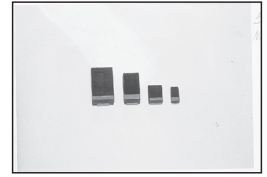


FEATURES

- EXPANDED VALUE RANGE & REDUCED CASE SIZES
- MOLDED CONSTRUCTION FOR HIGH SOLDERING HEAT RESISTANCE
- ELEVEN CASE SIZES (P, A2, A, B2, B, C2, C, V, D AND E)
- BOTH FLOW AND REFLOW SOLDERING APPLICABLE
- TAPE & REEL PACKAGING COMPATIBLE WITH AUTOMATIC PICK & PLACE EQUIPMENT



RoHS Compliant
includes all homogeneous materials

*See Part Number System for Details

SPECIFICATIONS & PERFORMANCE CHARACTERISTICS

| | | | | | | | | | |
|--|---|-----|-----|----------|----|----|----------|----|----|
| Capacitance Range | 0.1µF to 470µF | | | | | | | | |
| Capacitance Tolerance | ±10% (K), ±20% (M) | | | | | | | | |
| Rated Voltage Range @ 85°C (Vdc) | 2.5 | 4.0 | 6.3 | 10 | 16 | 20 | 25 | 35 | 50 |
| Surge Voltage Rating @ 85°C (Vdc) | 3.3 | 5.2 | 8.0 | 13 | 20 | 28 | 33 | 46 | 85 |
| Derated Voltage @ 125°C (Vdc) | 1.8 | 2.5 | 4.0 | 6.3 | 10 | 13 | 16 | 22 | 32 |
| Operating Temperature Range | -55°C to +125°C (voltage derating at temperatures over +85°C as referenced above) | | | | | | | | |
| Dissipation Factor | See Case Size and Specifications Table | | | | | | | | |
| Leakage Current @ +25°C (After 5 Minutes at Rated Voltage) | Not More Than 0.01CV or 0.5µA, whichever is greater | | | | | | | | |
| Capacitance Change With Temperature | -55°C | | | +85°C | | | +125°C | | |
| A2, A, B2, B, C, D & E Case Size | ΔC - 12% | | | ΔC ± 12% | | | ΔC ± 12% | | |
| J & P Case Size | ΔC - 20% | | | ΔC ± 20% | | | ΔC ± 20% | | |
| Resistance to Soldering Heat (+260°C for 5 Seconds) | ΔC ± 5%* Max, LC = Less than initial specification. DF = Less than initial specification | | | | | | | | |
| Moisture Resistance (500 hours; 90-95% RH @ 40°C) | ΔC ± 5%* Max, LC = Less than initial specification. DF = 150% of initial specification | | | | | | | | |
| Temperature Cycling (5 cycles; -55°C ~ +125°C) | ΔC ± 5%* Max, LC = Less than initial specification. DF = Less than initial specification | | | | | | | | |
| Load Life (at Rated Voltage) (2,000 hours @ 85°C) | ΔC ± 10%* Max, LC = 125% of initial specification. DF = Less than initial specification | | | | | | | | |
| Base Failure Rate (1.0Ω/Volt) | 1%/1000 hours at 60% confidence level (+85°C) | | | | | | | | |

*±12% ~ ±15% for extended values, ±20% for P case size values

RIPPLE CURRENT CORRECTION FACTOR:

| Ambient Temperature | 25°C | +55°C | +85°C | +105°C | +125°C |
|---------------------|------|-------|-------|--------|--------|
| Correction Factor | 1.0 | 0.90 | 0.80 | 0.40 | 0.15 |

RIPPLE CURRENT/VOLTAGE RATINGS:

$$I_{max.} = \sqrt{\frac{P_d}{ESR}} \quad V_{max.} = Z \cdot \sqrt{\frac{P_d}{ESR}}$$

I_{max.} = Ripple Current rating (Arms)

P_d = Power dissipation (watt)

ESR = Equivalent series resistance (ohm)

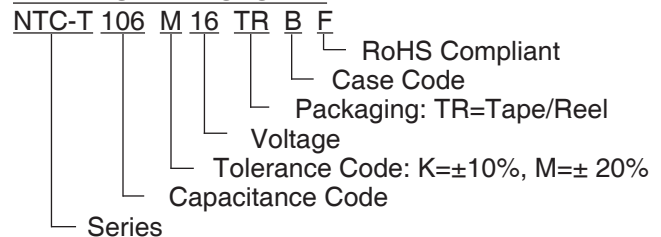
V_{max.} = Ripple voltage rating (Vrms)

$$Z = \text{The capacitors impedance (ohm)} = \sqrt{(ESR)^2 + (XL - XC)^2}$$

POWER DISSIPATION @ 25°C (FREE AIR) & EQUIVALENT SERIES INDUCTANCE (ESL)

| Case Code | Pd Max. (W) | ESL (nH) |
|-----------|-------------|----------|
| P | 0.025 | 1.00 |
| A2 | 0.050 | 1.20 |
| A | 0.070 | 1.20 |
| B2 | 0.070 | 1.50 |
| B | 0.080 | 1.50 |
| C2 | 0.090 | - |
| C | 0.110 | 2.70 |
| V | 0.125 | - |
| D | 0.150 | 3.00 |
| E | 0.165 | 3.00 |

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



STANDARD AND EXTENDED PRODUCT SPECIFICATIONS TABLE

*Extended Case Sizes

| Part Number | Cap. (µF) | Voltage (Vdc) | Dissipation Factor @ 120Hz/20°C | Leakage Current (µA) @ 20°C | ESR (ohms) @ 100KHz/20°C | Ripple Current Rating (mA) @ 100KHz/25°C |
|-------------------|-----------|---------------|---------------------------------|-----------------------------|--------------------------|--|
| NTC-T475K2.5TRA2F | 4.7* | 2.5 | 8% | 0.5 | 18 | 53 |
| NTC-T685M2.5TRPF | 6.8 | 2.5 | 20% | 0.5 | 20 | 35 |
| NTC-T685K2.5TRA2F | 6.8* | 2.5 | 8% | 0.5 | 16 | 56 |
| NTC-T106M2.5TRPF | 10 | 2.5 | 20% | 0.5 | 12 | 46 |
| NTC-T106K2.5TRA2F | 10* | 2.5 | 8% | 0.5 | 15 | 58 |
| NTC-T156K2.5TRA2F | 15* | 2.5 | 12% | 0.5 | 10 | 71 |
| NTC-T156K2.5TRAF | 15* | 2.5 | 8% | 0.5 | 5.0 | 118 |
| NTC-T226M2.5TRPF | 22 | 2.5 | 20% | 0.55 | 4.0 | 79 |
| NTC-T226K2.5TRA2F | 22* | 2.5 | 12% | 0.55 | 10 | 71 |
| NTC-T226K2.5TRAF | 22* | 2.5 | 8% | 0.55 | 4.0 | 132 |
| NTC-T336M2.5TRPF | 33 | 2.5 | 20% | 0.83 | 5.0 | 71 |
| NTC-T336K2.5TRA2F | 33 | 2.5 | 12% | 0.83 | 4.0 | 112 |
| NTC-T336K2.5TRAF | 33* | 2.5 | 8% | 0.83 | 3.5 | 141 |
| NTC-T336K2.5TRB2F | 33* | 2.5 | 8% | 0.83 | 3.5 | 141 |
| NTC-T336K2.5TRBF | 33* | 2.5 | 8% | 0.83 | 3.0 | 163 |
| NTC-T476M2.5TRPF | 47 | 2.5 | 30% | 1.18 | 6.0 | 65 |
| NTC-T476K2.5TRA2F | 47 | 2.5 | 12% | 1.18 | 4.5 | 105 |
| NTC-T476K2.5TRAF | 47* | 2.5 | 12% | 1.18 | 4.5 | 125 |
| NTC-T476K2.5TRB2F | 47* | 2.5 | 12% | 1.18 | 4.5 | 125 |
| NTC-T476K2.5TRBF | 47 | 2.5 | 8% | 1.18 | 2.4 | 183 |
| NTC-T686K2.5TRAF | 68 | 2.5 | 18% | 1.7 | 2.0 | 187 |
| NTC-T686K2.5TRBF | 68 | 2.5 | 8% | 1.7 | 2.0 | 200 |
| NTC-T107K2.5TRAF | 100 | 2.5 | 30% | 2.5 | 2.0 | 187 |
| NTC-T107K2.5TRB2F | 100 | 2.5 | 18% | 2.5 | 2.0 | 187 |
| NTC-T107K2.5TRBF | 100 | 2.5 | 8% | 2.5 | 2.0 | 200 |
| NTC-T157K2.5TRAF | 150 | 2.5 | 30% | 3.75 | 2.0 | 187 |
| NTC-T157K2.5TRB2F | 150 | 2.5 | 20% | 3.75 | 1.0 | 265 |
| NTC-T157K2.5TRBF | 150* | 2.5 | 16% | 3.75 | 5.0 | 126 |
| NTC-T157K2.5TRC2F | 150 | 2.5 | 12% | 3.75 | 0.8 | 335 |
| NTC-T227K2.5TRB2F | 220 | 2.5 | 30% | 5.5 | 1.0 | 265 |
| NTC-T227K2.5TRBF | 220 | 2.5 | 18% | 5.5 | 2.0 | 200 |
| NTC-T227K2.5TRC2F | 220 | 2.5 | 12% | 5.5 | 0.8 | 335 |
| NTC-T227K2.5TRCF | 220* | 2.5 | 12% | 5.5 | 1.0 | 332 |
| NTC-T337K2.5TRB2F | 330 | 2.5 | 30% | 8.25 | 2.0 | 187 |
| NTC-T337K2.5TRBF | 330 | 2.5 | 25% | 8.25 | 0.6 | 365 |
| NTC-T337K2.5TRCF | 330 | 2.5 | 16% | 8.25 | 1.2 | 303 |
| NTC-T477K2.5TRBF | 470 | 2.5 | 35% | 11.75 | 0.6 | 365 |
| NTC-T477K2.5TRCF | 470 | 2.5 | 18% | 11.75 | 1.2 | 303 |
| NTC-T477K2.5TRDF | 470* | 2.5 | 14% | 11.75 | 0.7 | 463 |
| NTC-T155M4TRPF | 1.5 | 4 | 10% | 0.5 | 25 | 32 |
| NTC-T225M4TRPF | 2.2 | 4 | 10% | 0.5 | 25 | 32 |
| NTC-T335M4TRPF | 3.3 | 4 | 20% | 0.5 | 20 | 35 |
| NTC-T335K4TRA2F | 3.3* | 4 | 8% | 0.5 | 18 | 53 |
| NTC-T335K4TRAF | 3.3 | 4 | 4% | 0.5 | 8.0 | 94 |
| NTC-T475M4TRPF | 4.7 | 4 | 20% | 0.5 | 12 | 46 |
| NTC-T475K4TRA2F | 4.7* | 4 | 8% | 0.5 | 10 | 71 |
| NTC-T475K4TRAF | 4.7 | 4 | 4% | 0.5 | 7.5 | 97 |
| NTC-T685M4TRPF | 6.8 | 4 | 20% | 0.5 | 12 | 46 |
| NTC-T685K4TRA2F | 6.8* | 4 | 8% | 0.5 | 8.0 | 79 |
| NTC-T685K4TRAF | 6.8* | 4 | 8% | 0.5 | 6.0 | 108 |
| NTC-T106M4TRPF | 10 | 4 | 20% | 0.5 | 12 | 46 |
| NTC-T106K4TRA2F | 10* | 4 | 12% | 0.5 | 8.0 | 79 |
| NTC-T106K4TRAF | 10* | 4 | 8% | 0.5 | 5.0 | 118 |
| NTC-T106K4TRBF | 10 | 4 | 6% | 0.5 | 3.5 | 151 |

Note: 20% (M) tolerance parts available special order



STANDARD AND EXTENDED PRODUCT SPECIFICATIONS TABLE

*Extended Case Sizes

| Part Number | Cap. (µF) | Voltage (Vdc) | Dissipation Factor @ 120Hz/20°C | Leakage Current (µA) @ 20°C | ESR (ohms) @ 100KHz/20°C | Ripple Current Rating (mA) @ 100KHz/25°C |
|-------------------|-----------|---------------|---------------------------------|-----------------------------|--------------------------|--|
| NTC-T156M4TRPF | 15 | 4 | 20% | 0.6 | 5.0 | 71 |
| NTC-T156K4TRA2F | 15* | 4 | 12% | 0.6 | 8.0 | 79 |
| NTC-T156K4TRAF | 15* | 4 | 8% | 0.6 | 4.0 | 132 |
| NTC-T156K4TRBF | 15* | 4 | 8% | 0.6 | 3.0 | 163 |
| NTC-T226K4TRPF | 22 | 4 | 20% | 0.88 | 5.0 | 71 |
| NTC-T226K4TRA2F | 22 | 4 | 12% | 0.88 | 4.0 | 112 |
| NTC-T226K4TRAF | 22* | 4 | 8% | 0.88 | 3.5 | 141 |
| NTC-T226K4TRB2F | 22* | 4 | 8% | 0.88 | 3.5 | 141 |
| NTC-T226K4TRBF | 22* | 4 | 8% | 0.88 | 2.8 | 169 |
| NTC-T336M4TRPF | 33 | 4 | 20% | 1.32 | 4.0 | 79 |
| NTC-T336K4TRA2F | 33 | 4 | 8% | 1.32 | 4.5 | 105 |
| NTC-T336K4TRAF | 33* | 4 | 10% | 1.32 | 4.5 | 39 |
| NTC-T336K4TRB2F | 33 | 4 | 12% | 1.32 | 4.5 | 125 |
| NTC-T336K4TRBF | 33* | 4 | 8% | 1.32 | 2.4 | 183 |
| NTC-T476M4TRPF | 47 | 4 | 30% | 1.88 | 3.0 | 91 |
| NTC-T476K4TRA2F | 47 | 4 | 15% | 1.88 | 4.5 | 105 |
| NTC-T476K4TRAF | 47 | 4 | 12% | 1.88 | 5.0 | 118 |
| NTC-T476K4TRB2F | 47 | 4 | 12% | 1.88 | 3.0 | 153 |
| NTC-T476K4TRBF | 47* | 4 | 8% | 1.88 | 2.4 | 188 |
| NTC-T476K4TRCF | 47* | 4 | 8% | 1.88 | 1.8 | 247 |
| NTC-T686K4TRAF | 68 | 4 | 12% | 2.72 | 2.5 | 167 |
| NTC-T686K4TRB2F | 68 | 4 | 15% | 2.72 | 3.0 | 153 |
| NTC-T686K4TRBF | 68* | 4 | 8% | 2.72 | 2.0 | 200 |
| NTC-T686K4TRCF | 68* | 4 | 8% | 2.72 | 1.6 | 262 |
| NTC-T107K4TRAF | 100 | 4 | 30% | 4.0 | 2.0 | 187 |
| NTC-T107K4TRB2F | 100 | 4 | 20% | 4.0 | 1.3 | 232 |
| NTC-T107K4TRBF | 100* | 4 | 12% | 4.0 | 2.0 | 200 |
| NTC-T107K4TRC2F | 100 | 4 | 10% | 4.0 | 0.8 | 335 |
| NTC-T107K4TRCF | 100* | 4 | 8% | 4.0 | 1.2 | 303 |
| NTC-T107K4TRDF | 100* | 4 | 8% | 4.0 | 0.8 | 433 |
| NTC-T157K4TRBF | 150 | 4 | 18% | 6.0 | 2.0 | 200 |
| NTC-T157K4TRC2F | 150 | 4 | 10% | 6.0 | 0.8 | 335 |
| NTC-T157K4TRCF | 150* | 4 | 10% | 6.0 | 1.0 | 332 |
| NTC-T157K4TRDF | 150* | 4 | 8% | 6.0 | 0.7 | 463 |
| NTC-T227K4TRBF | 220 | 4 | 18% | 8.8 | 0.5 | 400 |
| NTC-T227K4TRCF | 220 | 4 | 12% | 8.8 | 1.2 | 303 |
| NTC-T227K4TRDF | 220* | 4 | 8% | 8.8 | 0.7 | 463 |
| NTC-T337K4TRCF | 330 | 4 | 14% | 13.2 | 1.2 | 303 |
| NTC-T337K4TRVF | 330 | 4 | 12% | 13.2 | 0.5 | 500 |
| NTC-T337K4TRDF | 330* | 4 | 14% | 13.2 | 0.7 | 463 |
| NTC-T477K4TRDF | 470 | 4 | 16% | 18.8 | 1.0 | 387 |
| NTC-T687K4TRDF | 680* | 4 | 25% | 27.2 | 0.3 | 707 |
| NTC-T155M6.3TRPF | 1.5 | 6.3 | 10% | 0.5 | 25 | 32 |
| NTC-T225M6.3TRPF | 2.2 | 6.3 | 20% | 0.5 | 20 | 35 |
| NTC-T225K6.3TRA2F | 2.2* | 6.3 | 8% | 0.5 | 18 | 53 |
| NTC-T225K6.3TRAF | 2.2 | 6.3 | 4% | 0.5 | 8.0 | 94 |
| NTC-T335M6.3TRPF | 3.3 | 6.3 | 20% | 0.5 | 13 | 44 |
| NTC-T335K6.3TRA2F | 3.3* | 6.3 | 8% | 0.5 | 9.0 | 75 |
| NTC-T335K6.3TRAF | 3.3 | 6.3 | 4% | 0.5 | 7.5 | 97 |
| NTC-T475M6.3TRPF | 4.7 | 6.3 | 20% | 0.5 | 12 | 29 |
| NTC-T475K6.3TRA2F | 4.7* | 6.3 | 8% | 0.5 | 7.5 | 37 |
| NTC-T475K6.3TRAF | 4.7* | 6.3 | 8% | 0.5 | 6.0 | 41 |
| NTC-T685K6.3TRPF | 6.8 | 6.3 | 20% | 0.5 | 12 | 29 |
| NTC-T685K6.3TRA2F | 6.8* | 6.3 | 8% | 0.5 | 7.5 | 37 |

Note: 20% (M) tolerance parts available special order



STANDARD AND EXTENDED PRODUCT SPECIFICATIONS TABLE

*Extended Case Sizes

| Part Number | Cap. (μF) | Voltage (Vdc) | Dissipation Factor @ 120Hz/20°C | Leakage Current (μA) @ 20°C | ESR (ohms) @ 100KHz/20°C | Ripple Current Rating (mA) @ 100KHz/25°C |
|-------------------|-----------|---------------|---------------------------------|-----------------------------|--------------------------|--|
| NTC-T685K6.3TRAF | 6.8* | 6.3 | 8% | 0.5 | 5.0 | 45 |
| NTC-T685K6.3TRBF | 6.8* | 6.3 | 6% | 0.5 | 3.5 | 53 |
| NTC-T106M6.3TRPF | 10 | 6.3 | 20% | 0.63 | 12 | 46 |
| NTC-T106K6.3TRA2F | 10* | 6.3 | 8% | 0.63 | 10 | 71 |
| NTC-T106K6.3TRAF | 10* | 6.3 | 8% | 0.63 | 4.0 | 132 |
| NTC-T106K6.3TRBF | 10 | 6.3 | 6% | 0.63 | 3.0 | 163 |
| NTC-T156M6.3TRPF | 15 | 6.3 | 20% | 0.95 | 5.0 | 71 |
| NTC-T156K6.3TRA2F | 15 | 6.3 | 12% | 0.95 | 4.0 | 79 |
| NTC-T156K6.3TRAF | 15* | 6.3 | 8% | 0.95 | 3.5 | 85 |
| NTC-T156K6.3TRB2F | 15* | 6.3 | 8% | 0.95 | 3.5 | 85 |
| NTC-T156K6.3TRBF | 15* | 6.3 | 8% | 0.95 | 2.5 | 100 |
| NTC-T226M6.3TRPF | 22 | 6.3 | 20% | 1.39 | 4.0 | 79 |
| NTC-T226K6.3TRA2F | 22 | 6.3 | 12% | 1.39 | 2.8 | 134 |
| NTC-T226K6.3TRAF | 22* | 6.3 | 10% | 1.39 | 4.5 | 125 |
| NTC-T226K6.3TRB2F | 22* | 6.3 | 12% | 1.39 | 4.5 | 125 |
| NTC-T226K6.3TRBF | 22* | 6.3 | 8% | 1.39 | 2.3 | 187 |
| NTC-T226K6.3TRCF | 22 | 6.3 | 6% | 1.39 | 1.8 | 247 |
| NTC-T336K6.3TRA2F | 33 | 6.3 | 18% | 2.08 | 3.0 | 129 |
| NTC-T336K6.3TRAF | 33 | 6.3 | 12% | 2.08 | 5.0 | 118 |
| NTC-T336K6.3TRB2F | 33 | 6.3 | 12% | 2.08 | 1.7 | 203 |
| NTC-T336K6.3TRBF | 33* | 6.3 | 8% | 2.08 | 2.0 | 200 |
| NTC-T336K6.3TRCF | 33* | 6.3 | 8% | 2.08 | 1.8 | 247 |
| NTC-T476K6.3TRAF | 47 | 6.3 | 12% | 2.96 | 2.0 | 187 |
| NTC-T476K6.3TRB2F | 47 | 6.3 | 12% | 2.96 | 3.0 | 153 |
| NTC-T476K6.3TRBF | 47* | 6.3 | 8% | 2.96 | 2.0 | 200 |
| NTC-T476K6.3TRCF | 47* | 6.3 | 8% | 2.96 | 1.6 | 262 |
| NTC-T686K6.3TRAF | 68 | 6.3 | 30% | 4.29 | 2.0 | 187 |
| NTC-T686K6.3TRB2F | 68 | 6.3 | 20% | 4.29 | 2.0 | 187 |
| NTC-T686K6.3TRBF | 68* | 6.3 | 10% | 4.29 | 1.8 | 211 |
| NTC-T686K6.3TRC2F | 68 | 6.3 | 10% | 4.29 | 0.8 | 335 |
| NTC-T686K6.3TRCF | 68* | 6.3 | 8% | 4.29 | 1.2 | 303 |
| NTC-T686K6.3TRDF | 68* | 6.3 | 8% | 4.29 | 0.8 | 433 |
| NTC-T107K6.3TRB2F | 100 | 6.3 | 20% | 6.3 | 1.3 | 232 |
| NTC-T107K6.3TRBF | 100 | 6.3 | 12% | 6.3 | 1.2 | 258 |
| NTC-T107K6.3TRC2F | 100 | 6.3 | 10% | 6.3 | 0.8 | 335 |
| NTC-T107K6.3TRCF | 100* | 6.3 | 10% | 6.3 | 0.9 | 350 |
| NTC-T107K6.3TRDF | 100 | 6.3 | 8% | 6.3 | 0.8 | 433 |
| NTC-T157K6.3TRBF | 150 | 6.3 | 12% | 9.45 | 1.0 | 283 |
| NTC-T157K6.3TRCF | 150 | 6.3 | 10% | 9.45 | 1.2 | 303 |
| NTC-T157K6.3TRDF | 150* | 6.3 | 8% | 9.45 | 0.7 | 463 |
| NTC-T227K6.3TRBF | 220 | 6.3 | 18% | 13.9 | 0.5 | 400 |
| NTC-T227K6.3TRCF | 220 | 6.3 | 14% | 13.9 | 1.2 | 303 |
| NTC-T227K6.3TRVF | 220 | 6.3 | 12% | 13.9 | 0.5 | 500 |
| NTC-T227K6.3TRDF | 220* | 6.3 | 12% | 13.9 | 0.8 | 433 |
| NTC-T337K6.3TRVF | 330 | 6.3 | 14% | 20.8 | 0.5 | 500 |
| NTC-T337K6.3TRDF | 330 | 6.3 | 14% | 20.8 | 1.0 | 387 |
| NTC-T477K6.3TRDF | 470 | 6.3 | 20% | 29.6 | 0.3 | 707 |
| NTC-T105M10TRPF | 1.0 | 10 | 10% | 0.5 | 25 | 32 |
| NTC-T155M10TRPF | 1.5 | 10 | 20% | 0.5 | 25 | 32 |
| NTC-T155K10TRA2F | 1.5* | 10 | 8% | 0.5 | 20 | 50 |
| NTC-T155K10TRAF | 1.5 | 10 | 4% | 0.5 | 8.0 | 94 |
| NTC-T225M10TRPF | 2.2 | 10 | 20% | 0.5 | 20 | 35 |
| NTC-T225K10TRA2F | 2.2* | 10 | 8% | 0.5 | 12 | 65 |
| NTC-T225K10TRAF | 2.2 | 10 | 8% | 0.5 | 5.5 | 113 |
| NTC-T335M10TRPF | 3.3 | 10 | 20% | 0.5 | 20 | 35 |

Note: 20% (M) tolerance parts available special order



STANDARD AND EXTENDED PRODUCT SPECIFICATIONS TABLE

*Extended Case Sizes

| Part Number | Cap. (µF) | Voltage (Vdc) | Dissipation Factor @ 120Hz/20°C | Leakage Current (µA) @ 20°C | ESR (ohms) @ 100KHz/20°C | Ripple Current Rating (mA) @ 100KHz/25°C |
|------------------|-----------|---------------|---------------------------------|-----------------------------|--------------------------|--|
| NTC-T335K10TRA2F | 3.3* | 10 | 8% | 0.5 | 12 | 65 |
| NTC-T335K10TRAF | 3.3 | 10 | 8% | 0.5 | 5.5 | 113 |
| NTC-T475M10TRPF | 4.7 | 10 | 20% | 1.0 | 10 | 50 |
| NTC-T475K10TRA2F | 4.7* | 10 | 8% | 1.0 | 8.0 | 79 |
| NTC-T475K10TRAF | 4.7* | 10 | 8% | 1.0 | 5.0 | 118 |
| NTC-T475K10TRBF | 4.7 | 10 | 4% | 1.0 | 3.5 | 151 |
| NTC-T685K10TRA2F | 6.8 | 10 | 8% | 0.68 | 8.0 | 79 |
| NTC-T685K10TRAF | 6.8* | 10 | 8% | 0.68 | 4.5 | 125 |
| NTC-T685K10TRBF | 6.8 | 10 | 8% | 0.68 | 3.0 | 163 |
| NTC-T106M10TRPF | 10 | 10 | 20% | 1.0 | 6.0 | 65 |
| NTC-T106K10TRA2F | 10 | 10 | 8% | 1.0 | 5.0 | 100 |
| NTC-T106K10TRAF | 10* | 10 | 8% | 1.0 | 3.2 | 148 |
| NTC-T106K10TRB2F | 10* | 10 | 8% | 1.0 | 3.2 | 148 |
| NTC-T106K10TRBF | 10* | 10 | 8% | 1.0 | 2.5 | 179 |
| NTC-T106K10TRCF | 10 | 10 | 8% | 1.0 | 1.8 | 247 |
| NTC-T156K10TRA2F | 15 | 10 | 20% | 1.5 | 3.0 | 129 |
| NTC-T156K10TRB2F | 15* | 10 | 8% | 1.5 | 2.5 | 167 |
| NTC-T156K10TRCF | 15 | 10 | 8% | 1.5 | 1.8 | 247 |
| NTC-T226K10TRAF | 22 | 10 | 12% | 2.2 | 2.5 | 167 |
| NTC-T226K10TRB2F | 22 | 10 | 12% | 2.2 | 4.0 | 132 |
| NTC-T226K10TRBF | 22* | 10 | 8% | 2.2 | 2.4 | 183 |
| NTC-T226K10TRCF | 22* | 10 | 8% | 2.2 | 1.8 | 247 |
| NTC-T336K10TRB2F | 33 | 10 | 12% | 3.3 | 1.7 | 203 |
| NTC-T336K10TRBF | 33 | 10 | 8% | 3.3 | 2.0 | 200 |
| NTC-T336K10TRCF | 33* | 10 | 8% | 3.3 | 1.6 | 262 |
| NTC-T336K10TRDF | 33* | 10 | 6% | 3.3 | 0.8 | 433 |
| NTC-T476K10TRBF | 47 | 10 | 8% | 4.7 | 3.0 | 163 |
| NTC-T476K10TRC2F | 47 | 10 | 8% | 4.7 | 1.0 | 300 |
| NTC-T476K10TRCF | 47* | 10 | 8% | 4.7 | 1.6 | 262 |
| NTC-T476K10TRDF | 47 | 10 | 8% | 4.7 | 0.8 | 433 |
| NTC-T686K10TRBF | 68 | 10 | 12% | 6.8 | 0.9 | 298 |
| NTC-T686K10TRC2F | 68 | 10 | 10% | 6.8 | 1.0 | 300 |
| NTC-T686K10TRCF | 68* | 10 | 8% | 6.8 | 1.2 | 303 |
| NTC-T686K10TRDF | 68* | 10 | 8% | 6.8 | 0.8 | 433 |
| NTC-T107K10TRC2F | 100 | 10 | 10% | 10 | 0.8 | 335 |
| NTC-T107K10TRCF | 100 | 10 | 10% | 10 | 1.2 | 303 |
| NTC-T107K10TRVF | 100 | 10 | 8% | 10 | 0.5 | 500 |
| NTC-T107K10TRDF | 100* | 10 | 8% | 10 | 0.7 | 463 |
| NCT-T157K10TRVF | 150 | 10 | 8% | 15 | 0.5 | 500 |
| NTC-T157K10TRDF | 150* | 10 | 10% | 15 | 0.7 | 463 |
| NTC-T227K10TRDF | 220 | 10 | 12% | 22 | 1.0 | 387 |
| NTC-T227K10TREF | 220* | 10 | 8% | 22 | 0.9 | 428 |
| NTC-T474M16TRPF | 0.47 | 16 | 10% | 0.5 | 35 | 27 |
| NTC-T105M16TRPF | 1.0 | 16 | 20% | 0.5 | 25 | 32 |
| NTC-T105K16TRA2F | 1.0* | 16 | 6% | 0.5 | 16 | 56 |
| NTC-T105K16TRAF | 1.0 | 16 | 4% | 0.5 | 10 | 84 |
| NTC-T155K16TRA2F | 1.5* | 16 | 6% | 0.5 | 13 | 62 |
| NTC-T155K16TRAF | 1.5 | 16 | 4% | 0.5 | 8.0 | 94 |
| NTC-T225M16TRPF | 2.2 | 16 | 10% | 0.5 | 19 | 36 |
| NTC-T225K16TRA2F | 2.2* | 16 | 6% | 0.5 | 13 | 62 |
| NTC-T225K16TRAF | 2.2 | 16 | 6% | 0.5 | 6.0 | 108 |
| NTC-T335M16TRPF | 3.3 | 16 | 10% | 0.53 | 8.0 | 56 |
| NTC-T335K16TRA2F | 3.3 | 16 | 8% | 0.53 | 7.0 | 85 |
| NTC-T335K16TRAF | 3.3* | 16 | 6% | 0.53 | 5.0 | 118 |
| NTC-T335K16TRBF | 3.3 | 16 | 4% | 0.53 | 3.5 | 151 |
| NTC-T475K16TRA2F | 4.7 | 16 | 8% | 0.75 | 4.5 | 105 |

Note: 20% (M) tolerance parts available special order



STANDARD AND EXTENDED PRODUCT SPECIFICATIONS TABLE

*Extended Case Sizes

| Part NuKber | Cap. (μF) | Voltage (Vdc) | Dissipation Factor @ 120Hz/20°C | Leakage Current (μA) @ 20°C | ESR (ohms) @ 100KHz/20°C | Ripple Current Rating (mA) @ 100KHz/25°C |
|------------------|-----------|---------------|---------------------------------|-----------------------------|--------------------------|--|
| NTC-T475K16TRAF | 4.7* | 16 | 6% | 0.75 | 5.0 | 118 |
| NTC-T475K16TRBF | 4.7 | 16 | 6% | 0.75 | 3.0 | 163 |
| NTC-T685K16TRA2F | 6.8* | 16 | 6% | 1.09 | 4.5 | 105 |
| NTC-T685K16TRAF | 6.8* | 16 | 6% | 1.09 | 5.0 | 118 |
| NTC-T685K16TRB2F | 6.8 | 16 | 6% | 1.09 | 5.0 | 118 |
| NTC-T685K16TRBF | 6.8* | 16 | 6% | 1.09 | 2.5 | 179 |
| NTC-T106K16TRAF | 10 | 16 | 8% | 1.6 | 5.0 | 118 |
| NTC-T106K16TRB2F | 10 | 16 | 8% | 1.6 | 4.0 | 132 |
| NTC-T106K16TRBF | 10* | 16 | 6% | 1.6 | 2.4 | 183 |
| NTC-T106K16TRCF | 10 | 16 | 6% | 1.6 | 1.8 | 247 |
| NTC-T156K16TRAF | 15 | 16 | 12% | 2.4 | 5.0 | 118 |
| NTC-T156K16TRBF | 15* | 16 | 6% | 2.4 | 2.5 | 167 |
| NTC-T156K16TRCF | 15* | 16 | 6% | 2.4 | 1.8 | 247 |
| NTC-T156K16TRDF | 15 | 16 | 6% | 2.4 | 1.8 | 289 |
| NTC-T226K16TRB2F | 22 | 16 | 10% | 3.52 | 2.2 | 178 |
| NTC-T226K16TRBF | 22* | 16 | 6% | 3.52 | 2.5 | 179 |
| NTC-T226K16TRCF | 22* | 16 | 6% | 3.52 | 1.6 | 209 |
| NTC-T226K16TRDF | 22 | 16 | 6% | 3.52 | 0.8 | 296 |
| NTC-T336K16TRBF | 33 | 16 | 8% | 5.28 | 1.4 | 239 |
| NTC-T336K16TRC2F | 33 | 16 | 6% | 5.28 | 1.4 | 254 |
| NTC-T336K16TRCF | 33* | 16 | 6% | 5.28 | 1.2 | 303 |
| NTC-T336K16TRDF | 33* | 16 | 6% | 5.28 | 0.8 | 433 |
| NTC-T476K16TRCF | 47* | 16 | 6% | 7.52 | 1.2 | 303 |
| NTC-T476K16TRDF | 47* | 16 | 6% | 7.52 | 0.8 | 433 |
| NTC-T686K16TRCF | 68 | 16 | 6% | 10.9 | 0.7 | 396 |
| NTC-T686K16TRDF | 68* | 16 | 6% | 10.9 | 0.7 | 463 |
| NTC-T107K16TRDF | 100* | 16 | 10% | 16.0 | 1.0 | 387 |
| NTC-T157K16TRDF | 150* | 16 | 6% | 24.0 | 0.9 | 408 |
| NTC-T684K20TRAF | 0.68 | 20 | 4% | 0.5 | 12 | 76 |
| NTC-T105K20TRA2F | 1* | 20 | 6% | 0.5 | 13 | 62 |
| NTC-T105K20TRAF | 1* | 20 | 6% | 0.5 | 9.0 | 88 |
| NTC-T155K20TRA2F | 1.5* | 20 | 6% | 0.5 | 13 | 62 |
| NTC-T155K20TRAF | 1.5* | 20 | 6% | 0.5 | 6.5 | 104 |
| NTC-T225M20TRPF | 2.2 | 20 | 10% | 0.5 | 8.0 | 56 |
| NTC-T225K20TRA2F | 2.2 | 20 | 6% | 0.5 | 7.0 | 85 |
| NTC-T225K20TRAF | 2.2* | 20 | 6% | 0.5 | 6.0 | 108 |
| NTC-T225K20TRBF | 2.2 | 20 | 4% | 0.5 | 3.5 | 151 |
| NTC-T335K20TRA2F | 3.3 | 20 | 8% | 0.66 | 5.0 | 100 |
| NTC-T335K20TRAF | 3.3* | 20 | 6% | 0.66 | 5.0 | 118 |
| NTC-T335K20TRB2F | 3.3 | 20 | 6% | 0.66 | 3.9 | 134 |
| NTC-T335K20TRBF | 3.3* | 20 | 6% | 0.66 | 3.0 | 163 |
| NTC-T475K20TRA2F | 4.7 | 20 | 15% | 0.94 | 5.0 | 100 |
| NTC-T475K20TRAF | 4.7* | 20 | 6% | 0.94 | 5.0 | 118 |
| NTC-T475K20TRB2F | 4.7 | 20 | 6% | 0.94 | 3.0 | 153 |
| NTC-T475K20TRBF | 4.7* | 20 | 6% | 0.94 | 3.0 | 163 |
| NTC-T475K20TRCF | 4.7 | 20 | 4% | 0.94 | 2.4 | 214 |
| NTC-T685K20TRB2F | 6.8 | 20 | 6% | 1.36 | 3.0 | 153 |
| NTC-T685K20TRBF | 6.8* | 20 | 6% | 1.36 | 2.8 | 169 |
| NTC-T685K20TRCF | 6.8 | 20 | 6% | 1.36 | 1.9 | 241 |
| NTC-T106K20TRBF | 10* | 20 | 6% | 2.0 | 2.5 | 179 |
| NTC-T106K20TRCF | 10* | 20 | 6% | 2.0 | 1.8 | 247 |
| NTC-T106K20TRDF | 10 | 20 | 6% | 2.0 | 1.3 | 340 |
| NTC-T156K20TRCF | 15* | 20 | 6% | 3.0 | 1.7 | 254 |
| NTC-T156K20TRDF | 15 | 20 | 6% | 3.0 | 0.8 | 433 |
| NTC-T226K20TRC2F | 22 | 20 | 6% | 4.4 | 1.4 | 254 |
| NTC-T226K20TRCF | 22* | 20 | 6% | 4.4 | 1.5 | 271 |
| NTC-T226K20TRDF | 22* | 20 | 6% | 4.4 | 0.8 | 433 |
| NTC-T336K20TRDF | 33* | 20 | 6% | 6.6 | 0.8 | 433 |
| NTC-T476K20TRDF | 47* | 20 | 6% | 9.4 | 0.8 | 433 |

Note: 20% (M) tolerance parts available special order



STANDARD AND EXTENDED PRODUCT SPECIFICATIONS TABLE

*Extended Case Sizes

| Part Number | Cap. (μF) | Voltage (Vdc) | Dissipation Factor @ 120Hz/20°C | Leakage Current (μA) @ 20°C | ESR (ohms) @ 100KHz/20°C | Ripple Current Rating (mA) @ 100KHz/25°C |
|------------------|-----------|---------------|---------------------------------|-----------------------------|--------------------------|--|
| NTC-T474K25TRAF | 0.47 | 25 | 4% | 0.5 | 14 | 71 |
| NTC-T684K25TRAF | 0.68* | 25 | 6% | 0.5 | 10 | 84 |
| NTC-T105M25TRPF | 1 | 25 | 6% | 0.5 | 8.0 | 56 |
| NTC-T105K25TRA2F | 1 | 25 | 6% | 0.5 | 13 | 62 |
| NTC-T105K25TRAF | 1* | 25 | 6% | 0.5 | 8.0 | 94 |
| NTC-T155K25TRAF | 1.5* | 25 | 6% | 0.5 | 8.0 | 94 |
| NTC-T155K25TRBF | 1.5 | 25 | 4% | 0.5 | 4.6 | 132 |
| NTC-T225K25TRAF | 2.2* | 25 | 6% | 0.55 | 8.0 | 94 |
| NTC-T225K25TRBF | 2.2 | 25 | 6% | 0.55 | 4.0 | 141 |
| NTC-T335K25TRAF | 3.3 | 25 | 6% | 0.83 | 7.0 | 100 |
| NTC-T335K25TRBF | 3.3* | 25 | 6% | 0.83 | 3.5 | 151 |
| NTC-T335K25TRCF | 3.3 | 25 | 4% | 0.83 | 2.5 | 210 |
| NTC-T475K25TRB2F | 4.7 | 25 | 6% | 1.18 | 3.0 | 153 |
| NTC-T475K25TRBF | 4.7* | 25 | 6% | 1.18 | 3.0 | 163 |
| NTC-T475K25TRCF | 4.7 | 25 | 4% | 1.18 | 2.4 | 214 |
| NTC-T685K25TRBF | 6.8 | 25 | 6% | 1.7 | 2.5 | 179 |
| NTC-T685K25TRCF | 6.8* | 25 | 6% | 1.7 | 1.9 | 241 |
| NTC-T685K25TRDF | 6.8 | 25 | 6% | 1.7 | 1.4 | 327 |
| NTC-T106K25TRC2F | 10 | 25 | 6% | 2.5 | 2.0 | 212 |
| NTC-T106K25TRCF | 10* | 25 | 6% | 2.5 | 1.8 | 247 |
| NTC-T106K25TRDF | 10 | 25 | 6% | 2.5 | 1.2 | 354 |
| NTC-T156K25TRCF | 15 | 25 | 6% | 3.75 | 1.5 | 271 |
| NTC-T156K25TRDF | 15* | 25 | 6% | 3.75 | 1.0 | 387 |
| NTC-T226K25TRDF | 22* | 25 | 6% | 5.5 | 0.8 | 433 |
| NTC-T336K25TRDF | 33 | 25 | 6% | 8.25 | 0.7 | 463 |
| NTC-T104K35TRAF | 0.1 | 35 | 4% | 0.5 | 18 | 62 |
| NTC-T224K35TRAF | 0.22 | 35 | 4% | 0.5 | 18 | 62 |
| NTC-T334K35TRAF | 0.33 | 35 | 4% | 0.5 | 15 | 68 |
| NTC-T474K35TRAF | 0.47* | 35 | 6% | 0.5 | 12 | 76 |
| NTC-T474K35TRBF | 0.47 | 35 | 4% | 0.5 | 8.0 | 100 |
| NTC-T105K35TRA2F | 1 | 35 | 6% | 0.5 | 13 | 62 |
| NTC-T105K35TRAF | 1* | 35 | 6% | 0.5 | 8.0 | 94 |
| NTC-T105K35TRBF | 1 | 35 | 4% | 0.5 | 4.8 | 129 |
| NTC-T155K35TRAF | 1.5* | 35 | 6% | 0.53 | 8.0 | 94 |
| NTC-T155K35TRBF | 1.5* | 35 | 6% | 0.53 | 4.0 | 141 |
| NTC-T155K35TRCF | 1.5 | 35 | 4% | 0.53 | 3.0 | 191 |
| NTC-T225K35TRAF | 2.2 | 35 | 6% | 0.77 | 5.0 | 118 |
| NTC-T225K35TRBF | 2.2* | 35 | 6% | 0.77 | 4.2 | 138 |
| NTC-T225K35TRCF | 2.2 | 35 | 4% | 0.77 | 3.0 | 191 |
| NTC-T335K35TRB2F | 3.3 | 35 | 6% | 1.16 | 3.0 | 153 |
| NTC-T335K35TRBF | 3.3* | 35 | 6% | 1.16 | 4.0 | 141 |
| NTC-T335K35TRCF | 3.3 | 35 | 4% | 1.16 | 2.5 | 210 |
| NTC-T335K35TRDF | 3.3 | 35 | 4% | 1.16 | 2.0 | 274 |
| NTC-T475K35TRCF | 4.7 | 35 | 6% | 1.65 | 2.2 | 224 |
| NTC-T475K35TRDF | 4.7 | 35 | 4% | 1.65 | 1.5 | 316 |
| NTC-T685K35TRCF | 6.8* | 35 | 6% | 2.38 | 1.9 | 241 |
| NTC-T685K35TRDF | 6.8 | 35 | 6% | 2.38 | 1.3 | 340 |
| NTC-T106K35TRCF | 10 | 35 | 6% | 3.5 | 1.5 | 271 |
| NTC-T106K35TRDF | 10 | 35 | 6% | 3.5 | 1.0 | 387 |
| NTC-T106K35TREF | 10* | 35 | 6% | 3.5 | 1.0 | 406 |
| NTC-T156K35TRDF | 15* | 35 | 6% | 5.25 | 0.9 | 408 |
| NTC-T105K50TRCF | 1 | 50 | 4% | 0.5 | 5.5 | 141 |
| NTC-T225K50TRDF | 2.2 | 50 | 4% | 1.1 | 1.8 | 289 |
| NTC-T335K50TRDF | 3.3 | 50 | 4% | 1.65 | 1.4 | 327 |
| NTC-T475K50TRDF | 4.7 | 50 | 4% | 2.35 | 1.4 | 327 |

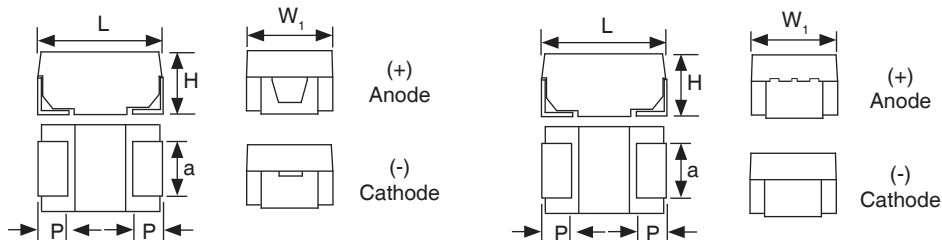
Note: 20% (M) tolerance parts available special order



DIMENSIONS (mm)

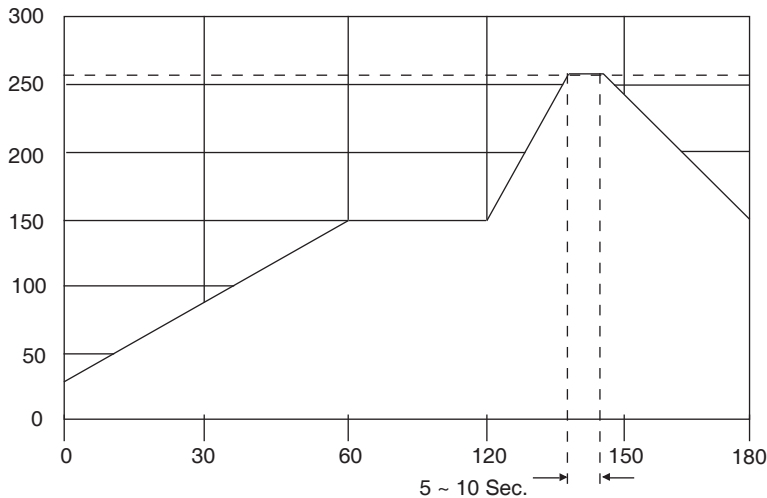
| Case Code | Metric Code | English Code | L | W | H | P | a |
|-----------|-------------|--------------|-----------|-----------------|-----------|-----------|-----------|
| P | 2012 | 0805 | 2.0 ± 0.2 | 1.25 +0.25/-0.2 | 1.2 MAX. | 0.5 ± 0.2 | 0.9 ± 0.1 |
| A2 | 3216 | 1206 | 3.2 ± 0.2 | 1.6 ± 0.2 | 1.2 MAX. | 0.8 ± 0.3 | 1.2 ± 0.1 |
| A | 3216 | 1206 | 3.2 ± 0.2 | 1.6 ± 0.2 | 1.6 ± 0.2 | 0.8 ± 0.3 | 1.2 ± 0.1 |
| B2 | 3528 | 1411 | 3.5 ± 0.2 | 2.8 ± 0.2 | 1.2 MAX. | 0.8 ± 0.3 | 2.3 ± 0.1 |
| B | 3528 | 1411 | 3.5 ± 0.2 | 2.8 ± 0.2 | 1.9 ± 0.2 | 0.8 ± 0.3 | 2.2 ± 0.1 |
| C2 | 6032 | 2412 | 6.0 ± 0.3 | 3.2 ± 0.3 | 1.5 MAX. | 1.3 ± 0.3 | 2.2 ± 0.1 |
| C | 6032 | 2412 | 6.0 ± 0.3 | 3.2 ± 0.3 | 2.6 ± 0.4 | 1.3 ± 0.3 | 2.2 ± 0.1 |
| V | 7343 | 2916 | 7.3 ± 0.2 | 4.3 ± 0.2 | 2.0 MAX. | 1.3 ± 0.3 | 2.4 ± 0.1 |
| D | 7343 | 2916 | 7.3 ± 0.2 | 4.3 ± 0.2 | 2.9 ± 0.3 | 1.3 ± 0.3 | 2.4 ± 0.1 |
| E | 7343H | 2917 | 7.3 ± 0.2 | 4.3 ± 0.2 | 4.1 ± 0.4 | 1.3 ± 0.3 | 2.4 ± 0.1 |

LEAD-FRAME FORMAT*



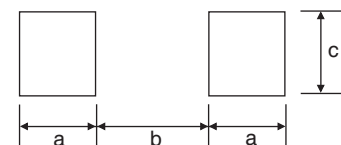
*Parts will be supplied with one of the above lead-frame formats.

Flow/Reflow Soldering
 Maximum Temperature/Time: Flow 260°C/5 Sec.
 Reflow 260°C/10 Sec.



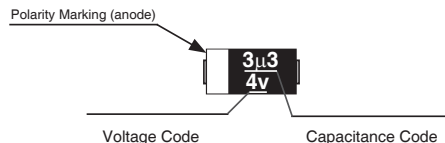
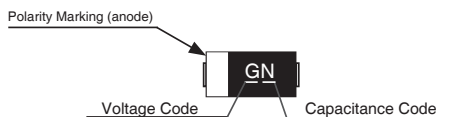
RECOMMENDED LAND PATTERN DIMENSIONS (mm)

| Case Size | a | b | c |
|-----------|------|------|------|
| P | 1.05 | 0.50 | 1.20 |
| A & A2 | 1.35 | 1.10 | 1.50 |
| B & B2 | 1.35 | 1.40 | 2.70 |
| C | 2.00 | 2.90 | 2.70 |
| D | 2.05 | 4.10 | 2.90 |
| D | 2.05 | 4.10 | 2.90 |

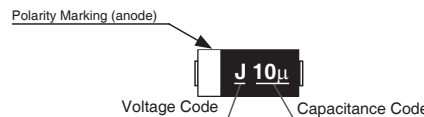
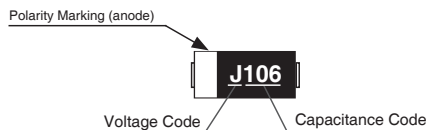


COMPONENT MARKING

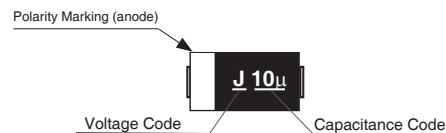
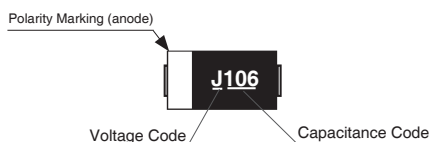
P Case Size



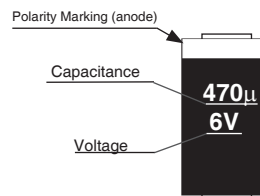
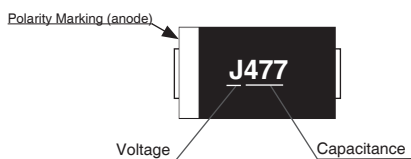
A & A2 Case Size



B & B2 Case Size 2.5V marked 2, 6.3V marked 6



C, V, D & E Case Size 2.5V marked 2, 6.3V marked 6



Note: Component body color may be Black (white marking) or Gold (brown marking).

CAPACITANCE CODES

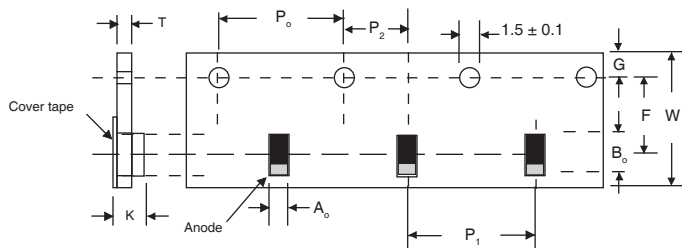
| Cap. (μF) | STD EIA Code | EIA Code 198D | Code for P Case Size |
|------------------------|--------------|---------------|----------------------|
| 0.1 | 104 | A5 | - |
| 0.15 | 154 | E5 | - |
| 0.22 | 224 | J5 | - |
| 0.33 | 334 | N5 | N |
| 0.47 | 474 | S5 | S |
| 0.68 | 684 | W5 | W |
| 1.0 | 105 | A6 | A |
| 1.5 | 155 | E6 | E |
| 2.2 | 225 | J6 | J |
| 3.3 | 335 | N6 | N |
| 4.7 | 475 | S6 | S |
| 6.8 | 685 | W6 | W |
| 10 | 106 | A7 | A |
| 22 | 226 | J7 | J |
| 33 | 336 | N7 | N |
| 47 | 476 | S7 | S |

VOLTAGE CODES

| Voltage | Code |
|---------|------|
| 2.5 | e |
| 4 | G |
| 6.3 | J |
| 10 | A |
| 16 | C |
| 20 | D |
| 25 | E |
| 35 | V |
| 50 | H |

TAPE DIMENSIONS (mm)

| Metric Code | Case Code | $A_0 \pm 0.2$ | $B_0 \pm 0.2$ | $W \pm 0.3$ | $F \pm 0.05$ | $P_0 \pm 0.1$ | $P_1 \pm 0.1$ | $P_2 \pm 0.05$ | $G \pm 0.1$ | $K \pm 0.2$ | T | 7" Reel |
|-------------|-----------|---------------|---------------|-------------|--------------|---------------|---------------|----------------|-------------|-------------|-----|---------|
| 2012 | P | 1.4 | 2.2 | 8.0 | 3.5 | 4.0 | 4.0 | 2.0 | 1.75 | 1.4 | 0.2 | 3000 |
| 3216 | A2 | 1.9 | 3.5 | 8.0 | 3.5 | 4.0 | 4.0 | 2.0 | 1.75 | 1.4 | 0.2 | 3000 |
| 3216 | A | 1.9 | 3.5 | 8.0 | 3.5 | 4.0 | 4.0 | 2.0 | 1.75 | 1.9 | 0.2 | 2000 |
| 3528 | B2 | 3.2 | 3.8 | 8.0 | 3.5 | 4.0 | 4.0 | 2.0 | 1.75 | 1.4 | 0.2 | 3000 |
| 3528 | B | 3.2 | 3.8 | 8.0 | 3.5 | 4.0 | 4.0 | 2.0 | 1.75 | 2.1 | 0.2 | 2000 |
| 6032 | C2 | 3.7 | 6.4 | 12.0 | 5.65 | 4.0 | 8.0 | 2.0 | 1.5 | 1.7 | 0.3 | 500 |
| 6032 | C | 3.7 | 6.4 | 12.0 | 5.65 | 4.0 | 8.0 | 2.0 | 1.5 | 3.0 | 0.3 | 500 |
| 7343 | V | 4.8 | 7.7 | 12.0 | 5.65 | 4.0 | 8.0 | 2.0 | 1.5 | 2.4 | 0.3 | 500 |
| 7343 | D | 4.8 | 7.7 | 12.0 | 5.65 | 4.0 | 8.0 | 2.0 | 1.5 | 3.3 | 0.3 | 500 |
| 7343H | E | 4.7 | 7.7 | 12.0 | 5.5 | 4.0 | 8.0 | 2.0 | 1.5 | 4.5 | 0.6 | 500 |



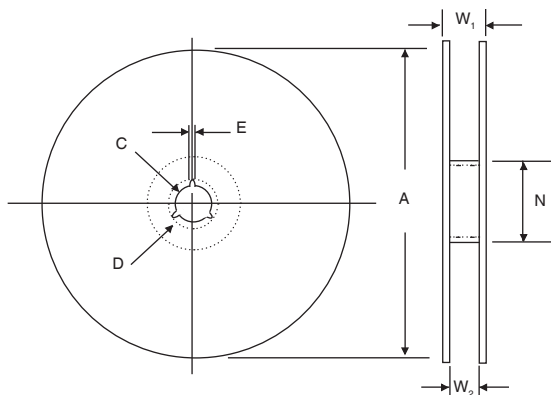
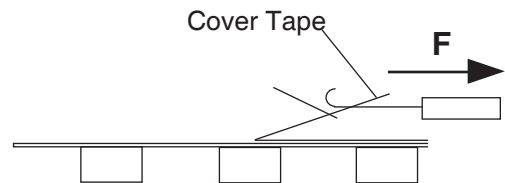
Cover tape peel-off specification

1. Peel-off speed : 300 mm/min.
2. Peel-off force : $F = 30 - 75g$
3. Peel-off angle : $\Theta = 0 - 15^\circ$

Peel-off speed
(F) = 50mm/Sec.

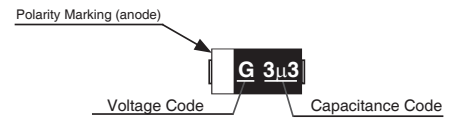
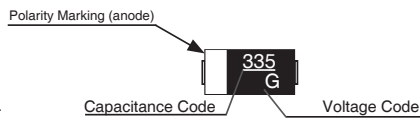
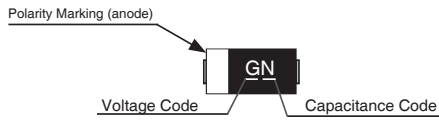
REEL DIMENSIONS (mm)

| Tape Width | A | C | D | E | N | W_1 | W_2 |
|------------|---------------|--------------|--------------|---------------|---------|----------------|-----------|
| 8mm | 178 ± 2.0 | 13 ± 0.5 | 21 ± 0.5 | 2.0 ± 0.5 | 50 min. | 10 ± 2.0 | 14.5 max. |
| 12mm | 178 ± 2.0 | 13 ± 0.5 | 21 ± 0.5 | 2.0 ± 0.5 | 50 min. | 14.5 ± 2.0 | 18.5 max. |

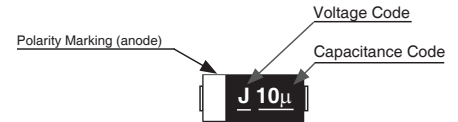
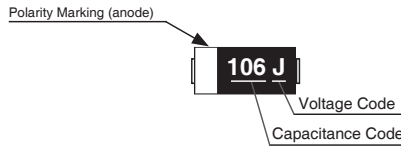
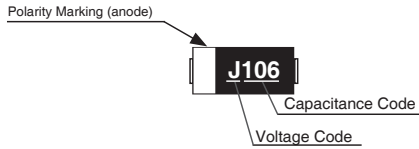


COMPONENT MARKING

P Case Size

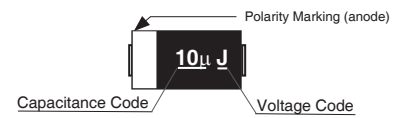
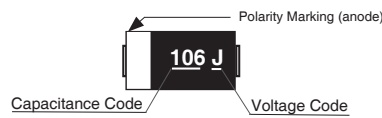
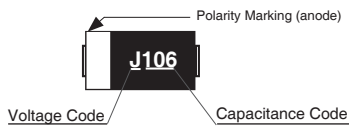


A & A2 Case Size



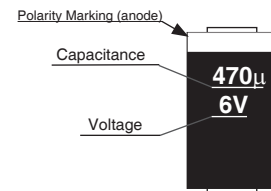
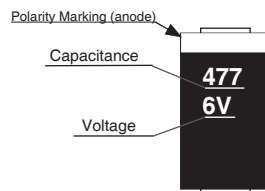
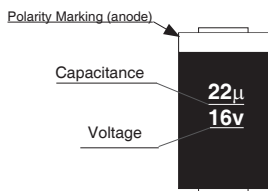
B & B2 Case Size

2.5V marked 2, 6.3V marked 6



C, V, D & E Case Size

2.5V marked 2, 6.3V marked 6



Note: Component body color may be Black(white marking) or Gold (black marking).

CAPACITANCE CODES

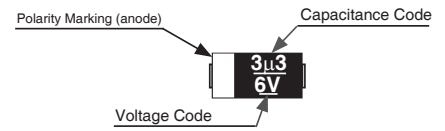
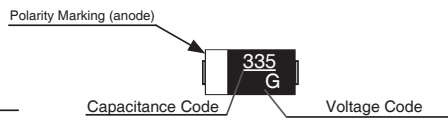
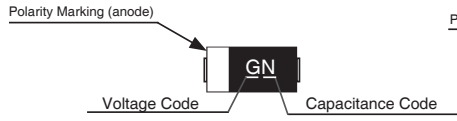
| Cap. (μF) | STD EIA Code | EIA Code 198D | Code for P Case Size |
|-----------|--------------|---------------|----------------------|
| 0.1 | 104 | A5 | - |
| 0.15 | 154 | E5 | - |
| 0.22 | 224 | J5 | - |
| 0.33 | 334 | N5 | N |
| 0.47 | 474 | S5 | S |
| 0.68 | 684 | W5 | W |
| 1.0 | 105 | A6 | A |
| 1.5 | 155 | E6 | E |
| 2.2 | 225 | J6 | J |
| 3.3 | 335 | N6 | N |
| 4.7 | 475 | S6 | S |
| 6.8 | 685 | W6 | W |
| 10 | 106 | A7 | A |
| 22 | 226 | J7 | J |
| 33 | 336 | N7 | N |
| 47 | 476 | S7 | S |

VOLTAGE CODES

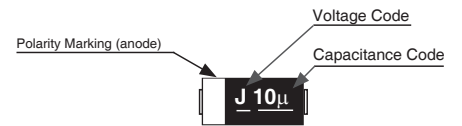
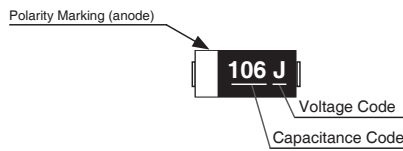
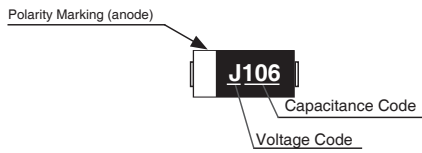
| Voltage | Code |
|---------|------|
| 2.5 | e |
| 4 | G |
| 6.3 | J |
| 10 | A |
| 16 | C |
| 20 | D |
| 25 | E |
| 35 | V |
| 50 | H |

COMPONENT MARKING

P Case Size



A & A2 Case Size



B & B2 Case Size

2.5V marked 2, 6.3V marked 6

