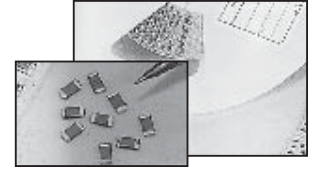


FEATURES

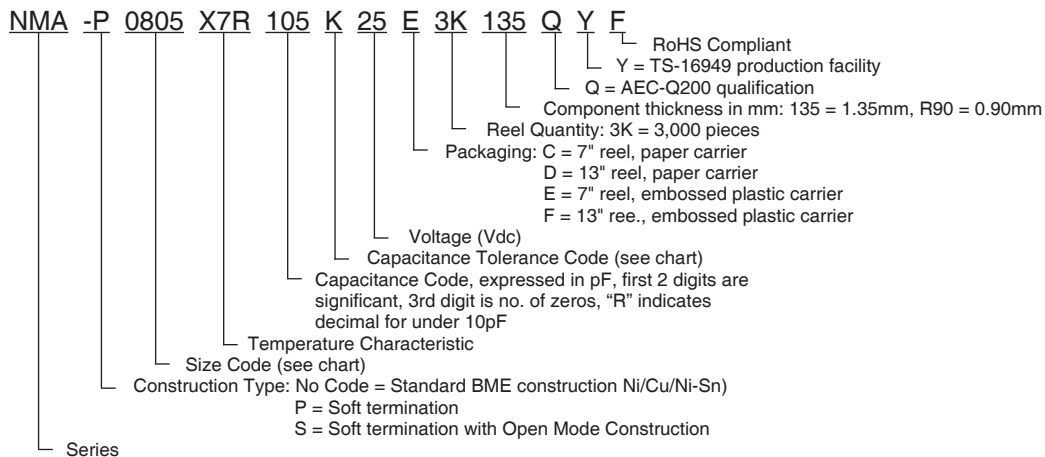
- MANUFACTURED AT ISO/TS 16949 PRODUCTION FACILITY
- AEC-Q200 QUALIFIED
- SURFACE MOUNT CASE SIZES 0402, 0603 & 0805
- AVAILABLE IN NPO & X7R DIELECTRICS
- AVAILABLE WITH FLEX TERMINATIONS & OPEN MODE CONSTRUCTION



CHARACTERISTICS

| Type | NPO | X7R |
|---------------------------------|--|---|
| Capacitance Range | 4.7pF ~ 0.01μF | 0.001μF ~ 0.1μF |
| Capacitance Tolerance | <5pF: C (±0.25pF), 5pF ~ <10pF: D (±0.5pF), >10pF: J (±0.5%) | ±10% (K), ±20% (M) |
| Operating Temperature Range | -55°C ~ +125°C | -55°C ~ +125°C |
| Temperature Characteristics | 0±30 ppm/°C | ±15% |
| Rated Voltages | 50V & 100V | 10V, 16V, 25V, 50V & 100V |
| Q Factor | Cap. ≤30pF: Q = 1,000 min. Cap. >30pF: Q = 400 + 20 x C | - |
| Dissipation Factor | - | 3.5% max. |
| Insulation Resistance | 100,000MΩ or 1,000MΩ • μF Whichever is less | 10,000MΩ or 500MΩ • μF Whichever is less |
| Dielectric Withstanding Voltage | 250% of rated voltage for 1~5 sec, 50mA current maximum | |
| Test Conditions (EIA-198-2E) | ≤1000pF (1MHz±10%) >1000pF (1KHz ±10%), 0.5~5Vrms | 1KHz, 1.0V ±0.2Vrms |

PART NUMBER SYSTEM

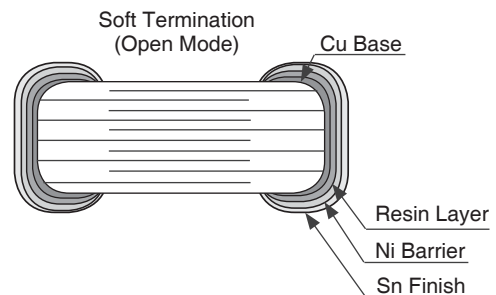
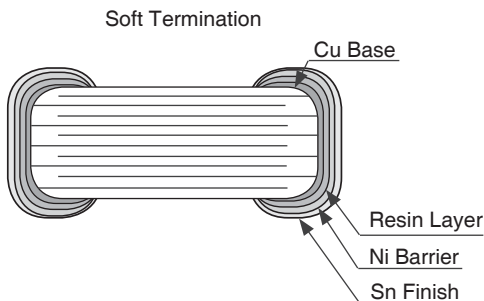
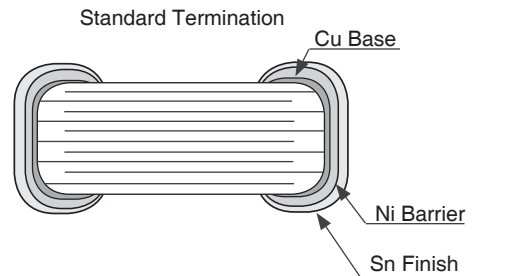


AVAILABLE TERMINATION TYPES

| Case Size | NPO | X7R |
|-----------|----------|-------------------------|
| 0402 | Standard | Soft |
| 0603 | Standard | Soft & Soft (Open Mode) |
| 0805 | Standard | Soft & Soft (Open Mode) |

PCB FLEX SPECIFICATION (AEC Q-200-005)

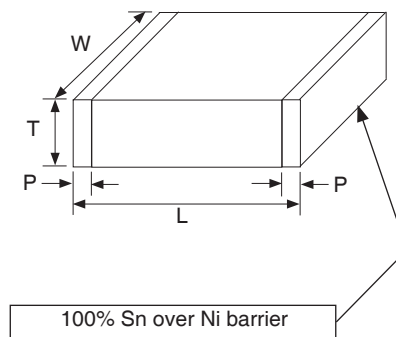
| Case Size | NPO (Standard Terminations) | X7R (Soft Terminations) |
|-----------|---|-------------------------|
| 0402 | 3mm (ΔC ±5% or 0.5pF whichever is greater) | 2mm (ΔC ±10 max.) |
| 0603 | | |
| 0805 | | |



0402 NPO Standard Terminations

| EIA Case Size | NPO 0402 Standard Terminations | | | |
|----------------------------|--------------------------------|---------------|-----------|-------------------|
| Length (L) | 1.0 ± 0.05 | | | |
| Width (W) | 0.5 ± 0.05 | | | |
| Termination Width (P) | 0.2 +0.15/-0.10 | | | |
| Part Number | Capacitance (pF) | Voltage (VDC) | Tolerance | Maximum Thickness |
| NMA0402NPO4R7C50C4KR55QYF | 4.7 | 50V | ±0.25pF | 0.55 |
| NMA0402NPO6R8D50C4KR55QYF | 6.8 | 50V | ±0.5pF | 0.55 |
| NMA0402NPO100J50C4KR55QYF | 10 | 50V | ±5% | 0.55 |
| NMA0402NPO120J50C4KR55QYF | 12 | 50V | ±5% | 0.55 |
| NMA0402NPO150J50C4KR55QYF | 15 | 50V | ±5% | 0.55 |
| NMA0402NPO180J50C4KR55QYF | 18 | 50V | ±5% | 0.55 |
| NMA0402NPO220J50C4KR55QYF | 22 | 50V | ±5% | 0.55 |
| NMA0402NPO270J50C4KR55QYF | 27 | 50V | ±5% | 0.55 |
| NMA0402NPO330J50C4KR55QYF | 33 | 50V | ±5% | 0.55 |
| NMA0402NPO390J50C4KR55QYF | 39 | 50V | ±5% | 0.55 |
| NMA0402NPO470J50C4KR55QYF | 47 | 50V | ±5% | 0.55 |
| NMA0402NPO560J50C4KR55QYF | 56 | 50V | ±5% | 0.55 |
| NMA0402NPO680J50C4KR55QYF | 68 | 50V | ±5% | 0.55 |
| NMA0402NPO820J50C4KR55QYF | 82 | 50V | ±5% | 0.55 |
| NMA0402NPO101J50C4KR55QYF | 100 | 50V | ±5% | 0.55 |
| NMA0402NPO121J50C4KR55QYF | 120 | 50V | ±5% | 0.55 |
| NMA0402NPO151J50C4KR55QYF | 150 | 50V | ±5% | 0.55 |
| NMA0402NPO221J50C4KR55QYF | 220 | 50V | ±5% | 0.55 |
| NMA0402NPO4R7C100C4KR55QYF | 4.7 | 100 V | ±0.25pF | 0.55 |
| NMA0402NPO6R8D100C4KR55QYF | 6.8 | 100 V | ±0.5pF | 0.55 |
| NMA0402NPO100J100C4KR55QYF | 10 | 100 V | ±5% | 0.55 |
| NMA0402NPO120J100C4KR55QYF | 12 | 100 V | ±5% | 0.55 |
| NMA0402NPO150J100C4KR55QYF | 15 | 100 V | ±5% | 0.55 |
| NMA0402NPO180J100C4KR55QYF | 18 | 100 V | ±5% | 0.55 |
| NMA0402NPO220J100C4KR55QYF | 22 | 100 V | ±5% | 0.55 |
| NMA0402NPO270J100C4KR55QYF | 27 | 100 V | ±5% | 0.55 |
| NMA0402NPO330J100C4KR55QYF | 33 | 100 V | ±5% | 0.55 |
| NMA0402NPO390J100C4KR55QYF | 39 | 100 V | ±5% | 0.55 |
| NMA0402NPO470J100C4KR55QYF | 47 | 100 V | ±5% | 0.55 |
| NMA0402NPO560J100C4KR55QYF | 56 | 100 V | ±5% | 0.55 |
| NMA0402NPO680J100C4KR55QYF | 68 | 100 V | ±5% | 0.55 |
| NMA0402NPO820J100C4KR55QYF | 82 | 100 V | ±5% | 0.55 |
| NMA0402NPO101J100C4KR55QYF | 100 | 100 V | ±5% | 0.55 |

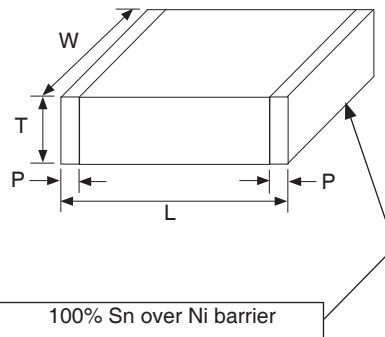
(CONSULT FACTORY FOR CAPACITANCE VALUES NOT LISTED)



0402 X7R Soft Terminations

| EIA Case Size | | X7R 0402 Soft Termination | | |
|-----------------------------|-------------|---------------------------|-----------|-------------------|
| Length (L) | | 1.0 ± 0.05 | | |
| Width (W) | | 0.5 ± 0.05 | | |
| Termination Width (P) | | 0.2 +0.15/-0.10 | | |
| Part Number | Capacitance | Voltage (VDC) | Tolerance | Maximum Thickness |
| NMA-P0402X7R102K16C4KR55QYF | 0.001μF | 16 V | ±10% | 0.55 |
| NMA-P0402X7R152K16C4KR55QYF | 0.0015μF | 16 V | ±10% | 0.55 |
| NMA-P0402X7R222K16C4KR55QYF | 0.0022μF | 16 V | ±10% | 0.55 |
| NMA-P0402X7R332K16C4KR55QYF | 0.0033μF | 16 V | ±10% | 0.55 |
| NMA-P0402X7R472K16C4KR55QYF | 0.0047μF | 16 V | ±10% | 0.55 |
| NMA-P0402X7R682K16C4KR55QYF | 0.0068μF | 16 V | ±10% | 0.55 |
| NMA-P0402X7R103K16C4KR55QYF | 0.01μF | 16 V | ±10% | 0.55 |
| NMA-P0402X7R153K16C4KR55QYF | 0.015μF | 16 V | ±10% | 0.55 |
| NMA-P0402X7R223K16C4KR55QYF | 0.022μF | 16 V | ±10% | 0.55 |
| NMA-P0402X7R473K16C4KR55QYF | 0.047μF | 16 V | ±10% | 0.55 |
| NMA-P0402X7R683K16C4KR55QYF | 0.068μF | 16 V | ±10% | 0.55 |
| NMA-P0402X7R104K16C4KR55QYF | 0.1μF | 16 V | ±10% | 0.55 |
| NMA-P0402X7R102K25C4KR55QYF | 0.001μF | 25V | ±10% | 0.55 |
| NMA-P0402X7R152K25C4KR55QYF | 0.0015μF | 25V | ±10% | 0.55 |
| NMA-P0402X7R222K25C4KR55QYF | 0.0022μF | 25V | ±10% | 0.55 |
| NMA-P0402X7R332K25C4KR55QYF | 0.0033μF | 25V | ±10% | 0.55 |
| NMA-P0402X7R472K25C4KR55QYF | 0.0047μF | 25V | ±10% | 0.55 |
| NMA-P0402X7R682K25C4KR55QYF | 0.0068μF | 25V | ±10% | 0.55 |
| NMA-P0402X7R103K25C4KR55QYF | 0.01μF | 25V | ±10% | 0.55 |
| NMA-P0402X7R153K25C4KR55QYF | 0.015μF | 25V | ±10% | 0.55 |
| NMA-P0402X7R223K25C4KR55QYF | 0.022μF | 25V | ±10% | 0.55 |
| NMA-P0402X7R331K50C4KR55QYF | 330pF | 50V | ±10% | 0.55 |
| NMA-P0402X7R471K50C4KR55QYF | 470pF | 50V | ±10% | 0.55 |
| NMA-P0402X7R681K50C4KR55QYF | 680pF | 50V | ±10% | 0.55 |
| NMA-P0402X7R102K50C4KR55QYF | 0.001μF | 50V | ±10% | 0.55 |
| NMA-P0402X7R152K50C4KR55QYF | 0.0015μF | 50V | ±10% | 0.55 |
| NMA-P0402X7R222K50C4KR55QYF | 0.0022μF | 50V | ±10% | 0.55 |
| NMA-P0402X7R332K50C4KR55QYF | 0.0033μF | 50V | ±10% | 0.55 |
| NMA-P0402X7R472K50C4KR55QYF | 0.0047μF | 50V | ±10% | 0.55 |
| NMA-P0402X7R682K50C4KR55QYF | 0.0068μF | 50V | ±10% | 0.55 |
| NMA-P0402X7R103K50C4KR55QYF | 0.01μF | 50V | ±10% | 0.55 |
| NMA-P0402X7R153K50C4KR55QYF | 0.015μF | 50V | ±10% | 0.55 |
| NMA-P0402X7R223K50C4KR55QYF | 0.022μF | 50V | ±10% | 0.55 |

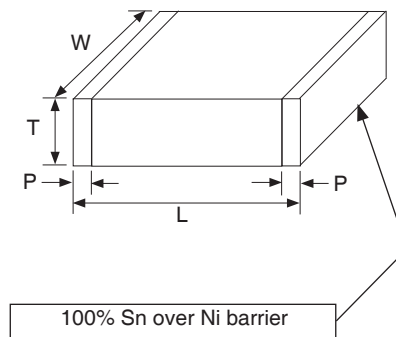
(CONSULT FACTORY FOR CAPACITANCE VALUES NOT LISTED)



0603 NPO Standard Terminations

| EIA Case Size | NPO 0603 - Standard Termination | | | |
|----------------------------|---------------------------------|---------------|-----------|-------------------|
| Length (L) | 1.6 ± 0.10 | | | |
| Width (W) | 0.8 ± 0.10 | | | |
| Termination Width (P) | 0.3 ± 0.20 | | | |
| Part Number | Capacitance | Voltage (VDC) | Tolerance | Maximum Thickness |
| NMA0603NPO4R7C50C4KR90QYF | 4.7pF | 50V | ±0.25pF | 0.90 |
| NMA0603NPO6R8D50C4KR90QYF | 6.8pF | 50V | ±0.5pF | 0.90 |
| NMA0603NPO100J50C4KR90QYF | 10pF | 50V | ±5% | 0.90 |
| NMA0603NPO120J50C4KR90QYF | 12pF | 50V | ±5% | 0.90 |
| NMA0603NPO150J50C4KR90QYF | 15pF | 50V | ±5% | 0.90 |
| NMA0603NPO180J50C4KR90QYF | 18pF | 50V | ±5% | 0.90 |
| NMA0603NPO220J50C4KR90QYF | 22pF | 50V | ±5% | 0.90 |
| NMA0603NPO270J50C4KR90QYF | 27pF | 50V | ±5% | 0.90 |
| NMA0603NPO330J50C4KR90QYF | 33pF | 50V | ±5% | 0.90 |
| NMA0603NPO390J50C4KR90QYF | 39pF | 50V | ±5% | 0.90 |
| NMA0603NPO470J50C4KR90QYF | 47pF | 50V | ±5% | 0.90 |
| NMA0603NPO560J50C4KR90QYF | 56pF | 50V | ±5% | 0.90 |
| NMA0603NPO680J50C4KR90QYF | 68pF | 50V | ±5% | 0.90 |
| NMA0603NPO820J50C4KR90QYF | 82pF | 50V | ±5% | 0.90 |
| NMA0603NPO101J50C4KR90QYF | 100pF | 50V | ±5% | 0.90 |
| NMA0603NPO121J50C4KR90QYF | 120pF | 50V | ±5% | 0.90 |
| NMA0603NPO151J50C4KR90QYF | 150pF | 50V | ±5% | 0.90 |
| NMA0603NPO221J50C4KR90QYF | 220pF | 50V | ±5% | 0.90 |
| NMA0603NPO271J50C4KR90QYF | 270pF | 50V | ±5% | 0.90 |
| NMA0603NPO331J50C4KR90QYF | 330pF | 50V | ±5% | 0.90 |
| NMA0603NPO391J50C4KR90QYF | 390pF | 50V | ±5% | 0.90 |
| NMA0603NPO471J50C4KR90QYF | 470pF | 50V | ±5% | 0.90 |
| NMA0603NPO561J50C4KR90QYF | 560pF | 50V | ±5% | 0.90 |
| NMA0603NPO681J50C4KR90QYF | 680pF | 50V | ±5% | 0.90 |
| NMA0603NPO821J50C4KR90QYF | 820pF | 50V | ±5% | 0.90 |
| NMA0603NPO102J50C4KR90QYF | 0.001μF | 50V | ±5% | 0.90 |
| NMA0603NPO4R7C100C4KR90QYF | 4.7pF | 100 V | ±0.25pF | 0.90 |
| NMA0603NPO6R8D100C4KR90QYF | 6.8pF | 100 V | ±0.5pF | 0.90 |
| NMA0603NPO100J100C4KR90QYF | 10pF | 100 V | ±5% | 0.90 |
| NMA0603NPO120J100C4KR90QYF | 12pF | 100 V | ±5% | 0.90 |
| NMA0603NPO150J100C4KR90QYF | 15pF | 100 V | ±5% | 0.90 |
| NMA0603NPO180J100C4KR90QYF | 18pF | 100 V | ±5% | 0.90 |
| NMA0603NPO220J100C4KR90QYF | 22pF | 100 V | ±5% | 0.90 |
| NMA0603NPO270J100C4KR90QYF | 27pF | 100 V | ±5% | 0.90 |
| NMA0603NPO330J100C4KR90QYF | 33pF | 100 V | ±5% | 0.90 |
| NMA0603NPO390J100C4KR90QYF | 39pF | 100 V | ±5% | 0.90 |
| NMA0603NPO470J100C4KR90QYF | 47pF | 100 V | ±5% | 0.90 |
| NMA0603NPO560J100C4KR90QYF | 56pF | 100 V | ±5% | 0.90 |
| NMA0603NPO680J100C4KR90QYF | 68pF | 100 V | ±5% | 0.90 |
| NMA0603NPO820J100C4KR90QYF | 82pF | 100 V | ±5% | 0.90 |
| NMA0603NPO101J100C4KR90QYF | 100pF | 100 V | ±5% | 0.90 |

(CONSULT FACTORY FOR CAPACITANCE VALUES NOT LISTED)



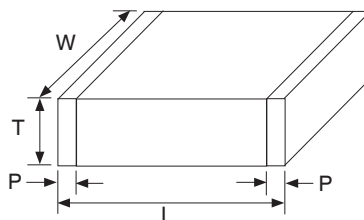
0603 X7R Soft Terminations

| EIA Case Size | X7R 0603 - Soft Termination | | | |
|-----------------------------|-----------------------------|---------------|-----------|------------------------|
| Length (L) | 1.6 ± 0.10 | | | |
| Width (W) | 0.8 ± 0.10 | | | |
| Termination Width (P) | 0.3 ± 0.20 | | | |
| Part Number | Capacitance (μF) | Voltage (VDC) | Tolerance | Maximum Thickness (mm) |
| NMA-P0603X7R154K16C4KR90QYF | 0.15 | 16 V | ±10% | 0.90 |
| NMA-P0603X7R224K16C4KR90QYF | 0.22 | 16 V | ±10% | 0.90 |
| NMA-P0603X7R334K16C4KR90QYF | 0.33 | 16 V | ±10% | 0.90 |
| NMA-P0603X7R474K16C4KR90QYF | 0.47 | 16 V | ±10% | 0.90 |
| NMA-P0603X7R684K16C4KR90QYF | 0.68 | 16 V | ±10% | 0.90 |
| NMA-P0603X7R105K16C4KR90QYF | 1.0 | 16 V | ±10% | 0.90 |
| NMA-P0603X7R154K25C4KR90QYF | 0.15 | 25V | ±10% | 0.90 |
| NMA-P0603X7R224K25C4KR90QYF | 0.22 | 25V | ±10% | 0.90 |
| NMA-P0603X7R334K25C4KR90QYF | 0.33 | 25V | ±10% | 0.90 |
| NMA-P0603X7R474K25C4KR90QYF | 0.47 | 25V | ±10% | 0.90 |

0603 X7R Soft Terminations (Open Mode)

| EIA Case Size | X7R 0603 - Soft Termination (Open Mode) | | | |
|------------------------------|---|---------------|-----------|------------------------|
| Length (L) | 1.6 ± 0.10 | | | |
| Width (W) | 0.8 ± 0.10 | | | |
| Termination Width (P) | 0.3 ± 0.20 | | | |
| Part Number | Capacitance | Voltage (VDC) | Tolerance | Maximum Thickness (mm) |
| NMA-S0603X7R473K16C4KR90QYF | 0.047μF | 16 V | ±10% | 0.90 |
| NMA-S0603X7R683K16C4KR90QYF | 0.068μF | 16 V | ±10% | 0.90 |
| NMA-S0603X7R104K16C4KR90QYF | 0.1μF | 16 V | ±10% | 0.90 |
| NMA-S0603X7R103K25C4KR90QYF | 0.01μF | 25V | ±10% | 0.90 |
| NMA-S0603X7R153K25C4KR90QYF | 0.015μF | 25V | ±10% | 0.90 |
| NMA-S0603X7R223K25C4KR90QYF | 0.022μF | 25V | ±10% | 0.90 |
| NMA-S0603X7R333K25C4KR90QYF | 0.033μF | 25V | ±10% | 0.90 |
| NMA-S0603X7R473K25C4KR90QYF | 0.047μF | 25V | ±10% | 0.90 |
| NMA-S0603X7R683K25C4KR90QYF | 0.068μF | 25V | ±10% | 0.90 |
| NMA-S0603X7R104K25C4KR90QYF | 0.1μF | 25V | ±10% | 0.90 |
| NMA-S0603X7R221K50C4KR90QYF | 220pF | 50V | ±10% | 0.90 |
| NMA-S0603X7R471K50C4KR90QYF | 470pF | 50V | ±10% | 0.90 |
| NMA-S0603X7R102K50C4KR90QYF | 0.001μF | 50V | ±10% | 0.90 |
| NMA-S0603X7R152K50C4KR90QYF | 0.0015μF | 50V | ±10% | 0.90 |
| NMA-S0603X7R222K50C4KR90QYF | 0.0022μF | 50V | ±10% | 0.90 |
| NMA-S0603X7R472K50C4KR90QYF | 0.0047μF | 50V | ±10% | 0.90 |
| NMA-S0603X7R103K50C4KR90QYF | 0.01μF | 50V | ±10% | 0.90 |
| NMA-S0603X7R153K50C4KR90QYF | 0.015μF | 50V | ±10% | 0.90 |
| NMA-S0603X7R223K50C4KR90QYF | 0.022μF | 50V | ±10% | 0.90 |
| NMA-S0603X7R333K50C4KR90QYF | 0.033μF | 50V | ±10% | 0.90 |
| NMA-S0603X7R473K50C4KR90QYF | 0.047μF | 50V | ±10% | 0.90 |
| NMA-S0603X7R683K50C4KR90QYF | 0.068μF | 50V | ±10% | 0.90 |
| NMA-S0603X7R104K50C4KR90QYF | 0.1μF | 50V | ±10% | 0.90 |
| NMA-S0603X7R221K100C4KR90QYF | 220pF | 100V | ±10% | 0.90 |
| NMA-S0603X7R471K100C4KR90QYF | 470pF | 100V | ±10% | 0.90 |
| NMA-S0603X7R102K100C4KR90QYF | 0.001μF | 100V | ±10% | 0.90 |
| NMA-S0603X7R152K100C4KR90QYF | 0.0015μF | 100V | ±10% | 0.90 |
| NMA-S0603X7R222K100C4KR90QYF | 0.0022μF | 100V | ±10% | 0.90 |
| NMA-S0603X7R332K100C4KR90QYF | 0.0033μF | 100V | ±10% | 0.90 |
| NMA-S0603X7R472K100C4KR90QYF | 0.0047μF | 100V | ±10% | 0.90 |
| NMA-S0603X7R103K100C4KR90QYF | 0.01μF | 100V | ±10% | 0.90 |

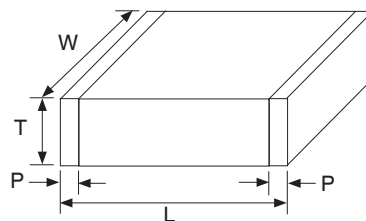
(CONSULT FACTORY FOR CAPACITANCE VALUES NOT LISTED)



0805 NPO Standard Terminations

| EIA Case Size | NPO 0805 Standard Termination | | | |
|----------------------------|-------------------------------|---------------|-----------|------------------------|
| Length (L) | 2.0 ± 0.20 | | | |
| Width (W) | 1.25 ± 0.20 | | | |
| Termination Width (P) | 0.5 +0.20/-0.30 | | | |
| Part Number | Capacitance | Voltage (VDC) | Tolerance | Maximum Thickness (mm) |
| NMA0805NPO100J50C4KR70QYF | 10pF | 50 | ±5% | 0.70 |
| NMA0805NPO120J50C4KR70QYF | 12pF | 50 | ±5% | 0.70 |
| NMA0805NPO150J50C4KR70QYF | 15pF | 50 | ±5% | 0.70 |
| NMA0805NPO180J50C4KR70QYF | 18pF | 50 | ±5% | 0.70 |
| NMA0805NPO220J50C4KR70QYF | 22pF | 50 | ±5% | 0.70 |
| NMA0805NPO330J50C4KR70QYF | 33pF | 50 | ±5% | 0.70 |
| NMA0805NPO390J50C4KR70QYF | 39pF | 50 | ±5% | 0.70 |
| NMA0805NPO470J50C4KR70QYF | 47pF | 50 | ±5% | 0.70 |
| NMA0805NPO560J50C4KR70QYF | 56pF | 50 | ±5% | 0.70 |
| NMA0805NPO680J50C4KR70QYF | 68pF | 50 | ±5% | 0.70 |
| NMA0805NPO820J50C4KR70QYF | 82pF | 50 | ±5% | 0.70 |
| NMA0805NPO101J50C4KR70QYF | 100pF | 50 | ±5% | 0.70 |
| NMA0805NPO121J50C4KR70QYF | 120pF | 50 | ±5% | 0.70 |
| NMA0805NPO151J50C4KR70QYF | 150pF | 50 | ±5% | 0.70 |
| NMA0805NPO221J50C4KR70QYF | 220pF | 50 | ±5% | 0.70 |
| NMA0805NPO271J50C4KR70QYF | 270pF | 50 | ±5% | 0.70 |
| NMA0805NPO331J50C4KR70QYF | 330pF | 50 | ±5% | 0.70 |
| NMA0805NPO471J50C4KR95QYF | 470pF | 50 | ±5% | 0.70 |
| NMA0805NPO561J50C4KR95QYF | 560pF | 50 | ±5% | 0.70 |
| NMA0805NPO681J50C4KR95QYF | 680pF | 50 | ±5% | 0.70 |
| NMA0805NPO821J50C4KR95QYF | 820pF | 50 | ±5% | 0.70 |
| NMA0805NPO102J50C4KR95QYF | 0.001μF | 50 | ±5% | 0.70 |
| NMA0805NPO122J50C4KR95QYF | 0.0012μF | 50 | ±5% | 0.70 |
| NMA0805NPO152J50C4KR95QYF | 0.0015μF | 50 | ±5% | 0.70 |
| NMA0805NPO182J50C4KR95QYF | 0.0018μF | 50 | ±5% | 0.70 |
| NMA0805NPO222J50C4KR95QYF | 0.0022μF | 50 | ±5% | 0.70 |
| NMA0805NPO272J50C4KR95QYF | 0.0027μF | 50 | ±5% | 0.70 |
| NMA0805NPO332J50C4KR95QYF | 0.0033μF | 50 | ±5% | 0.70 |
| NMA0805NPO392J50C4KR95QYF | 0.0039μF | 50 | ±5% | 0.70 |
| NMA0805NPO472J50C4KR95QYF | 0.0047μF | 50 | ±5% | 0.70 |
| NMA0805NPO562J50C4KR95QYF | 0.0056μF | 50 | ±5% | 0.70 |
| NMA0805NPO102J50E3K135QYF | 0.001μF | 50 | ±5% | 1.35 |
| NMA0805NPO122J50E3K135QYF | 0.0012μF | 50 | ±5% | 1.35 |
| NMA0805NPO152J50E3K135QYF | 0.0015μF | 50 | ±5% | 1.35 |
| NMA0805NPO182J50E3K135QYF | 0.0018μF | 50 | ±5% | 1.35 |
| NMA0805NPO222J50E3K135QYF | 0.0022μF | 50 | ±5% | 1.35 |
| NMA0805NPO272J50E3K135QYF | 0.0027μF | 50 | ±5% | 1.35 |
| NMA0805NPO332J50E3K135QYF | 0.0033μF | 50 | ±5% | 1.35 |
| NMA0805NPO392J50E3K135QYF | 0.0039μF | 50 | ±5% | 1.35 |
| NMA0805NPO472J50E3K135QYF | 0.0047μF | 50 | ±5% | 1.35 |
| NMA0805NPO562J50E3K135QYF | 0.0056μF | 50 | ±5% | 1.35 |
| NMA0805NPO682J50E3K135QYF | 0.0068μF | 50 | ±5% | 1.35 |
| NMA0805NPO822J50E3K135QYF | 0.0082μF | 50 | ±5% | 1.35 |
| NMA0805NPO103J50E3K135QYF | 0.01μF | 50 | ±5% | 1.35 |
| NMA0805NPO100J100C4KR70QYF | 10pF | 100 | ±5% | 0.70 |
| NMA0805NPO120J100C4KR70QYF | 12pF | 100 | ±5% | 0.70 |
| NMA0805NPO150J100C4KR70QYF | 15pF | 100 | ±5% | 0.70 |
| NMA0805NPO180J100C4KR70QYF | 18pF | 100 | ±5% | 0.70 |

(CONSULT FACTORY FOR CAPACITANCE VALUES NOT LISTED)



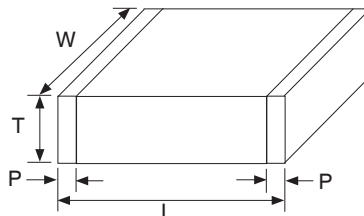
0805 NPO Standard Terminations

| EIA Case Size | NPO 0805 Standard Termination | | | |
|----------------------------|-------------------------------|---------------|-----------|------------------------|
| Length (L) | 2.0 ± 0.20 | | | |
| Width (W) | 1.25 ± 0.20 | | | |
| Termination Width (P) | 0.5 +0.20/-0.30 | | | |
| Part Number | Capacitance (pF) | Voltage (VDC) | Tolerance | Maximum Thickness (mm) |
| NMA0805NPO220J100C4KR70QYF | 22 | 100 | ±5% | 0.70 |
| NMA0805NPO270J100C4KR70QYF | 27 | 100 | ±5% | 0.70 |
| NMA0805NPO330J100C4KR70QYF | 33 | 100 | ±5% | 0.70 |
| NMA0805NPO390J100C4KR70QYF | 39 | 100 | ±5% | 0.70 |
| NMA0805NPO470J100C4KR70QYF | 47 | 100 | ±5% | 0.70 |
| NMA0805NPO560J100C4KR70QYF | 56 | 100 | ±5% | 0.70 |
| NMA0805NPO680J100C4KR70QYF | 68 | 100 | ±5% | 0.70 |
| NMA0805NPO820J100C4KR70QYF | 82 | 100 | ±5% | 0.70 |
| NMA0805NPO101J100C4KR70QYF | 100 | 100 | ±5% | 0.70 |
| NMA0805NPO121J100C4KR70QYF | 120 | 100 | ±5% | 0.70 |
| NMA0805NPO151J100C4KR70QYF | 150 | 100 | ±5% | 0.70 |
| NMA0805NPO221J100C4KR70QYF | 220 | 100 | ±5% | 0.70 |
| NMA0805NPO271J100C4KR70QYF | 270 | 100 | ±5% | 0.70 |
| NMA0805NPO331J100C4KR70QYF | 330 | 100 | ±5% | 0.70 |
| NMA0805NPO471J100C4KR95QYF | 470 | 100 | ±5% | 0.95 |
| NMA0805NPO561J100C4KR95QYF | 560 | 100 | ±5% | 0.95 |
| NMA0805NPO681J100C4KR95QYF | 680 | 100 | ±5% | 0.95 |
| NMA0805NPO821J100C4KR95QYF | 820 | 100 | ±5% | 0.95 |
| NMA0805NPO102J100C4KR95QYF | 1000 | 100 | ±5% | 0.95 |
| NMA0805NPO102J100E3K135QYF | 1000 | 100 | ±5% | 1.35 |

0805 X7R Soft Terminations

| EIA Case Size | X7R 0805 Soft Termination | | | |
|-----------------------------|---------------------------|---------------|-----------|------------------------|
| Length (L) | 2.0 ± 0.20 | | | |
| Width (W) | 1.25 ± 0.20 | | | |
| Termination Width (P) | 0.5 +0.20/-0.30 | | | |
| Part Number | Capacitance (µF) | Voltage (VDC) | Tolerance | Maximum Thickness (mm) |
| NMA-P0805X7R335K10E3K140QYF | 3.3 | 10V | ±10% | 1.40 |
| NMA-P0805X7R475K10E3K140QYF | 4.7 | 10V | ±10% | 1.40 |
| NMA-P0805X7R154K16E3K135QYF | 0.15 | 16 V | ±10% | 1.35 |
| NMA-P0805X7R224K16E3K135QYF | 0.22 | 16 V | ±10% | 1.35 |
| NMA-P0805X7R334K16E3K135QYF | 0.33 | 16 V | ±10% | 1.35 |
| NMA-P0805X7R474K16E3K135QYF | 0.47 | 16 V | ±10% | 1.35 |
| NMA-P0805X7R684K16E3K135QYF | 0.68 | 16 V | ±10% | 1.35 |
| NMA-P0805X7R105K16E3K135QYF | 1.0 | 16 V | ±10% | 1.35 |
| NMA-P0805X7R225K16E3K135QYF | 2.2 | 16 V | ±10% | 1.35 |
| NMA-P0805X7R154K25E3K135QYF | 0.15 | 25V | ±10% | 1.35 |
| NMA-P0805X7R224K25E3K135QYF | 0.22 | 25V | ±10% | 1.35 |
| NMA-P0805X7R334K25E3K135QYF | 0.33 | 25V | ±10% | 1.35 |
| NMA-P0805X7R474K25E3K135QYF | 0.47 | 25V | ±10% | 1.35 |
| NMA-P0805X7R684K25E3K135QYF | 0.68 | 25V | ±10% | 1.35 |
| NMA-P0805X7R105K25E3K135QYF | 1.0 | 25V | ±10% | 1.35 |
| NMA-P0805X7R154K50E3K135QYF | 0.15 | 50V | ±10% | 1.35 |
| NMA-P0805X7R224K50E3K135QYF | 0.22 | 50V | ±10% | 1.35 |
| NMA-P0805X7R334K50E3K135QYF | 0.33 | 50V | ±10% | 1.35 |
| NMA-P0805X7R474K50E3K135QYF | 0.47 | 50V | ±10% | 1.35 |

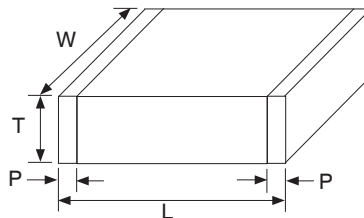
(CONSULT FACTORY FOR CAPACITANCE VALUES NOT LISTED)

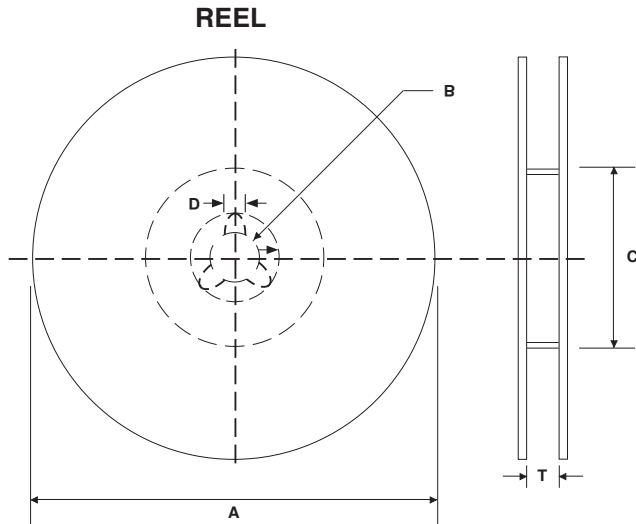


0805 X7R Soft Terminations (Open Mode)

| EIA Case Size | X7R 0805 Soft Termination (Open Mode) | | | |
|------------------------------|---------------------------------------|---------------|-----------|------------------------|
| Length (L) | 2.0 ± 0.20 | | | |
| Width (W) | 1.25 ± 0.20 | | | |
| Termination Width (P) | 0.5 +0.20/-0.30 | | | |
| Part Number | Capacitance (μF) | Voltage (VDC) | Tolerance | Maximum Thickness (mm) |
| NMA-S0805X7R104K16C4KR95QYF | 0.1 | 16 V | ±10% | 0.95 |
| NMA-S0805X7R473K25C4KR95QYF | 0.047 | 25V | ±10% | 0.95 |
| NMA-S0805X7R683K25C4KR95QYF | 0.068 | 25V | ±10% | 0.95 |
| NMA-S0805X7R104K25C4KR95QYF | 0.1 | 25V | ±10% | 0.95 |
| NMA-S0805X7R102K50C4KR70QYF | 0.001 | 50V | ±10% | 0.70 |
| NMA-S0805X7R222K50C4KR70QYF | 0.0022 | 50V | ±10% | 0.70 |
| NMA-S0805X7R472K50C4KR70QYF | 0.0047 | 50V | ±10% | 0.70 |
| NMA-S0805X7R103K50C4KR70QYF | 0.01 | 50V | ±10% | 0.70 |
| NMA-S0805X7R153K50C4KR70QYF | 0.015 | 50V | ±10% | 0.70 |
| NMA-S0805X7R223K50C4KR70QYF | 0.022 | 50V | ±10% | 0.70 |
| NMA-S0805X7R333K50C4KR95QYF | 0.033 | 50V | ±10% | 0.95 |
| NMA-S0805X7R473K50C4KR95QYF | 0.047 | 50V | ±10% | 0.95 |
| NMA-S0805X7R683K50C4KR95QYF | 0.068 | 50V | ±10% | 0.95 |
| NMA-S0805X7R104K50C4KR95QYF | 0.1 | 50V | ±10% | 0.95 |
| NMA-S0805X7R104K50C3K135QYF | 0.1 | 50V | ±10% | 1.35 |
| NMA-S0805X7R102K100C4KR70QYF | 0.001 | 100V | ±10% | 0.70 |
| NMA-S0805X7R222K100C4KR70QYF | 0.0022 | 100V | ±10% | 0.70 |
| NMA-S0805X7R472K100C4KR70QYF | 0.0047 | 100V | ±10% | 0.70 |
| NMA-S0805X7R103K100C4KR70QYF | 0.01 | 100V | ±10% | 0.70 |
| NMA-S0805X7R153K100C4KR70QYF | 0.015 | 100V | ±10% | 0.70 |
| NMA-S0805X7R223K100C4KR70QYF | 0.022 | 100V | ±10% | 0.70 |
| NMA-S0805X7R333K100C4KR95QYF | 0.033 | 100V | ±10% | 0.95 |
| NMA-S0805X7R473K100C4KR95QYF | 0.047 | 100V | ±10% | 0.95 |
| NMA-S0805X7R683K100C4KR95QYF | 0.068 | 100V | ±10% | 0.95 |
| NMA-S0805X7R104K100C4KR95QYF | 0.1 | 100V | ±10% | 0.95 |
| NMA-S0805X7R104K100C3K135QYF | 0.1 | 100V | ±10% | 1.35 |

(CONSULT FACTORY FOR CAPACITANCE VALUES NOT LISTED)





REEL DIMENSIONS (mm)

| Reel Diameter (A) | B | C | D | T max. |
|---------------------|----------|----------|----------|-----------|
| 7" (178 + 0/- 0.3) | 13 ± 0.3 | 80 +1/-0 | 21 ± 1.0 | 9.0 ± 0.5 |
| 13" (330 + 0/- 0.3) | | | | |

REEL QUANTITIES*

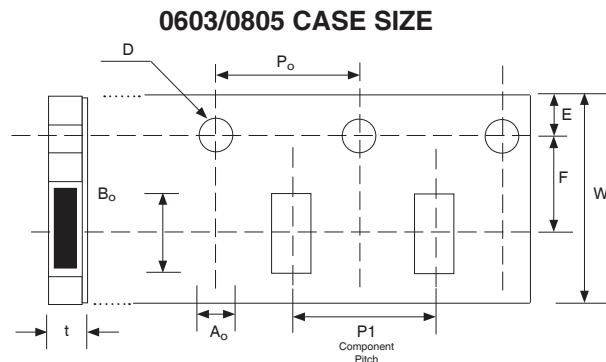
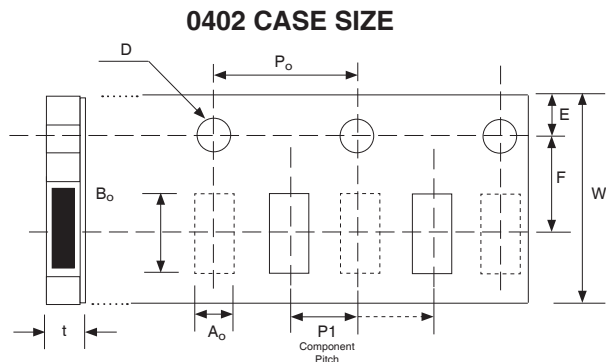
| Reel Size | 0402 | 0603 | 0805 | |
|-----------|--------|--------|------------|-----------|
| | | | T ≤ 0.95mm | T ≥ 1.0mm |
| 7" | 10,000 | 4,000 | 4,000 | 3,000 |
| 13" | 50,000 | 15,000 | 15,000 | 10,000 |

CARRIER TAPE MATERIAL

Parts with a thickness of ≥1mm will be taped on embossed plastic carrier. Parts with a thickness of less than 1mm will be taped on paper carrier

PUNCHED CARRIER TAPE DIMENSIONS (mm)

| Type | A _o | B _o | W | F | E | P1 | P0 | D0 | t max. |
|------|----------------|----------------|-----------|------------|-------------|------------|-----------|----------------|--------|
| 0402 | 0.61 ± 0.04 | 1.12 ± 0.04 | 8.0 ± 0.3 | 3.5 ± 0.05 | 1.75 ± 0.01 | 2.0 ± 0.05 | 4.0 ± 0.1 | 1.5 +0.1/-0.03 | 0.65 |
| 0603 | 1.1 ± 0.2 | 1.9 ± 0.2 | | | | 4.0 ± 0.1 | | | 1.1 |
| 0805 | 1.6 ± 0.2 | 2.4 ± 0.2 | | | | | | | |



EMBOSSED PLASTIC CARRIER TAPE DIMENSIONS (mm)

| Type | A _o | B _o | W | F | E | P1 | P0 | D0 | t ₁ | t ₂ |
|------|----------------|----------------|-----------|------------|-------------|-----------|-----------|----------------|----------------|----------------|
| 0805 | 1.45 ± 0.2 | 2.3 ± 0.2 | 8.0 ± 0.3 | 3.5 ± 0.05 | 1.75 ± 0.01 | 4.0 ± 0.1 | 4.0 ± 0.1 | 1.5 +0.1/-0.03 | 0.6 max. | 2.9 max. |

