = 1,200μF                            | 0.22                                                   | 0.19 | -    | 0.14      | 0.12 | 0.10 | 0.09       | 0.08 | -    |
|                                                         | C = 1,500μF                            | 0.22                                                   | -    | 0.16 | 0.14      | 0.12 | 0.10 | 0.09       | -    | -    |
|                                                         | C = 1,800μF                            | 0.22                                                   | 0.19 | 0.16 | 0.14      | 0.12 | -    | 0.09       | -    | -    |
|                                                         | C = 2,200μF                            | -                                                      | 0.21 | 0.18 | 0.16      | -    | 0.12 | 0.11       | -    | -    |
|                                                         | C = 2,700μF                            | 0.24                                                   | 0.21 | 0.18 | 0.16      | -    | 0.12 | 0.11       | -    | -    |
|                                                         | C = 3,300μF                            | 0.26                                                   | 0.23 | 0.20 | 0.18      | -    | 0.14 | -          | -    | -    |
|                                                         | C = 3,900μF                            | 0.26                                                   | -    | 0.20 | -         | -    | 0.14 | -          | -    | -    |
|                                                         | C = 4,700μF                            | 0.28                                                   | 0.25 | 0.22 | -         | -    | -    | -          | -    | -    |
|                                                         | C = 5,600μF                            | 0.30                                                   | 0.27 | -    | -         | -    | -    | -          | -    | -    |
| C = 6,800μF                                             | 0.32                                   | -                                                      | -    | -    | -         | -    | -    | -          | -    |      |
| C = 8,200μF                                             | 0.36                                   | -                                                      | -    | -    | -         | -    | -    | -          | -    |      |
| Low Temperature Stability Impedance Ratio @ 120Hz       | Z-25°C/Z+20°C                          | 2                                                      |      |      |           |      |      |            |      |      |
|                                                         | Z-40°C/Z+20°C                          | 3                                                      |      |      |           |      |      |            |      |      |
| Load Life Hours<br>Load Life Test at Rated W.V. & 105°C | Case Size                              | Life Hours                                             |      |      |           |      |      |            |      |      |
|                                                         |                                        | 6.3V                                                   |      |      | 10V ~ 50V |      |      | 63V ~ 100V |      |      |
|                                                         | 5x11, 6.3x11                           | 6,000                                                  |      |      | 7,000     |      |      | 6,000      |      |      |
|                                                         | 8x11.5                                 | 8,000                                                  |      |      | 9,000     |      |      | 8,000      |      |      |
|                                                         | 10x12.5                                | 9,000                                                  |      |      | 9,000     |      |      | 9,000      |      |      |
|                                                         | 8x16, 8x20                             | 9,000                                                  |      |      | 10,000    |      |      | 9,000      |      |      |
|                                                         | 10x16 ~ 10x25<br>φ12.5 to φ18 Diameter | 10,000                                                 |      |      | 10,000    |      |      | 10,000     |      |      |
|                                                         | Capacitance Change                     | Within ±25% (6.3V, 10V ±30%) of initial measured value |      |      |           |      |      |            |      |      |
|                                                         | Tan δ                                  | Less than 200% of specified value                      |      |      |           |      |      |            |      |      |
|                                                         | Leakage Current                        | Less than specified value                              |      |      |           |      |      |            |      |      |
| Shelf Life Test<br>105°C 1,000 Hours<br>No Load         | Capacitance Change                     | Within ±25% of initial measured value                  |      |      |           |      |      |            |      |      |
|                                                         | Tan δ                                  | Less than 200% of specified value                      |      |      |           |      |      |            |      |      |
|                                                         | Leakage Current                        | Less than specified value                              |      |      |           |      |      |            |      |      |

### PART NUMBERING SYSTEM



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



### STANDARD PRODUCT, SPECIFICATIONS AND CASE SIZES D $\phi$ x L (mm)

| Part Number          | Cap.<br>( $\mu$ F) | W.V.<br>(Vdc) | Dissipation Factor<br>+20°C/120Hz | Ripple Current Rating (mA)<br>+105°C/100KHz | Max. Z ( $\Omega$ ) 100KHz |       | Load Life Hours<br>@+105°C |
|----------------------|--------------------|---------------|-----------------------------------|---------------------------------------------|----------------------------|-------|----------------------------|
|                      |                    |               |                                   |                                             | +20°C                      | -10°C |                            |
| NRZJ221M6.3V5X11F    | 220                | 6.3           | 0.22                              | 345                                         | 0.40                       | 1.20  | 6,000                      |
| NRZJ471M6.3V6.3X11F  | 470                |               | 0.22                              | 540                                         | 0.17                       | 0.51  | 6,000                      |
| NRZJ821M6.3V8X11.5F  | 820                |               | 0.22                              | 945                                         | 0.075                      | 0.23  | 8,000                      |
| NRZJ102M6.3V8X16F    | 1000               |               | 0.22                              | 1,250                                       | 0.059                      | 0.18  | 9,000                      |
| NRZJ122M6.3V10X12.5F | 1200               |               | 0.22                              | 1,330                                       | 0.053                      | 0.16  | 9,000                      |
| NRZJ152M6.3V8X20F    | 1500               |               | 0.22                              | 1,500                                       | 0.041                      | 0.13  | 9,000                      |
| NRZJ182M6.3V10X16F   | 1800               |               | 0.22                              | 1,760                                       | 0.038                      | 0.12  | 10,000                     |
| NRZJ272M6.3V10X20F   | 2700               |               | 0.24                              | 1,960                                       | 0.028                      | 0.084 | 10,000                     |
| NRZJ332M6.3V10X25F   | 3300               |               | 0.26                              | 2,250                                       | 0.024                      | 0.072 | 10,000                     |
| NRZJ392M6.3V12.5X20F | 3900               |               | 0.26                              | 2,480                                       | 0.025                      | 0.075 | 10,000                     |
| NRZJ472M6.3V12.5X25F | 4700               |               | 0.28                              | 2,900                                       | 0.019                      | 0.057 | 10,000                     |
| NRZJ562M6.3V12.5X30F | 5600               |               | 0.30                              | 3,450                                       | 0.018                      | 0.054 | 10,000                     |
| NRZJ682M6.3V16X20F   | 6800               |               | 0.32                              | 3,250                                       | 0.021                      | 0.063 | 10,000                     |
| NRZJ682M6.3V12.5X35F | 6800               |               | 0.32                              | 3,570                                       | 0.016                      | 0.048 | 10,000                     |
| NRZJ822M6.3V16X25F   | 8200               |               | 0.36                              | 3,630                                       | 0.017                      | 0.051 | 10,000                     |
| NRZJ151M10V5X11F     | 150                | 10            | 0.19                              | 450                                         | 0.40                       | 1.20  | 7,000                      |
| NRZJ331M10V6.3X11F   | 330                |               | 0.19                              | 700                                         | 0.17                       | 0.51  | 7,000                      |
| NRZJ561M10V8X11.5F   | 560                |               | 0.19                              | 1,200                                       | 0.075                      | 0.23  | 9,000                      |
| NRZJ681M10V8X16F     | 680                |               | 0.19                              | 1,600                                       | 0.059                      | 0.18  | 10,000                     |
| NRZJ821M10V10X12.5F  | 820                |               | 0.19                              | 1,700                                       | 0.053                      | 0.16  | 9,000                      |
| NRZJ102M10V8X20F     | 1000               |               | 0.19                              | 1,960                                       | 0.041                      | 0.13  | 10,000                     |
| NRZJ122M10V10X16F    | 1200               |               | 0.19                              | 2,000                                       | 0.038                      | 0.12  | 10,000                     |
| NRZJ182M10V10X20F    | 1800               |               | 0.19                              | 2,500                                       | 0.028                      | 0.084 | 10,000                     |
| NRZJ222M10V10X25F    | 2200               |               | 0.21                              | 2,900                                       | 0.024                      | 0.072 | 10,000                     |
| NRZJ272M10V12.5X20F  | 2700               |               | 0.21                              | 2,600                                       | 0.025                      | 0.075 | 10,000                     |
| NRZJ332M10V12.5X25F  | 3300               |               | 0.23                              | 3,200                                       | 0.019                      | 0.057 | 10,000                     |
| NRZJ472M10V12.5X30F  | 4700               |               | 0.25                              | 3,660                                       | 0.018                      | 0.054 | 10,000                     |
| NRZJ472M10V16X20F    | 4700               |               | 0.25                              | 3,330                                       | 0.021                      | 0.063 | 10,000                     |
| NRZJ562M10V12.5X35F  | 5600               |               | 0.27                              | 4,120                                       | 0.016                      | 0.048 | 10,000                     |
| NRZJ562M10V16X25F    | 5600               |               | 0.27                              | 3,810                                       | 0.017                      | 0.051 | 10,000                     |
| NRZJ121M16V5X11F     | 120                | 16            | 0.16                              | 450                                         | 0.40                       | 1.20  | 7,000                      |
| NRZJ271M16V6.3X11F   | 270                |               | 0.16                              | 700                                         | 0.17                       | 0.51  | 7,000                      |
| NRZJ471M16V8X11.5F   | 470                |               | 0.16                              | 1200                                        | 0.075                      | 0.23  | 9,000                      |
| NRZJ561M16V8X16F     | 560                |               | 0.16                              | 1600                                        | 0.059                      | 0.18  | 10,000                     |
| NRZJ681M16V8X16F     | 680                |               | 0.16                              | 1600                                        | 0.059                      | 0.18  | 10,000                     |
| NRZJ681M16V10X12.5F  | 680                |               | 0.16                              | 1700                                        | 0.053                      | 0.16  | 9,000                      |
| NRZJ821M16V8X20F     | 820                |               | 0.16                              | 1960                                        | 0.041                      | 0.13  | 10,000                     |
| NRZJ102M16V8X20F     | 1000               |               | 0.16                              | 1960                                        | 0.041                      | 0.13  | 10,000                     |
| NRZJ102M16V10X16F    | 1000               |               | 0.16                              | 2000                                        | 0.038                      | 0.12  | 10,000                     |
| NRZJ152M16V10X20F    | 1500               |               | 0.16                              | 2500                                        | 0.028                      | 0.084 | 10,000                     |
| NRZJ182M16V10X25F    | 1800               |               | 0.16                              | 2900                                        | 0.024                      | 0.072 | 10,000                     |
| NRZJ222M16V12.5X20F  | 2200               |               | 0.18                              | 2600                                        | 0.025                      | 0.075 | 10,000                     |

### New Part Numbers

### RIPPLE CURRENT FREQUENCY CORRECTION FACTOR

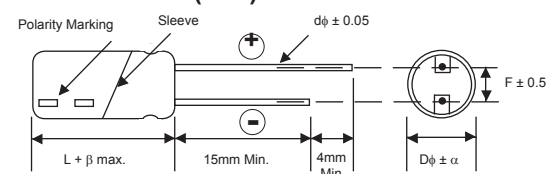
| Frequency (Hz)      | 120  | 1K   | 10K  | 100K $\leq$ |
|---------------------|------|------|------|-------------|
| 8.2 ~ 33 $\mu$ F    | 0.42 | 0.70 | 0.90 | 1.00        |
| 47 ~ 270 $\mu$ F    | 0.50 | 0.73 | 0.92 | 1.00        |
| 330 ~ 680 $\mu$ F   | 0.55 | 0.77 | 0.94 | 1.00        |
| 820 ~ 1800 $\mu$ F  | 0.60 | 0.80 | 0.96 | 1.00        |
| 2200 ~ 8200 $\mu$ F | 0.70 | 0.85 | 0.98 | 1.00        |

### DIAMETER AND LEADSPACE (mm)

| Case Dia. (D $\phi$ ) | 5   | 6.3 | 8   | 10  | 12.5 | 16  | 18  |
|-----------------------|-----|-----|-----|-----|------|-----|-----|
| Lead Dia. (d $\phi$ ) | 0.5 | 0.5 | 0.6 | 0.6 | 0.6  | 0.8 | 0.8 |
| Lead Spacing (F)      | 2.0 | 2.5 | 3.5 | 5.0 | 5.0  | 7.5 | 7.5 |
| Dim. $\alpha$         | 0.5 | 0.5 | 0.5 | 0.5 | 0.5  | 0.5 | 0.5 |

$$\beta = L \leq 16\text{mm} = 1.5\text{mm}, L \geq 20\text{mm} = 2.0\text{mm}$$

### DIMENSIONS (mm)



Drawing is representative of parts as supplied in bulk or straight lead format, please see taping specification for details on taped format packaging.

### STANDARD PRODUCT, SPECIFICATIONS AND CASE SIZES D $\phi$ x L (mm)

| Part Number         | Cap.<br>( $\mu$ F) | W.V.<br>(Vdc) | Dissipation Factor<br>+20°C/120Hz | Ripple Current Rating (mA)<br>+105°C/100KHz | Max. Z ( $\Omega$ ) 100KHz |       | Load Life Hours<br>@+105°C |
|---------------------|--------------------|---------------|-----------------------------------|---------------------------------------------|----------------------------|-------|----------------------------|
|                     |                    |               |                                   |                                             | +20°C                      | -10°C |                            |
| NRZJ272M16V12.5X25F | 2700               | 16            | 0.18                              | 3200                                        | 0.019                      | 0.057 | 10,000                     |
| NRZJ332M16V12.5X30F | 3300               |               | 0.2                               | 3660                                        | 0.018                      | 0.054 | 10,000                     |
| NRZJ332M16V16X20F   | 3300               |               | 0.2                               | 3330                                        | 0.021                      | 0.063 | 10,000                     |
| NRZJ392M16V12.5X35F | 3900               |               | 0.2                               | 4120                                        | 0.016                      | 0.048 | 10,000                     |
| NRZJ472M16V16X25F   | 4700               |               | 0.22                              | 3810                                        | 0.017                      | 0.051 | 10,000                     |
| NRZJ680M25V5X11F    | 68                 | 25            | 0.14                              | 450                                         | 0.40                       | 1.20  | 7,000                      |
| NRZJ151M25V6.3X11F  | 150                |               | 0.14                              | 700                                         | 0.17                       | 0.51  | 7,000                      |
| NRZJ331M25V8X11.5F  | 330                |               | 0.14                              | 1200                                        | 0.075                      | 0.23  | 9,000                      |
| NRZJ391M25V8X16F    | 390                |               | 0.14                              | 1600                                        | 0.059                      | 0.18  | 10,000                     |
| NRZJ471M25V10X12.5F | 470                |               | 0.14                              | 1700                                        | 0.053                      | 0.16  | 9,000                      |
| NRZJ561M25V8X20F    | 560                |               | 0.14                              | 1960                                        | 0.041                      | 0.13  | 10,000                     |
| NRZJ681M25V10X16F   | 680                |               | 0.14                              | 2000                                        | 0.038                      | 0.12  | 10,000                     |
| NRZJ102M25V10X20F   | 1000               |               | 0.14                              | 2500                                        | 0.028                      | 0.084 | 10,000                     |
| NRZJ122M25V10X25F   | 1200               |               | 0.14                              | 2900                                        | 0.024                      | 0.072 | 10,000                     |
| NRZJ152M25V12.5X20F | 1500               |               | 0.14                              | 2600                                        | 0.025                      | 0.075 | 10,000                     |
| NRZJ182M25V12.5X25F | 1800               |               | 0.14                              | 3200                                        | 0.019                      | 0.057 | 10,000                     |
| NRZJ222M25V12.5X30F | 2200               |               | 0.16                              | 3660                                        | 0.018                      | 0.054 | 10,000                     |
| NRZJ222M25V16X20F   | 2200               |               | 0.16                              | 3330                                        | 0.021                      | 0.063 | 10,000                     |
| NRZJ272M25V12.5X35F | 2700               |               | 0.16                              | 4120                                        | 0.016                      | 0.048 | 10,000                     |
| NRZJ332M25V16X25F   | 3300               |               | 0.18                              | 3810                                        | 0.017                      | 0.051 | 10,000                     |
| NRZJ470M35V5X11F    | 47                 | 35            | 0.12                              | 450                                         | 0.40                       | 1.20  | 7,000                      |
| NRZJ101M35V6.3X11F  | 100                |               | 0.12                              | 700                                         | 0.17                       | 0.51  | 7,000                      |
| NRZJ181M35V8x11.5F  | 180                |               | 0.12                              | 1200                                        | 0.075                      | 0.23  | 9,000                      |
| NRZJ221M35V8X16F    | 220                |               | 0.12                              | 1600                                        | 0.059                      | 0.18  | 10,000                     |
| NRZJ271M35V8X16F    | 270                |               | 0.12                              | 1600                                        | 0.059                      | 0.18  | 10,000                     |
| NRZJ271M35V10X12.5F | 270                |               | 0.12                              | 1700                                        | 0.053                      | 0.16  | 9,000                      |
| NRZJ331M35V8X20F    | 330                |               | 0.12                              | 1960                                        | 0.041                      | 0.13  | 10,000                     |
| NRZJ331M35V10X12.5F | 330                |               | 0.12                              | 1700                                        | 0.053                      | 0.16  | 9,000                      |
| NRZJ391M35V8X20F    | 390                |               | 0.12                              | 1960                                        | 0.041                      | 0.13  | 10,000                     |
| NRZJ391M35V10X16F   | 390                |               | 0.12                              | 2000                                        | 0.038                      | 0.12  | 10,000                     |
| NRZJ471M35V10X16F   | 470                |               | 0.12                              | 2000                                        | 0.038                      | 0.12  | 10,000                     |
| NRZJ561M35V10X20F   | 560                |               | 0.12                              | 2500                                        | 0.028                      | 0.084 | 10,000                     |
| NRZJ681M35V10X25F   | 680                |               | 0.12                              | 2900                                        | 0.024                      | 0.072 | 10,000                     |
| NRZJ821M35V12.5X20F | 820                |               | 0.12                              | 2600                                        | 0.025                      | 0.075 | 10,000                     |
| NRZJ102M35V12.5X20F | 1000               |               | 0.12                              | 2600                                        | 0.025                      | 0.075 | 10,000                     |
| NRZJ122M35V12.5X25F | 1200               |               | 0.12                              | 3200                                        | 0.019                      | 0.057 | 10,000                     |
| NRZJ152M35V12.5X30F | 1500               |               | 0.12                              | 3660                                        | 0.018                      | 0.054 | 10,000                     |
| NRZJ152M35V16X20F   | 1500               |               | 0.12                              | 3330                                        | 0.021                      | 0.063 | 10,000                     |
| NRZJ182M35V12.5X35F | 1800               |               | 0.12                              | 4120                                        | 0.016                      | 0.048 | 10,000                     |
| NRZJ182M35V16X25F   | 1800               |               | 0.12                              | 3810                                        | 0.017                      | 0.051 | 10,000                     |
| NRZJ270M50V5X11F    | 27                 | 50            | 0.10                              | 310                                         | 0.48                       | 1.50  | 7,000                      |
| NRZJ560M50V6.3X11F  | 56                 |               | 0.10                              | 500                                         | 0.22                       | 0.66  | 7,000                      |
| NRZJ101M50V8X11.5F  | 100                |               | 0.10                              | 950                                         | 0.12                       | 0.36  | 9,000                      |
| NRZJ121M50V8X11.5F  | 120                |               | 0.10                              | 1300                                        | 0.11                       | 0.33  | 9,000                      |
| NRZJ121M50V8X16F    | 120                |               | 0.10                              | 1230                                        | 0.082                      | 0.25  | 10,000                     |
| NRZJ151M50V10X12.5F | 150                |               | 0.10                              | 1280                                        | 0.073                      | 0.22  | 9,000                      |
| NRZJ181M50V8X16F    | 180                |               | 0.10                              | 1700                                        | 0.081                      | 0.24  | 10,000                     |
| NRZJ181M50V8X20F    | 180                |               | 0.10                              | 1580                                        | 0.058                      | 0.18  | 10,000                     |
| NRZJ221M50V10X12.5F | 220                |               | 0.10                              | 1700                                        | 0.071                      | 0.21  | 9,000                      |
| NRZJ221M50V10X16F   | 220                |               | 0.10                              | 1650                                        | 0.053                      | 0.16  | 10,000                     |
| NRZJ271M50V8X20F    | 270                |               | 0.10                              | 2100                                        | 0.058                      | 0.17  | 10,000                     |
| NRZJ331M50V10X16F   | 330                |               | 0.10                              | 2100                                        | 0.052                      | 0.16  | 10,000                     |
| NRZJ331M50V10X20F   | 330                |               | 0.10                              | 2060                                        | 0.038                      | 0.12  | 10,000                     |
| NRZJ391M50V10X25F   | 390                |               | 0.10                              | 2420                                        | 0.032                      | 0.10  | 10,000                     |
| NRZJ471M50V10X20F   | 470                |               | 0.10                              | 2500                                        | 0.037                      | 0.11  | 10,000                     |
| NRZJ471M50V12.5X16F | 470                |               | 0.10                              | 2200                                        | 0.040                      | 0.12  | 10,000                     |
| NRZJ471M50V12.5X20F | 470                |               | 0.10                              | 2300                                        | 0.032                      | 0.10  | 10,000                     |
| NRZJ561M50V10X25F   | 560                |               | 0.10                              | 2900                                        | 0.031                      | 0.093 | 10,000                     |
| NRZJ681M50V12.5X20F | 680                |               | 0.10                              | 2700                                        | 0.029                      | 0.087 | 10,000                     |
| NRZJ681M50V12.5X25F | 680                |               | 0.10                              | 2800                                        | 0.025                      | 0.080 | 10,000                     |

### New Part Numbers



### STANDARD PRODUCT, SPECIFICATIONS AND CASE SIZES D $\phi$ x L (mm)

| Part Number         | Cap.<br>( $\mu$ F) | W.V.<br>(Vdc) | Dissipation Factor<br>+20°C/120Hz | Ripple Current Rating (mA)<br>+105°C/100KHz | Max. Z ( $\Omega$ ) 100KHz |       | Load Life Hours<br>@+105°C |
|---------------------|--------------------|---------------|-----------------------------------|---------------------------------------------|----------------------------|-------|----------------------------|
|                     |                    |               |                                   |                                             | +20°C                      | -10°C |                            |
| NRZJ821M50V12.5X30F | 820                | 50            | 0.10                              | 3370                                        | 0.023                      | 0.074 | 10,000                     |
| NRZJ821M50V16X20F   | 820                |               | 0.10                              | 3070                                        | 0.026                      | 0.084 | 10,000                     |
| NRZJ102M50V12.5X25F | 1000               |               | 0.10                              | 3000                                        | 0.022                      | 0.066 | 10,000                     |
| NRZJ102M50V12.5X30F | 1000               |               | 0.10                              | 3500                                        | 0.020                      | 0.060 | 10,000                     |
| NRZJ102M50V12.5X35F | 1000               |               | 0.10                              | 3810                                        | 0.021                      | 0.067 | 10,000                     |
| NRZJ102M50V16X25F   | 1000               |               | 0.10                              | 3510                                        | 0.022                      | 0.070 | 10,000                     |
| NRZJ122M50V12.5X35F | 1200               |               | 0.10                              | 4000                                        | 0.017                      | 0.051 | 10,000                     |
| NRZJ122M50V16X20F   | 1200               |               | 0.10                              | 3100                                        | 0.023                      | 0.069 | 10,000                     |
| NRZJ152M50V12.5X40F | 1500               |               | 0.10                              | 4500                                        | 0.019                      | 0.057 | 10,000                     |
| NRZJ152M50V16X25F   | 1500               |               | 0.10                              | 3600                                        | 0.018                      | 0.054 | 10,000                     |
| NRZJ152M50V18X20F   | 1500               |               | 0.10                              | 3200                                        | 0.029                      | 0.087 | 10,000                     |
| NRZJ222M50V16X31.5F | 2200               |               | 0.12                              | 4100                                        | 0.018                      | 0.054 | 10,000                     |
| NRZJ222M50V18X25F   | 2200               |               | 0.12                              | 3700                                        | 0.022                      | 0.066 | 10,000                     |
| NRZJ272M50V16X35.5F | 2700               |               | 0.12                              | 4400                                        | 0.016                      | 0.048 | 10,000                     |
| NRZJ272M50V16X40F   | 2700               |               | 0.12                              | 4800                                        | 0.014                      | 0.042 | 10,000                     |
| NRZJ272M50V18X31.5F | 2700               |               | 0.12                              | 4200                                        | 0.019                      | 0.057 | 10,000                     |
| NRZJ332M50V18X35.5F | 3300               |               | 0.14                              | 4600                                        | 0.016                      | 0.048 | 10,000                     |
| NRZJ392M50V18X40F   | 3900               |               | 0.14                              | 5000                                        | 0.014                      | 0.042 | 10,000                     |
| NRZJ180M63V5X11F    | 18                 | 63            | 0.09                              | 240                                         | 0.710                      | 3.20  | 6,000                      |
| NRZJ470M63V6.3X11F  | 47                 |               | 0.09                              | 420                                         | 0.280                      | 1.30  | 6,000                      |
| NRZJ820M63V8X11.5F  | 82                 |               | 0.09                              | 720                                         | 0.180                      | 0.79  | 8,000                      |
| NRZJ101M63V8X11.5F  | 100                |               | 0.09                              | 1000                                        | 0.130                      | 0.39  | 8,000                      |
| NRZJ101M63V8X16F    | 100                |               | 0.09                              | 990                                         | 0.130                      | 0.58  | 9,000                      |
| NRZJ121M63V8X16F    | 120                |               | 0.09                              | 1300                                        | 0.095                      | 0.29  | 9,000                      |
| NRZJ121M63V10X12.5F | 120                |               | 0.09                              | 990                                         | 0.110                      | 0.44  | 9,000                      |
| NRZJ151M63V8X20F    | 150                |               | 0.09                              | 1200                                        | 0.096                      | 0.43  | 9,000                      |
| NRZJ151M63V10X12.5F | 150                |               | 0.09                              | 1300                                        | 0.080                      | 0.24  | 9,000                      |
| NRZJ181M63V8X20F    | 180                |               | 0.09                              | 1600                                        | 0.069                      | 0.21  | 9,000                      |
| NRZJ181M63V10X16F   | 180                |               | 0.09                              | 1200                                        | 0.076                      | 0.31  | 10,000                     |
| NRZJ221M63V10X16F   | 220                |               | 0.09                              | 1700                                        | 0.058                      | 0.17  | 10,000                     |
| NRZJ271M63V10X20F   | 270                |               | 0.09                              | 1570                                        | 0.056                      | 0.23  | 10,000                     |
| NRZJ271M63V12.5X16F | 270                |               | 0.09                              | 1570                                        | 0.072                      | 0.27  | 10,000                     |
| NRZJ331M63V10X20F   | 330                |               | 0.09                              | 2000                                        | 0.042                      | 0.13  | 10,000                     |
| NRZJ331M63V10X25F   | 330                |               | 0.09                              | 1990                                        | 0.046                      | 0.19  | 10,000                     |
| NRZJ331M63V12.5X16F | 330                |               | 0.09                              | 1900                                        | 0.045                      | 0.14  | 10,000                     |
| NRZJ391M63V10X25F   | 390                |               | 0.09                              | 2400                                        | 0.035                      | 0.11  | 10,000                     |
| NRZJ391M63V12.5X20F | 390                |               | 0.09                              | 1990                                        | 0.041                      | 0.13  | 10,000                     |
| NRZJ471M63V12.5X20F | 470                |               | 0.09                              | 2400                                        | 0.033                      | 0.099 | 10,000                     |
| NRZJ471M63V12.5X25F | 470                |               | 0.09                              | 2460                                        | 0.031                      | 0.093 | 10,000                     |
| NRZJ561M63V12.5X30F | 560                |               | 0.09                              | 2760                                        | 0.028                      | 0.084 | 10,000                     |
| NRZJ561M63V16X20F   | 560                |               | 0.09                              | 2380                                        | 0.032                      | 0.096 | 10,000                     |
| NRZJ681M63V12.5X25F | 680                |               | 0.09                              | 2800                                        | 0.025                      | 0.075 | 10,000                     |
| NRZJ681M63V12.5X35F | 680                |               | 0.09                              | 3040                                        | 0.024                      | 0.072 | 10,000                     |
| NRZJ821M63V12.5X30F | 820                |               | 0.09                              | 3200                                        | 0.022                      | 0.066 | 10,000                     |
| NRZJ821M63V16X20F   | 820                |               | 0.09                              | 2900                                        | 0.025                      | 0.075 | 10,000                     |
| NRZJ821M63V16X25F   | 820                |               | 0.09                              | 2890                                        | 0.025                      | 0.075 | 10,000                     |
| NRZJ102M63V12.5X35F | 1000               |               | 0.09                              | 3500                                        | 0.018                      | 0.054 | 10,000                     |
| NRZJ102M63V16X25F   | 1000               |               | 0.09                              | 3200                                        | 0.020                      | 0.060 | 10,000                     |
| NRZJ122M63V12.5X40F | 1200               |               | 0.09                              | 3800                                        | 0.021                      | 0.063 | 10,000                     |
| NRZJ122M63V18X20F   | 1200               |               | 0.09                              | 3000                                        | 0.032                      | 0.096 | 10,000                     |
| NRZJ152M63V16X31.5F | 1500               |               | 0.09                              | 3500                                        | 0.020                      | 0.060 | 10,000                     |
| NRZJ152M63V18X25F   | 1500               |               | 0.09                              | 3200                                        | 0.024                      | 0.072 | 10,000                     |
| NRZJ182M63V16X35.5F | 1800               |               | 0.09                              | 3800                                        | 0.017                      | 0.051 | 10,000                     |
| NRZJ182M63V18X31.5F | 1800               |               | 0.09                              | 3700                                        | 0.020                      | 0.060 | 10,000                     |
| NRZJ222M63V16X40F   | 2200               |               | 0.11                              | 4100                                        | 0.015                      | 0.045 | 10,000                     |
| NRZJ222M63V18X35.5F | 2200               |               | 0.11                              | 3900                                        | 0.017                      | 0.051 | 10,000                     |
| NRZJ272M63V18X40F   | 2700               |               | 0.11                              | 4300                                        | 0.015                      | 0.045 | 10,000                     |

### New Part Numbers



### STANDARD PRODUCT, SPECIFICATIONS AND CASE SIZES D $\phi$ x L (mm)

| Part Number          | Cap.<br>( $\mu$ F) | W.V.<br>(Vdc) | Dissipation Factor<br>+20°C/120Hz | Ripple Current Rating (mA)<br>+105°C/100KHz | Max. Z ( $\Omega$ ) 100KHz |       | Load Life Hours<br>@+105°C |
|----------------------|--------------------|---------------|-----------------------------------|---------------------------------------------|----------------------------|-------|----------------------------|
|                      |                    |               |                                   |                                             | +20°C                      | -10°C |                            |
| NRZJ120M80V5X11F     | 12                 | 80            | 0.08                              | 220                                         | 1.20                       | 5.40  | 6,000                      |
| NRZJ270M80V6.3X11F   | 27                 |               | 0.08                              | 370                                         | 0.46                       | 2.10  | 6,000                      |
| NRZJ470M80V8X11.5F   | 47                 |               | 0.08                              | 620                                         | 0.29                       | 1.30  | 8,000                      |
| NRZJ560M80V8X16F     | 56                 |               | 0.08                              | 780                                         | 0.20                       | 0.90  | 9,000                      |
| NRZJ680M80V10X12.5F  | 68                 |               | 0.08                              | 780                                         | 0.17                       | 0.66  | 9,000                      |
| NRZJ820M80V8X20F     | 82                 |               | 0.08                              | 1040                                        | 0.16                       | 0.66  | 9,000                      |
| NRZJ101M80V10X16F    | 100                |               | 0.08                              | 1040                                        | 0.11                       | 0.47  | 10,000                     |
| NRZJ151M80V10X20F    | 150                |               | 0.08                              | 1430                                        | 0.084                      | 0.34  | 10,000                     |
| NRZJ151M80V12.5X16F  | 150                |               | 0.08                              | 1430                                        | 0.110                      | 0.34  | 10,000                     |
| NRZJ181M80V10X25F    | 180                |               | 0.08                              | 1620                                        | 0.069                      | 0.28  | 10,000                     |
| NRZJ221M80V12.5X20F  | 220                |               | 0.08                              | 1750                                        | 0.062                      | 0.18  | 10,000                     |
| NRZJ271M80V12.5X25F  | 270                |               | 0.08                              | 2210                                        | 0.047                      | 0.14  | 10,000                     |
| NRZJ331M80V12.5X30F  | 330                |               | 0.08                              | 2400                                        | 0.042                      | 0.13  | 10,000                     |
| NRZJ331M80V16X20F    | 330                |               | 0.08                              | 1950                                        | 0.048                      | 0.15  | 10,000                     |
| NRZJ391M80V12.5X35F  | 390                |               | 0.08                              | 2600                                        | 0.036                      | 0.11  | 10,000                     |
| NRZJ471M80V12.5X40F  | 470                |               | 0.08                              | 2860                                        | 0.032                      | 0.095 | 10,000                     |
| NRZJ471M80V16X25F    | 470                |               | 0.08                              | 2430                                        | 0.038                      | 0.120 | 10,000                     |
| NRZJ471M80V18X20F    | 470                |               | 0.08                              | 2270                                        | 0.045                      | 0.140 | 10,000                     |
| NRZJ561M80V16X31.5F  | 560                |               | 0.08                              | 2640                                        | 0.032                      | 0.095 | 10,000                     |
| NRZJ681M80V16X35.5F  | 680                |               | 0.08                              | 2860                                        | 0.029                      | 0.086 | 10,000                     |
| NRZJ681M80V18X25F    | 680                |               | 0.08                              | 2500                                        | 0.036                      | 0.110 | 10,000                     |
| NRZJ821M80V16X40F    | 820                |               | 0.08                              | 3510                                        | 0.027                      | 0.081 | 10,000                     |
| NRZJ821M80V18X31.5F  | 820                |               | 0.08                              | 2860                                        | 0.03                       | 0.090 | 10,000                     |
| NRZJ102M80V18X35.5F  | 1000               |               | 0.08                              | 3510                                        | 0.027                      | 0.081 | 10,000                     |
| NRZJ122M80V18X40F    | 1200               |               | 0.08                              | 3860                                        | 0.026                      | 0.076 | 10,000                     |
| NRZJ8R2M100V5X11F    | 8.2                | 100           | 0.08                              | 220                                         | 1.20                       | 5.40  | 6,000                      |
| NRZJ180M100V6.3X11F  | 18                 |               | 0.08                              | 370                                         | 0.46                       | 2.10  | 6,000                      |
| NRZJ330M100V8X11.5F  | 33                 |               | 0.08                              | 620                                         | 0.29                       | 1.30  | 8,000                      |
| NRZJ470M100V8X16F    | 47                 |               | 0.08                              | 780                                         | 0.20                       | 0.90  | 9,000                      |
| NRZJ560M100V10X12.5F | 56                 |               | 0.08                              | 780                                         | 0.17                       | 0.66  | 9,000                      |
| NRZJ680M100V8X20F    | 68                 |               | 0.08                              | 1040                                        | 0.16                       | 0.66  | 9,000                      |
| NRZJ820M100V10X16F   | 82                 |               | 0.08                              | 1040                                        | 0.11                       | 0.47  | 10,000                     |
| NRZJ101M100V10X20F   | 100                |               | 0.08                              | 1430                                        | 0.084                      | 0.34  | 10,000                     |
| NRZJ101M100V12.5X16F | 100                |               | 0.08                              | 1430                                        | 0.110                      | 0.34  | 10,000                     |
| NRZJ121M100V10X25F   | 120                |               | 0.08                              | 1620                                        | 0.069                      | 0.28  | 10,000                     |
| NRZJ151M100V12.5X20F | 150                |               | 0.08                              | 1750                                        | 0.062                      | 0.18  | 10,000                     |
| NRZJ221M100V12.5X25F | 220                |               | 0.08                              | 2210                                        | 0.047                      | 0.14  | 10,000                     |
| NRZJ271M100V12.5X30F | 270                |               | 0.08                              | 2400                                        | 0.042                      | 0.13  | 10,000                     |
| NRZJ271M100V16X20F   | 270                |               | 0.08                              | 1950                                        | 0.048                      | 0.15  | 10,000                     |
| NRZJ331M100V12.5X35F | 330                |               | 0.08                              | 2600                                        | 0.036                      | 0.11  | 10,000                     |
| NRZJ391M100V12.5X40F | 390                |               | 0.08                              | 2860                                        | 0.032                      | 0.095 | 10,000                     |
| NRZJ391M100V16X25F   | 390                |               | 0.08                              | 2430                                        | 0.038                      | 0.120 | 10,000                     |
| NRZJ391M100V18X20F   | 390                |               | 0.08                              | 2270                                        | 0.045                      | 0.140 | 10,000                     |
| NRZJ471M100V16X31.5F | 470                |               | 0.08                              | 2640                                        | 0.032                      | 0.095 | 10,000                     |
| NRZJ471M100V18X25F   | 470                |               | 0.08                              | 2500                                        | 0.036                      | 0.110 | 10,000                     |
| NRZJ561M100V16X35.5F | 560                |               | 0.08                              | 2860                                        | 0.029                      | 0.086 | 10,000                     |
| NRZJ561M100V18X31.5F | 560                |               | 0.08                              | 2860                                        | 0.030                      | 0.090 | 10,000                     |
| NRZJ681M100V16X40F   | 680                |               | 0.08                              | 3510                                        | 0.027                      | 0.081 | 10,000                     |
| NRZJ681M100V18X35.5F | 680                |               | 0.08                              | 3510                                        | 0.027                      | 0.081 | 10,000                     |
| NRZJ821M100V18X40F   | 820                |               | 0.08                              | 3860                                        | 0.026                      | 0.076 | 10,000                     |

### 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](http://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](mailto:tpmg@niccomp.com)

