

NTS Series / NTF Series

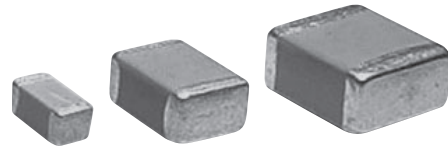
(General product)

Temperature cycle : 1000 cycles



◆FEATURES

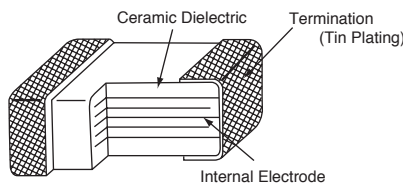
1. Large capacitance by small size.
2. X7R and X7S temperature characteristics.
3. High permissible ripple current capability.
4. NTF: Temperature cycle : 1000 cycles.



◆APPLICATIONS

1. Smoothing circuit of DC-DC converters.
2. On-board power supplies.
3. Voltage regulators for computers.
3. Noise suppressor for various kinds of equipments.
4. High reliability equipments.

◆CONSTRUCTION



◆RATINGS

| | |
|--------------------------------|--|
| 1. Category Temperature Range | -55 to +125°C |
| 2. Rated Voltage Range | 25, 35, 50, 100, 250, 500V _{dc} |
| 3. Rated Capacitance Range | 0.010 to 47μF |
| 4. Rated Capacitance Tolerance | M (±20%) : Standard, K (±10%) |
| 5. Temperature Characteristics | X7R |
| 6. Rated Ripple Current | See No.5 on the following table |

◆SPECIFICATIONS

| No. | Items | Specification | Test Condition | | |
|---------------------------------|-----------------------|--|---|---------------------------------|-------------|
| 1 | Withstand Voltage | No abnormality. | Rated voltage | Withstand voltage | |
| | | | Less than 250V | 250% of rated voltage | |
| | | | More than 250V Less than 500V | 100V + 150% of rated voltage | |
| | | | More than 500V | 130% of rated voltage | |
| Shall be applied for 5 seconds. | | | | | |
| 2 | Insulation Resistance | 100/C _R (MΩ) or 4000(MΩ) whichever is less. | Rated voltage shall be applied for 60±5 seconds at temperature 25±2°C. | | |
| 3 | Rated Capacitance | Within specified tolerance. | C _R ≤10μF | C _R >10μF | |
| | | | Temperature 25±2°C | | |
| 4 | Dissipation Factor | X7R temperature characteristics of 5.0% or less X7S temperature characteristics of 7.5% or less | Frequency | 1±0.1kHz | 120±12Hz |
| | | | Voltage | 1±0.2Vrms | 0.5±0.2Vrms |
| | | | | | |
| 5 | Rated Ripple Current | See STANDARD RATINGS | 10kHz~1MHz (sine curve) Ripple voltage V _p shall be less than the rated voltage. | | |

As customer requirement, Chemi-Con has submits the test results according to AEC-Q200 for Multilayer ceramic capacitors. Please contact us for more information.



MULTILAYER CERAMIC CHIP CAPACITORS

NTS Series

◆STANDARD RATINGS

| Rated voltage (Vdc) | Rated Capacitance (μF) | Electrostatic Capacitance Temperature Characteristics | Dimensions(mm) | | | | Maximum ripple current (Arms) | Part Number | Taping Quantity per reel (pcs. / reel) | | | | | |
|---------------------|------------------------|---|--------------------|---------|---------|---------|-------------------------------|--------------------|--|-------|---------|-----|--------------------|-------|
| | | | L | W | T max. | a | | | | | | | | |
| 25 | 1.0 | X7R | 3.2±0.2 | 1.6±0.2 | 1.8 | 0.5±0.3 | 0.3 | KTS250B105M31N0T00 | 3,000 | | | | | |
| | 1.5 | X7R | | | | | | KTS250B155M31N0T00 | 3,000 | | | | | |
| | 2.2 | X7R | | | | | | KTS250B225M31N0T00 | 3,000 | | | | | |
| | 3.3 | X7S | | | | | | KTS250S335M31N0T00 | 2,000 | | | | | |
| | 3.3 | X7R | 3.2±0.4 | 2.5±0.3 | 2.6 | 0.6±0.3 | 0.5 | KTS250B335M32N0T00 | 1,600 | | | | | |
| | 4.7 | X7R | | | | | | KTS250B475M32N0T00 | 1,600 | | | | | |
| | 6.8 | X7R | | | | | | KTS250B685M32N0T00 | 1,600 | | | | | |
| | 10 | X7S | | | | | | KTS250S106M32N0T00 | 1,600 | | | | | |
| | 10 | X7R | 4.5±0.4 | 3.2±0.4 | 2.8 | 0.6±0.3 | 1.0 | KTS250B106M43N0T00 | 800 | | | | | |
| | 15 | X7R | | | | | | KTS250B156M43N0T00 | 800 | | | | | |
| | 22 | X7S | | | | | | KTS250S226M43N0T00 | 800 | | | | | |
| | 22 | X7R | | | | | | KTS250B226M55N0T00 | 800 | | | | | |
| | 33 | X7R | 5.7±0.4 | 5.0±0.4 | 2.8 | 0.8±0.5 | 2.0 | KTS250B336M55N0T00 | 800 | | | | | |
| | 33 | X7R | | | 3.0 | | | KTS250B336M55N0T00 | 800 | | | | | |
| 47 | X7R | 7.5±0.5 | 6.3±0.5 | 4.0 | 1.0±0.5 | 3.0 | KTS250B476M76N0T00 | 300 | | | | | | |
| 35 | 1.0 | X7R | 3.2±0.2 | 1.6±0.2 | 1.8 | 0.5±0.3 | 0.3 | KTS350B105M31N0T00 | 3,000 | | | | | |
| | 1.5 | X7R | | | | | | KTS350B155M31N0T00 | 3,000 | | | | | |
| | 2.2 | X7R | | | | | | KTS350B225M31N0T00 | 3,000 | | | | | |
| | 3.3 | X7R | | | | | | KTS350B335M32N0T00 | 1,600 | | | | | |
| | 4.7 | X7R | 3.2±0.4 | 2.5±0.3 | 2.6 | 0.6±0.3 | 0.5 | KTS350B475M32N0T00 | 1,600 | | | | | |
| | 6.8 | X7R | | | | | | KTS350B685M43N0T00 | 800 | | | | | |
| | 10 | X7R | | | | | | KTS350B106M43N0T00 | 800 | | | | | |
| | 15 | X7R | | | | | | KTS350B156M55N0T00 | 800 | | | | | |
| | 22 | X7R | 5.7±0.4 | 5.0±0.4 | 2.8 | 0.8±0.5 | 2.0 | KTS350B226M55N0T00 | 800 | | | | | |
| | 33 | X7R | | | | | | KTS350B336M76N0T00 | 300 | | | | | |
| | 47 | X7R | 7.5±0.5 | 6.3±0.5 | 4.0 | 1.0±0.5 | 3.0 | KTS350B476M76N0T00 | 300 | | | | | |
| | 50 | 0.33 | X7R | 3.2±0.2 | 1.6±0.2 | 1.8 | 0.5±0.3 | 0.3 | KTS500B334M31N0T00 | 3,000 | | | | |
| | | 0.47 | X7R | | | | | | KTS500B474M31N0T00 | 3,000 | | | | |
| | | 0.68 | X7R | | | | | | KTS500B684M31N0T00 | 3,000 | | | | |
| 1.0 | | X7R | KTS500B105M31N0T00 | | | | | | 3,000 | | | | | |
| 1.5 | | X7R | KTS500B155M31N0T00 | | | | | | 2,000 | | | | | |
| 2.2 | | X7R | KTS500B225M31N0T00 | | | | | | 2,000 | | | | | |
| 1.5 | | X7R | 3.2±0.4 | 2.5±0.3 | 2.6 | 0.6±0.3 | 0.5 | KTS500B155M32N0T00 | 1,600 | | | | | |
| 2.2 | | X7R | | | | | | KTS500B225M32N0T00 | 1,600 | | | | | |
| 3.3 | | X7R | | | | | | KTS500B335M32N0T00 | 1,600 | | | | | |
| 4.7 | | X7R | | | | | | KTS500B475M32N0T00 | 1,600 | | | | | |
| 4.7 | | X7R | | | | | | KTS500B475M43N0T00 | 800 | | | | | |
| 6.8 | | X7R | | | | | | KTS500B685M43N0T00 | 800 | | | | | |
| 10 | | X7R | 4.5±0.4 | 3.2±0.4 | 2.8 | 0.6±0.3 | 1.0 | KTS500B106M43N0T00 | 800 | | | | | |
| 10 | | X7R | | | | | | KTS500B106M55N0T00 | 800 | | | | | |
| 15 | | X7R | | | | | | KTS500B156M55N0T00 | 800 | | | | | |
| 22 | | X7R | | | | | | KTS500B226M76N0T00 | 300 | | | | | |
| 0.1 | | X7R | | | | | | 3.2±0.2 | 1.6±0.2 | 1.8 | 0.5±0.3 | 0.3 | KTS101B104M31N0T00 | 3,000 |
| 0.15 | | X7R | | | | | | | | | | | KTS101B154M31N0T00 | 3,000 |
| 0.22 | X7R | KTS101B224M31N0T00 | 3,000 | | | | | | | | | | | |
| 0.33 | X7R | KTS101B334M31N0T00 | 3,000 | | | | | | | | | | | |
| 0.47 | X7R | KTS101B474M31N0T00 | 3,000 | | | | | | | | | | | |
| 0.68 | X7R | KTS101B684M31N0T00 | 3,000 | | | | | | | | | | | |
| 1.0 | X7R | KTS101B105M31N0T00 | 2,000 | | | | | | | | | | | |
| 1.5 | X7R | KTS101B155M31N0T00 | 2,000 | | | | | | | | | | | |
| 2.2 | X7R | KTS101B225M31N0T00 | 2,000 | | | | | | | | | | | |
| 1.0 | X7R | 3.2±0.4 | 2.5±0.3 | 2.6 | 0.6±0.3 | 0.5 | KTS101B105M32N0T00 | | | | | | 1,600 | |
| 1.5 | X7R | | | | | | KTS101B155M32N0T00 | | | | | | 1,600 | |
| 2.2 | X7R | | | | | | KTS101B225M32N0T00 | | | | | | 1,600 | |
| 3.3 | X7R | | | | | | KTS101B335M32N0T00 | | | | | | 1,600 | |
| 4.7 | X7R | | | | | | KTS101B475M32N0T00 | | | | | | 1,600 | |
| 1.5 | X7R | | | | | | KTS101B155M43N0T00 | | | | | | 800 | |
| 2.2 | X7R | 4.5±0.4 | 3.2±0.4 | 2.8 | 0.6±0.3 | 1.0 | KTS101B225M43N0T00 | | | | | | 800 | |
| 3.3 | X7R | | | | | | KTS101B335M43J0T00 | | | | | | 800 | |
| 4.7 | X7R | 5.7±0.4 | 5.0±0.4 | 3.2 | 0.8±0.5 | 2.0 | KTS101B475M43E0T00 | | | | | | 800 | |
| 6.8 | X7R | | | 2.8 | | | KTS101B685M43N0T00 | 800 | | | | | | |
| 3.3 | X7R | | | 2.8 | | | KTS101B335M55N0T00 | 800 | | | | | | |
| 4.7 | X7R | | | 3.2 | | | KTS101B475M55N0T00 | 800 | | | | | | |
| 6.8 | X7R | | | 2.8 | | | KTS101B685M55F0T00 | 800 | | | | | | |
| 10 | X7R | | | 2.8 | | | KTS101B106M55N0T00 | 800 | | | | | | |
| 6.8 | X7R | 7.5±0.5 | 6.3±0.5 | 3.5 | 1.0±0.5 | 3.0 | KTS101B685M76N0T00 | 300 | | | | | | |

*Please consult with us when you consider the rating other than a standard table.

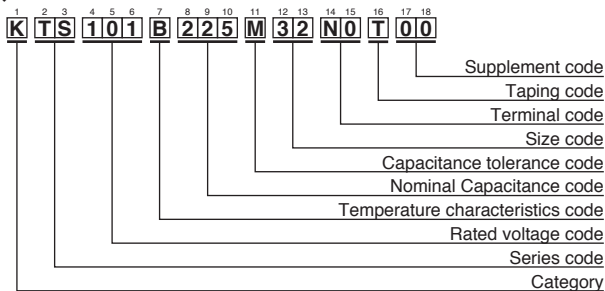
NTS Series

◆STANDARD RATINGS

| Rated voltage (Vdc) | Rated Capacitance (μF) | Electrostatic Capacitance Temperature Characteristics | Dimensions(mm) | | | | Maximum ripple current (Arms) | Part Number | Taping Quantity per reel (pcs. / reel) |
|---------------------|------------------------|---|----------------|---------|--------------------|---------|-------------------------------|--------------------|--|
| | | | L | W | Tmax. | a | | | |
| 250 | 0.01 | X7R | 3.2±0.2 | 1.6±0.2 | 1.8 | 0.5±0.3 | 0.3 | KTS251B103M31N0T00 | 3,000 |
| | 0.022 | X7R | | | | | | KTS251B223M31N0T00 | 3,000 |
| | 0.033 | X7R | | | | | | KTS251B333M31N0T00 | 3,000 |
| | 0.047 | X7R | | | | | | KTS251B473M31N0T00 | 3,000 |
| | 0.068 | X7R | | | | | | KTS251B683M31N0T00 | 3,000 |
| | 0.1 | X7R | | | | | | KTS251B104M31N0T00 | 3,000 |
| | 0.15 | X7R | 3.2±0.4 | 2.5±0.3 | 2.6 | 0.6±0.3 | 0.5 | KTS251B154M32N0T00 | 1,600 |
| | 0.22 | X7R | | | | | | KTS251B224M32N0T00 | 1,600 |
| | 0.33 | X7R | | | | | | KTS251B334M32N0T00 | 1,600 |
| | 0.47 | X7R | 4.5±0.4 | 3.2±0.4 | 2.8 | 0.6±0.3 | 1.0 | KTS251B474M43N0T00 | 800 |
| | 0.68 | X7R | | | | | | KTS251B684M43N0T00 | 800 |
| | 1.0 | X7R | 5.7±0.4 | 5.0±0.4 | 2.8 | 0.8±0.5 | 2.0 | KTS251B105M55N0T00 | 800 |
| | 1.5 | X7R | | | | | | KTS251B155M55N0T00 | 800 |
| | 1.5 | X7R | 7.5±0.5 | 6.3±0.5 | 3.5 | 1.0±0.5 | 3.0 | KTS251B155M76N0T00 | 300 |
| 2.2 | X7R | 5.0 | | | KTS251B225M76N0T00 | | | 300 | |
| 2.2 | X7R | 5.0 | | | KTS251B225M76N0T00 | | | 300 | |
| 500 | 0.47 | X7R | 5.7±0.4 | 5.0±0.4 | 2.7 | 0.8±0.5 | 1.5 | KTS501B474M55N0T00 | 800 |
| | 0.56 | X7R | | | 3.0 | | | KTS501B564M55N0T00 | 800 |
| | 0.68 | X7R | 7.5±0.5 | 6.3±0.5 | 2.5 | 1.0±0.5 | 2.0 | KTS501B684M76N0T00 | 500 |
| | 1.0 | X7R | | | 3.2 | | | KTS501B105M76N0T00 | 300 |
| | 1.2 | X7R | | | 3.5 | | | KTS501B125M76N0T00 | 300 |
| | 1.2 | X7R | | | 3.5 | | | KTS501B125M76N0T00 | 300 |

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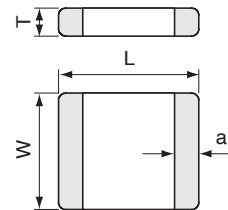
◆PART NUMBERING SYSTEM



Size Code

| Size Code | Code | |
|-----------|------|------|
| | JIS | EIA |
| 31 | 3216 | 1206 |
| 32 | 3225 | 1210 |
| 43 | 4532 | 1812 |
| 55 | 5750 | 2220 |
| 76 | 7563 | 3025 |

◆DIMENSIONS



Please refer to "Part Numbering System" of the beginning of a catalog for the details.