

### ◆FEATURES

1. Small size and large capacitance, high ripple current.
2. Temperature cycle: 1000 cycles.
3. X7R temperature characteristics.
4. Excellent noise absorption.
5. For reflow soldering use.
6. Suitable for aluminum substrate.



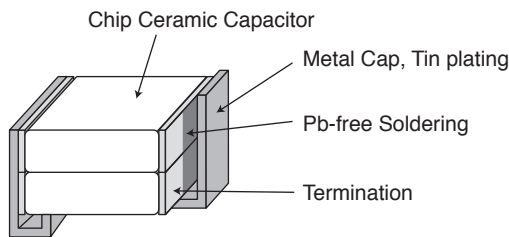
### ◆APPLICATIONS

1. Smoothing circuit of switching mode AC-DC or DC-DC converter.
2. On-board power supply.
3. Noise suppressor for various kinds of equipments.

### ◆CUSTOM MADE PRODUCTS

We can offer custom made one element metal cap type capacitors for request of customers. Please contact us if you have questions for details.

### ◆CONSTRUCTION



### ◆RATINGS

|                                |                                     |
|--------------------------------|-------------------------------------|
| 1. Category Temperature Range  | -55~+125°C                          |
| 2. Rated Voltage Range         | 25, 35, 50, 100, 250V <sub>dc</sub> |
| 3. Rated Capacitance Range     | 1.0 to 100μF                        |
| 4. Rated Capacitance Tolerance | M(±20%)                             |
| 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.  | 250% of rated voltage shall be applied for 5 seconds.<br>(Only 250V <sub>dc</sub> products : 475V)  |  |                      |                      |             |        |  |           |          |          |         |                       |                         |
| 2           | Insulation Resistance | 100/C <sub>R</sub> (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.                            | <table border="1"> <tr> <td></td> <td>C<sub>R</sub>≤10μF</td> <td>C<sub>R</sub>&gt;10μF</td> </tr> <tr> <td>Temperature</td> <td colspan="2">25±2°C</td> </tr> <tr> <td>Frequency</td> <td>1±0.1kHz</td> <td>120±12Hz</td> </tr> <tr> <td>Voltage</td> <td>1±0.2V<sub>rms</sub></td> <td>0.5±0.2V<sub>rms</sub></td> </tr> </table> |  | C <sub>R</sub> ≤10μF | C <sub>R</sub> >10μF | Temperature | 25±2°C |  | Frequency | 1±0.1kHz | 120±12Hz | Voltage | 1±0.2V <sub>rms</sub> | 0.5±0.2V <sub>rms</sub> |
|             | C <sub>R</sub> ≤10μF  | C <sub>R</sub> >10μF                                   |   |  |                      |                      |             |        |  |           |          |          |         |                       |                         |
| Temperature | 25±2°C                |  |   |  |                      |                      |             |        |  |           |          |          |         |                       |                         |
| Frequency   | 1±0.1kHz              | 120±12Hz   |   |  |                      |                      |             |        |  |           |          |          |         |                       |                         |
| Voltage     | 1±0.2V <sub>rms</sub> | 0.5±0.2V <sub>rms</sub>                                |   |  |                      |                      |             |        |  |           |          |          |         |                       |                         |
| 4           | Dissipation Factor    | 5.0% maximum   |   |  |                      |                      |             |        |  |           |          |          |         |                       |                         |
| 5           | Rated Ripple Current  | See STANDARD RATINGS                                   | 10kHz~1MHz (sine curve)<br>Ripple voltage V <sub>p</sub> 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.

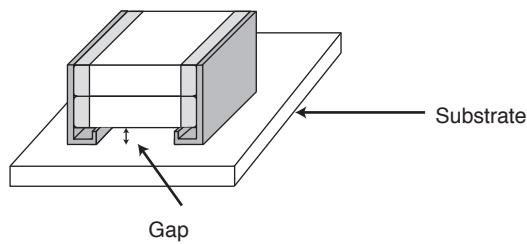
◆SPECIFICATIONS

| No.  | Items                        | Specification  | Test Condition  |      |                  |        |   |                              |      |   |                  |        |   |                              |      |   |                  |        |
|------|------------------------------|--|---|------|------------------|--------|---|------------------------------|------|---|------------------|--------|---|------------------------------|------|---|------------------|--------|
| 6    | Temperature Cycle            | Appearance : No visible damage.<br>ΔC/C : ±15%<br>D.F. : To meet the initial specification.<br>I.R. : To meet the initial specification. | <table border="1"> <thead> <tr> <th>Step</th> <th>Temperature (°C)</th> <th>(min.)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Min. Category temperature ±3</td> <td>30±3</td> </tr> <tr> <td>2</td> <td>Room temperature</td> <td>3 max.</td> </tr> <tr> <td>3</td> <td>Max. Category temperature ±3</td> <td>30±3</td> </tr> <tr> <td>4</td> <td>Room temperature</td> <td>3 max.</td> </tr> </tbody> </table> <p>&lt;Cycle&gt;<br/>1000 cycles</p> | Step | Temperature (°C) | (min.) | 1 | Min. Category temperature ±3 | 30±3 | 2 | Room temperature | 3 max. | 3 | Max. Category temperature ±3 | 30±3 | 4 | Room temperature | 3 max. |
| Step | Temperature (°C)             | (min.)   |   |      |                  |        |   |                              |      |   |                  |        |   |                              |      |   |                  |        |
| 1    | Min. Category temperature ±3 | 30±3   |   |      |                  |        |   |                              |      |   |                  |        |   |                              |      |   |                  |        |
| 2    | Room temperature             | 3 max.   |   |      |                  |        |   |                              |      |   |                  |        |   |                              |      |   |                  |        |
| 3    | Max. Category temperature ±3 | 30±3   |   |      |                  |        |   |                              |      |   |                  |        |   |                              |      |   |                  |        |
| 4    | Room temperature             | 3 max.   |   |      |                  |        |   |                              |      |   |                  |        |   |                              |      |   |                  |        |
| 7    | Humidity Load Life           | Appearance : No abnormality.<br>ΔC/C : ±20%<br>D.F. : 10% max.<br>I.R. : 25/C <sub>R</sub> (MΩ) or 1000(MΩ)<br>whichever is less.        | Temperature : 40±2°C<br>Humidity : 90 to 95%RH<br>Voltage : Rated voltage<br>Time : 500± <sup>24</sup> <sub>0</sub> hours   |      |                  |        |   |                              |      |   |                  |        |   |                              |      |   |                  |        |
| 8    | Endurance                    | Appearance : No abnormality.<br>ΔC/C : ±20%<br>D.F. : 10% max.<br>I.R. : 50/C <sub>R</sub> (MΩ) or 1000(MΩ)<br>whichever is less.        | Temperature : 125±3°C<br>Voltage : Rated voltage<br>Time : 1000± <sup>48</sup> <sub>0</sub> hours   |      |                  |        |   |                              |      |   |                  |        |   |                              |      |   |                  |        |

\*C<sub>R</sub> : Rated Capacitance(μF)

◆Note of mountig for NTJ series.

1. The gap of capacitor and a substrate shall be the mounting face.
2. To prevent degradation of temperature cycling capability, if need to be careful about amount of solder that would not go into the inner side of terminations.

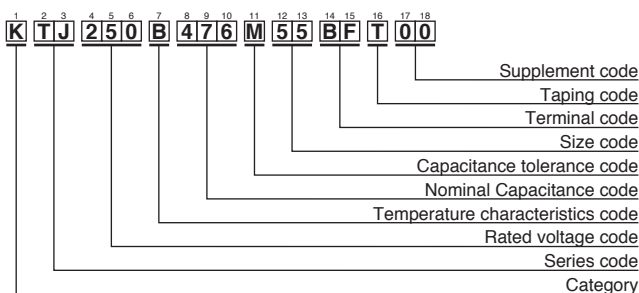


## ◆STANDARD RATINGS

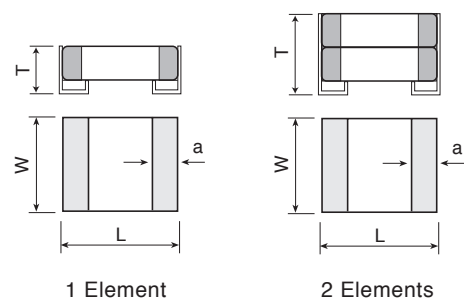
| Rated voltage (Vdc) | Rated Capacitance (μF) | Dimensions(mm) |         |         |         | Element | Maximum ripple current (Arms) | Part Number        | Taping Quantity per reel (pcs. / reel) |     |
|---------------------|------------------------|----------------|---------|---------|---------|---------|-------------------------------|--------------------|--|-----|
|                     |                        | L              | W       | Tmax.   | a       |         |                               |                    |  |     |
| 25                  | 33                     | 6.0±0.4        | 5.3±0.4 | 3.8     | 1.3±0.3 | 1       | 2.0                           | KTJ250B336M55AFT00 | 400                                    |     |
|                     | 33                     |                |         | 5.5     |         |         |                               |                    |  |     |
|                     | 47                     | 6.0±0.4        | 5.3±0.4 | 7.0     | 1.3±0.3 | 2       | 3.0                           | KTJ250B476M55BFT00 | 2,000                                  |     |
|                     | 68                     |                |         |         |         |         |                               |                    |  |     |
|                     | 47                     |                |         |         |         |         |                               |                    |  |     |
|                     | 68                     | 7.8±0.5        | 6.6±0.5 | 5.5     | 1.5±0.3 | 1       | 3.0                           | KTJ250B476M76AFT00 | 1,200                                  |     |
|                     | 100                    |                |         |         |         |         |                               |                    |  |     |
| 100                 |                        |                |         |         |         |         |                               |                    |  |     |
| 35                  | 33                     | 6.0±0.4        | 5.3±0.4 | 5.5     | 1.3±0.3 | 2       | 3.0                           | KTJ350B336M55BFT00 | 2,000                                  |     |
|                     | 47                     |                |         |         |         |         |                               |                    |  |     |
|                     | 47                     | 7.8±0.5        | 6.6±0.5 | 5.5     | 1.5±0.3 | 1       | 3.0                           | KTJ350B476M76AFT00 | 1,200                                  |     |
|                     | 68                     |                |         |         |         |         |                               |                    |  |     |
|                     | 100                    |                |         |         |         |         |                               |                    |  |     |
|                     | 50                     | 15             | 6.0±0.4 | 5.3±0.4 | 3.8     | 1.3±0.3 | 1                             | 2.0                | KTJ500B156M55AFT00                     | 400 |
|                     |                        | 15             |         |         |         |         |                               |                    |  |     |
| 22                  |                        | 6.0±0.4        | 5.3±0.4 | 5.5     | 1.3±0.3 | 2       | 3.0                           | KTJ500B226M55BFT00 | 2,000                                  |     |
| 33                  |                        |                |         |         |         |         |                               |                    |  |     |
| 22                  |                        |                |         |         |         |         |                               |                    |  |     |
| 33                  |                        | 7.8±0.5        | 6.6±0.5 | 5.5     | 1.5±0.3 | 1       | 3.0                           | KTJ500B336M76AFT00 | 1,200                                  |     |
| 47                  |                        |                |         |         |         |         |                               |                    |  |     |
| 47                  |                        |                |         |         |         |         |                               |                    |  |     |
| 100                 | 4.7                    | 6.0±0.4        | 5.3±0.4 | 3.8     | 1.3±0.3 | 1       | 2.0                           | KTJ101B475M55AFT00 | 400                                    |     |
|                     | 6.8                    |                |         |         |         |         |                               |                    |  |     |
|                     | 10                     | 6.0±0.4        | 5.3±0.4 | 5.5     | 1.3±0.3 | 2       | 3.0                           | KTJ101B106M55BFT00 | 2,000                                  |     |
|                     | 15                     |                |         |         |         |         |                               |                    |  |     |
|                     | 22                     |                |         |         |         |         |                               |                    |  |     |
|                     | 6.8                    | 7.8±0.5        | 6.6±0.5 | 5.5     | 1.5±0.3 | 1       | 3.0                           | KTJ101B685M76AFT00 | 1,200                                  |     |
|                     | 15                     |                |         |         |         |         |                               |                    |  |     |
| 15                  |                        |                |         |         |         |         |                               |                    |  |     |
| 250                 | 1.0                    | 6.0±0.4        | 5.3±0.4 | 3.8     | 1.3±0.3 | 1       | 2.0                           | KTJ251B105M55AFT00 | 400                                    |     |
|                     | 1.5                    |                |         |         |         |         |                               |                    |  |     |
|                     | 2.2                    | 6.0±0.4        | 5.3±0.4 | 5.5     | 1.3±0.3 | 2       | 3.0                           | KTJ251B155M55BFT00 | 2,000                                  |     |
|                     | 2.2                    |                |         |         |         |         |                               |                    |  |     |
|                     | 3.3                    |                |         |         |         |         |                               |                    |  |     |
|                     | 2.2                    | 7.8±0.5        | 6.6±0.5 | 5.5     | 1.5±0.3 | 1       | 3.0                           | KTJ251B225M76AFT00 | 1,200                                  |     |
| 3.3                 |                        |                |         |         |         |         |                               |                    |  |     |
| 3.3                 | 7.8±0.5                | 6.6±0.5        | 8.5     | 1.5±0.3 | 2       | 3.0     | KTJ251B335M76BFT00            | 500                |  |     |

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

## ◆PART NUMBERING SYSTEM



## ◆DIMENSIONS



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