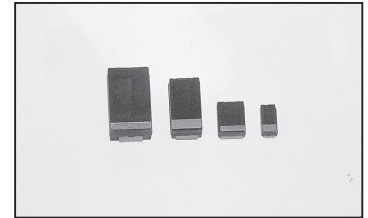


FEATURES

- Low ESR and High Ripple Current Ratings
- Values from 10 μ F to 470 μ F
- Suitable for Flow and Reflow Soldering Processes
- Available in EIA B, C and D Case Sizes

**RoHS
Compliant**
includes all homogeneous materials

*See Part Number System for Details



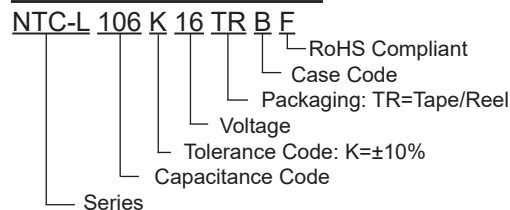
SPECIFICATIONS

| | | | |
|---|--|-----------------|-----------------|
| Capacitance Range | 10 μ F to 470 μ F | | |
| Capacitance Tolerance | \pm 10% (K) | | |
| Operating Temperature Range | -55°C ~ +125°C (voltage derating above 85°C, see table below) | | |
| Dissipation Factor @ 120Hz/25°C | See Part Number & Specifications Table | | |
| Capacitance Change Versus Temperature | -55°C | +85°C | +125°C |
| | Δ C -10% | Δ C +10% | Δ C +12% |
| Soldering Heat Resistance (+260°C for 5~10 sec.) | Δ C \pm 10% Max., Leakage Current and Dissipation Factor will be less than value specified below. | | |
| Moisture Resistance (500 hours; 90~95% RH @ 40°C) | | | |
| Load Life Test @at Rated Voltage 2,000 hours @ 85°C | | | |
| Base Failure Rate (1.0 Ω /Volt) | 1%/1000 hours at 60% confidence level (+85°C) | | |

STANDARD RATINGS AND CASE SIZE

| Rated Voltage @ 85°C | 6.3Vdc | 10Vdc | 16Vdc | 20Vdc | 25Vdc | 35Vdc | |
|------------------------|--------|-----------|-----------|-----------|-----------|-----------|---|
| Surge Voltage @ 85°C | 8 | 13 | 20 | 26 | 32 | 45 | |
| Derated Voltage @125°C | 4 | 6.3 | 10 | 13 | 16 | 22 | |
| Capacitance (μ F) | Code | Case Size | Case Size | Case Size | Case Size | Case Size | |
| 10 | 106 | - | - | B | C | - | D |
| 15 | 156 | - | B | - | C | D | D |
| 22 | 226 | B | C | C | D | D | D |
| 33 | 336 | C | C | D | D | D | - |
| 47 | 476 | C | D | D | D | - | - |
| 68 | 686 | - | D | D | - | - | - |
| 100 | 107 | D | D | D | - | - | - |
| 150 | 157 | D | D | - | - | - | - |
| 220 | 227 | D | D | - | - | - | - |
| 330 | 337 | D | D | - | - | - | - |
| 470 | 477 | D | - | - | - | - | - |

PART NUMBER SYSTEM



PRECAUTIONS

Please review the notes on correct use, safety and precautions found on our website at www.niccomp.com/tantpc
If in doubt or uncertainty, please review your specific application - process details with NIC's technical support personnel: tpmg@niccomp.com

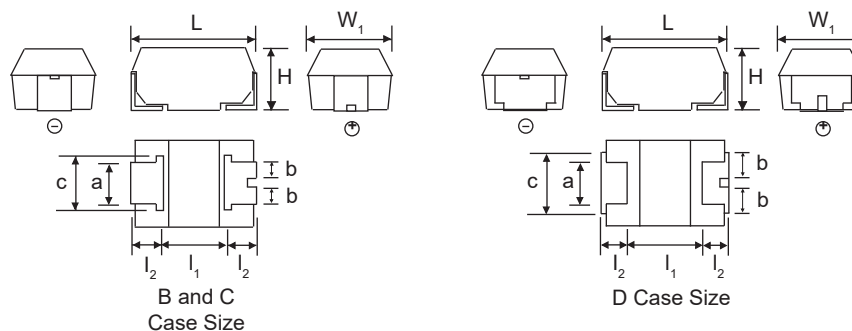


PART NUMBER AND SPECIFICATIONS TABLE

| Part Number | Cap. (μF) | Voltage (Vdc) | Dissipation Factor @ 120Hz/20°C | Leakage Current (μA) @ 25°C | ESR (ohms) @ 100KHz/20°C | Ripple Current Rating (mA) @ 100KHz/25°C |
|------------------|-----------|---------------|---------------------------------|-----------------------------|--------------------------|--|
| NTC-L226K6.3TRBF | 22 | 6.3 | 0.06 | 1.4 | 0.50 | 440 |
| NTC-L336K6.3TRCF | 33 | | 0.06 | 2.1 | 0.35 | 530 |
| NTC-L476K6.3TRCF | 47 | | 0.06 | 3.0 | 0.35 | 530 |
| NTC-L107K6.3TRDF | 100 | | 0.08 | 6.3 | 0.15 | 890 |
| NTC-L157K6.3TRDF | 150 | | 0.08 | 9.5 | 0.10 | 1,100 |
| NTC-L227K6.3TRDF | 220 | | 0.10 | 14 | 0.10 | 1,100 |
| NTC-L337K6.3TRDF | 330 | | 0.10 | 20.8 | 0.10 | 1,100 |
| NTC-L477K6.3TRDF | 470 | | 0.18 | 32.9 | 0.20 | 770 |
| NTC-L156K10TRBF | 15 | | 10 | 0.06 | 1.5 | 0.60 |
| NTC-L226K10TRCF | 22 | 0.06 | | 2.2 | 0.50 | 440 |
| NTC-L336K10TRCF | 33 | 0.06 | | 3.3 | 0.35 | 530 |
| NTC-L476K10TRDF | 47 | 0.06 | | 4.7 | 0.25 | 690 |
| NTC-L686K10TRDF | 68 | 0.06 | | 6.8 | 0.20 | 770 |
| NTC-L107K10TRDF | 100 | 0.08 | | 10 | 0.10 | 1,100 |
| NTC-L157K10TRDF | 150 | 0.08 | | 15 | 0.10 | 1,100 |
| NTC-L227K10TRDF | 220 | 0.10 | | 22 | 0.10 | 1,100 |
| NTC-L337K10TRDF | 330 | 0.18 | | 33 | 0.15 | 890 |
| NTC-L106K16TRBF | 10 | 16 | 0.06 | 1.6 | 0.60 | 400 |
| NTC-L226K16TRCF | 22 | | 0.06 | 3.5 | 0.40 | 500 |
| NTC-L336K16TRDF | 33 | | 0.06 | 5.3 | 0.25 | 690 |
| NTC-L476K16TRDF | 47 | | 0.06 | 7.5 | 0.20 | 770 |
| NTC-L686K16TRDF | 68 | | 0.06 | 11 | 0.15 | 890 |
| NTC-L107K16TRDF | 100 | | 0.08 | 16 | 0.10 | 1,100 |
| NTC-L106K20TRCF | 10 | 20 | 0.06 | 2.0 | 0.60 | 400 |
| NTC-L156K20TRCF | 15 | | 0.06 | 3.0 | 0.50 | 440 |
| NTC-L226K20TRDF | 22 | | 0.06 | 4.4 | 0.35 | 580 |
| NTC-L336K20TRDF | 33 | | 0.06 | 6.6 | 0.30 | 630 |
| NTC-L476K20TRDF | 47 | | 0.06 | 9.4 | 0.20 | 830 |
| NTC-L156K25TRDF | 15 | 25 | 0.06 | 3.8 | 0.30 | 630 |
| NTC-L226K25TRDF | 22 | | 0.06 | 5.5 | 0.30 | 630 |
| NTC-L336K25TRDF | 33 | | 0.06 | 8.3 | 0.30 | 630 |
| NTC-L106K35TRDF | 10 | 35 | 0.06 | 3.5 | 0.30 | 630 |
| NTC-L156K35TRDF | 15 | | 0.06 | 5.3 | 0.30 | 630 |
| NTC-L226K35TRDF | 22 | | 0.06 | 7.7 | 0.50 | 490 |

CASE DIMENSIONS (mm)

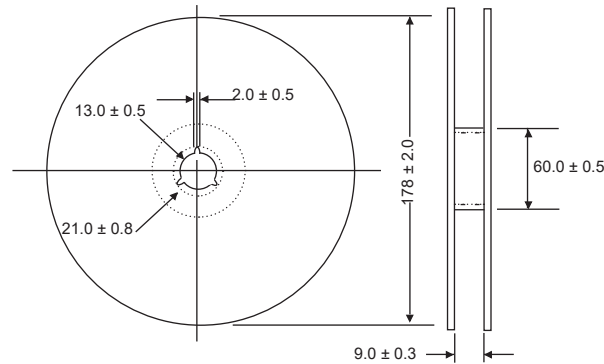
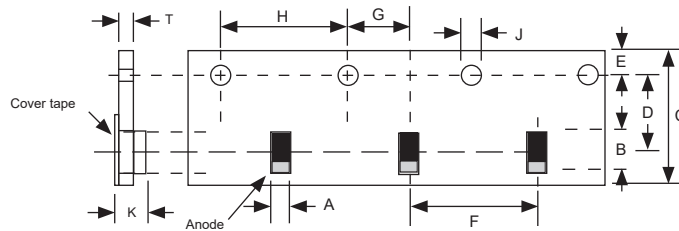
| Case Code | L ±0.2 | W ±0.2 | HL ±0.2 | I ₁ ±0.2 | I ₂ ±0.2 | a ±0.2 | b ±0.2 | c ±0.2 |
|-----------|--------|---------|---------|---------------------|---------------------|--------|--------|--------|
| B | 3.4 | 2.6 | 1.9 | 1.4 | 0.8 | 2.0 | 0.7 | 2.2 |
| C | 5.8 | 3.2 | 2.5 | 2.4 | 1.3 | 2.2 | 0.7 | 2.4 |
| D | 7.3 | 4.3±0.3 | 2.8 | 3.8 | 1.3 | 2.4 | 1.2 | 3.3 |



Terminations:
100% Sn (Lead-Free)
Standard

TAPING SPECIFICATIONS (mm)

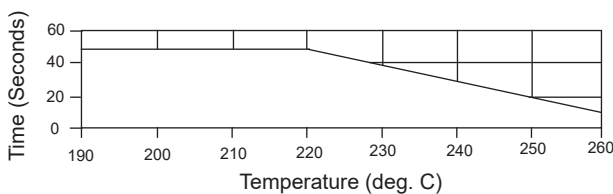
| Case Code | A ±0.1 | B ±0.1 | C ±0.3 | D ±0.1 | E ±0.1 | F ±0.1 | G ±0.1 | H ±0.1 | J ±0.1 | K max. | t max. | Reel Qty |
|-----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|----------|
| B | 3.1 | 3.8 | 8.0 | 3.5 | 1.75 | 4.0 | 2.0 | 4.0 | 1.5 | 2.5 | 0.2 | 2000 |
| C | 3.7 | 6.3 | 12.0 | 5.5 | 1.75 | 8.0 | 2.0 | 4.0 | 1.5 | 3.0 | 0.3 | 500 |
| D | 4.8 | 7.7 | 12.0 | 5.5 | 1.75 | 8.0 | 2.0 | 4.0 | 1.5 | 3.4 | 0.3 | 500 |



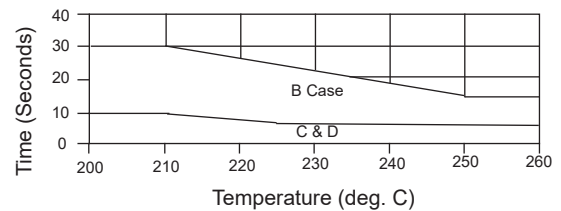
RECOMMENDED SOLDERING PROFILES

Note: To avoid thermal shock a preheating stage, 130°C ~ 160°C for 1 minute, should be incorporated into the soldering process

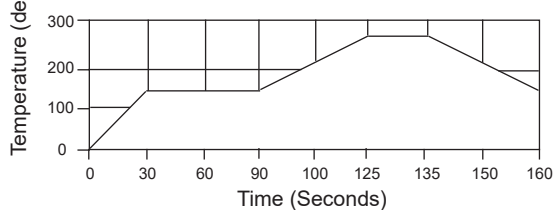
Reflow Soldering - Permitted Temperature/Time Range



Flow Soldering - Permitted Temperature/Time Range



Reflow Soldering - Recommended Profile Maximum Temperature/Time: 260°C/10 Sec.



Flow Soldering - Recommended Profile Maximum Temperature/Time: 245°C/5 Sec.

