

# Leaded MLCC for General Purpose Data Sheet

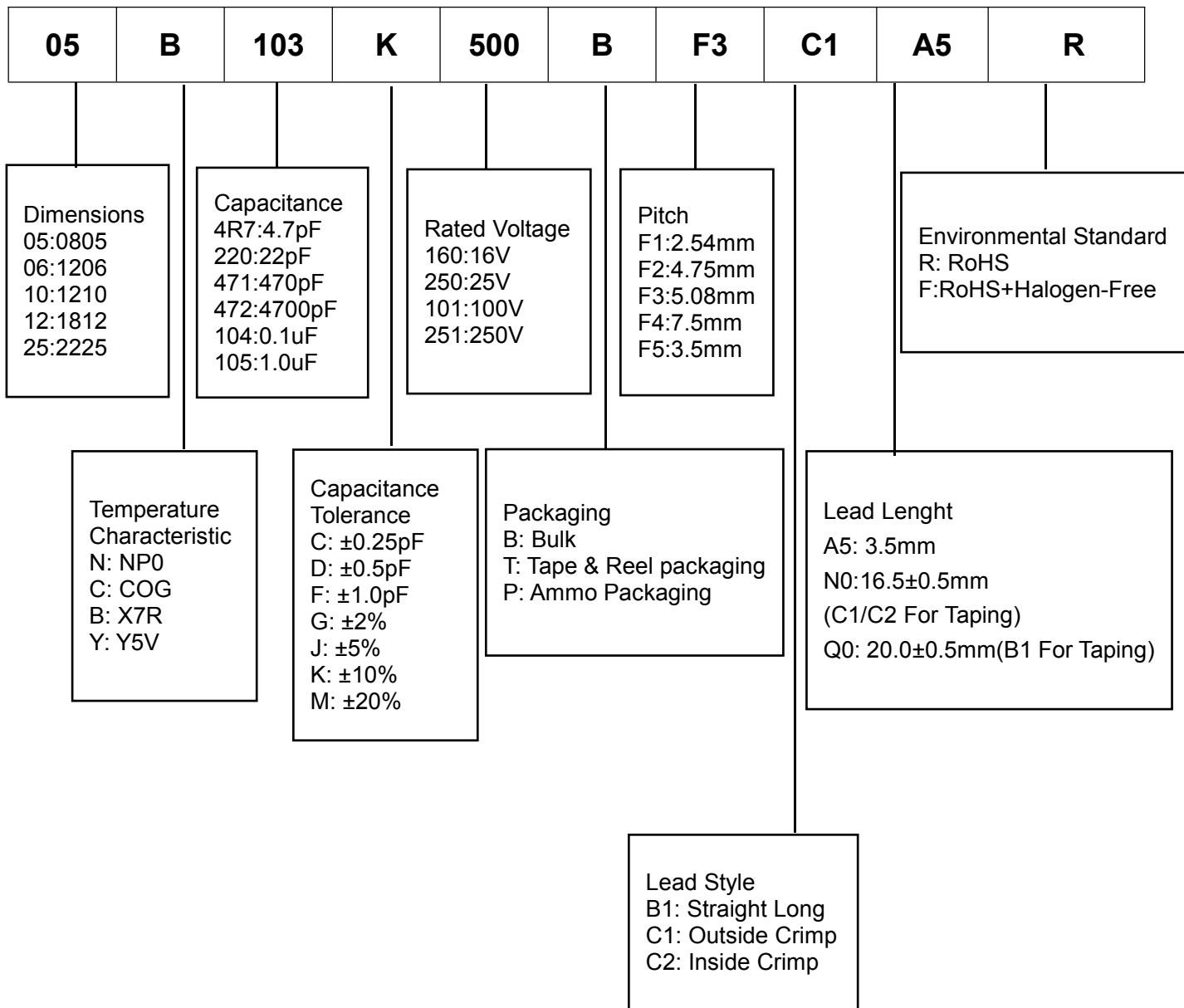
## Feature

- Small size and large capacitance
- Low ESR characteristics for high frequency
- Meet LF (Lead Free) and HF (Halogen Free)
- Epoxy resin coating

## Applications

- General electronic equipment

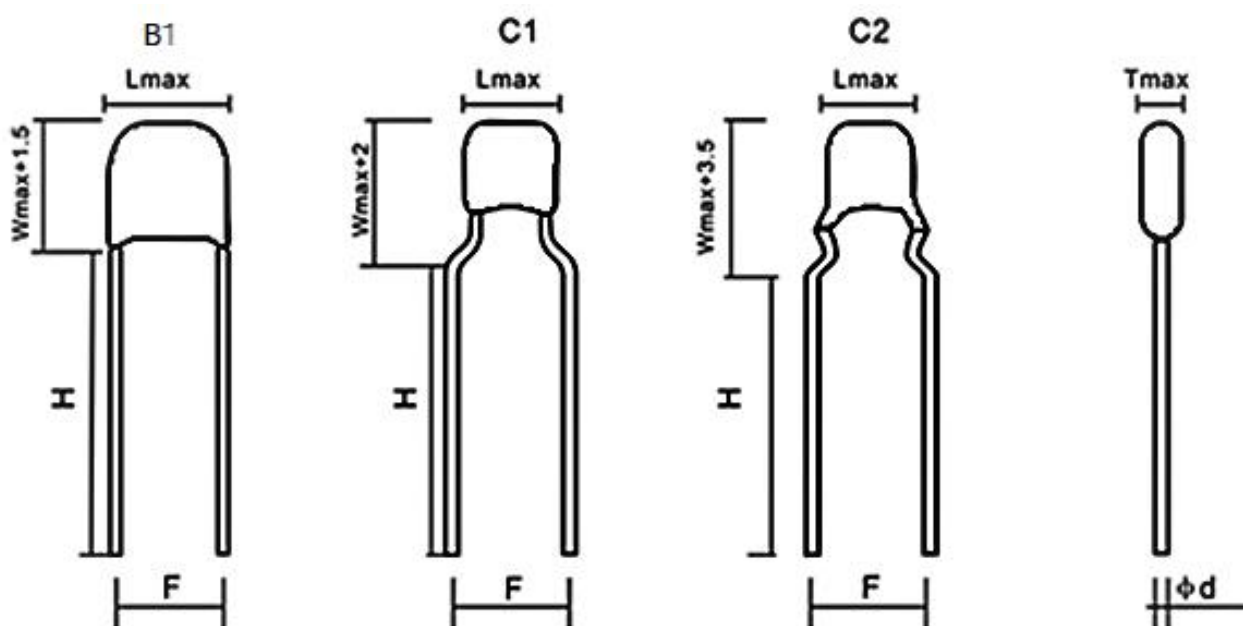
## Part Number Code



## Specifications

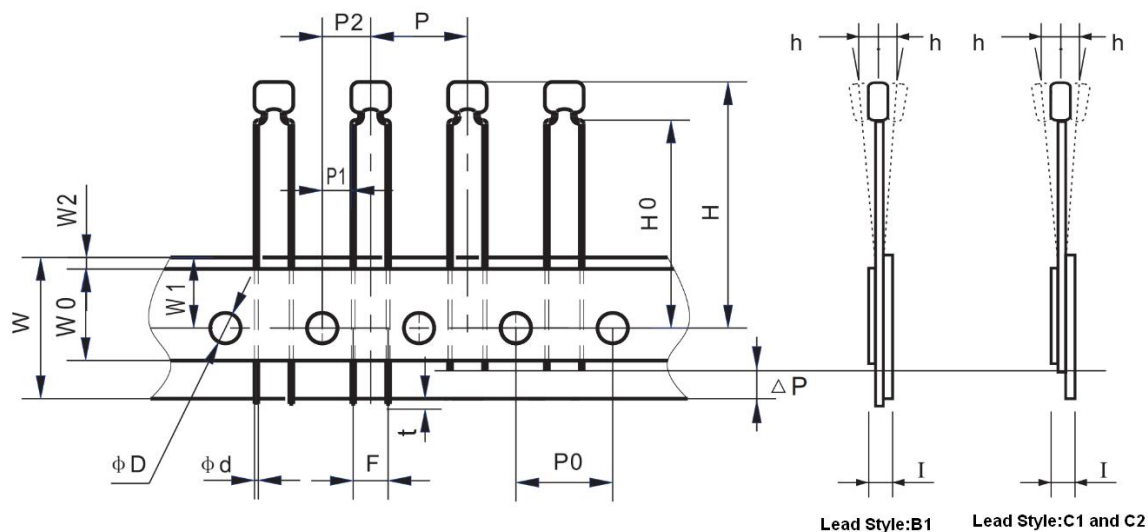
|                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Reference Standard</b>                          | GB/T 5966                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Operating Temperature Range</b>                 | -55~125℃                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Capacitance(C) and Dissipation Factor(tg δ)</b> | Class 1:<br>$C \leq 1000\text{pF}$ , $1\text{MHz} \pm 10\%$ , $1.0\text{V}$<br>$C > 1000\text{pF}$ , $1\text{KHz} \pm 10\%$ , $1.0\text{V}$<br>$CR \geq 50\text{PF}$ , $DF \leq 0.15\%$<br>$CR < 50\text{PF}$ , $DF \leq 0.15\% \left[ \left( \frac{150}{CR} \right) + 7 \right] \times 10^{-4}$<br>Class 2:<br>$1\text{KHz} \pm 10\%$ , $1.0\text{V(B)}/0.5\text{V(Y)}$<br>B: $DF \leq 3.5\%$<br>Y: $DF \leq 7.5\%$ ( $CR \leq 0.1\mu\text{F}$ )<br>$DF \leq 10.0\%$ ( $1\mu\text{F} > CR > 0.1\mu\text{F}$ )<br>$DF \leq 15\%$ ( $CR \geq 1\mu\text{F}$ ) |
| <b>Rated Voltage</b>                               | 25V、50V、100V、250V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Withstand Voltage</b>                           | Class1 300% Withstand Voltage<br>Class2 250% Withstand Voltage<br>The charge/discharge current is less than 50mA                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Insulation Resistance</b>                       | Rated Voltage, $60 \pm 5\text{sec}$<br>Class1: $C \leq 10\text{nF}$ , $IR \geq 10000\text{M}\Omega$<br>$C > 10\text{nF}$ , $IR \geq 100\text{M}\Omega \cdot \mu\text{F}$<br>Class2: $C \leq 25\text{nF}$ , $IR \geq 4000\text{M}\Omega$<br>$C > 25\text{nF}$ , $IR \geq 100\text{M}\Omega \cdot \mu\text{F}$                                                                                                                                                                                                                                                |
| <b>Temperature Characteristic</b>                  | COG(NP0)、X7R、Y5V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

## Dimension、Voltage and Capacitance



| Dimension | Dimensions (Unit: mm) |           |      |     |     |              | Rated voltage      | Available Capacitance Range   |                               |                           |
|-----------|-----------------------|-----------|------|-----|-----|--------------|--------------------|-------------------------------|-------------------------------|---------------------------|
|           | F                     | H         | L    | W   | T   | Φd           |                    | N                             | B                             | Y                         |
|           | ±0.5                  | ±1        | max  | max | max | ±0.05        |                    | COG(NPO)                      | X7R                           | Y5V                       |
| 0805      | 2.54                  | 10        | 4.2  | 3.8 | 3.8 | 0.45         | 25V<br>50V<br>100V | 0R5-272<br>0R5-222<br>05R-102 | 101-105<br>101-105<br>101-104 | 102-125<br>102-105<br>--- |
|           | 5.08                  | 5.0/      |      |     |     |              |                    |                               |                               |                           |
|           | 5.08                  | 10.0<br>5 |      |     |     |              |                    |                               |                               |                           |
| 1206      | 3.50<br>5.08          | 10        | 5.5  | 4.5 | 3.8 | 0.45<br>0.50 | 25V                | 0R5-562                       | 101-225                       | 102-125                   |
|           |                       |           |      |     |     |              | 50V                | 0R5-472                       | 101-105                       | 102-105                   |
|           |                       |           |      |     |     |              | 100V               | 0R5-332                       | 101-154                       | ---                       |
| 1210/1209 | 3.50<br>5.08          | 10        | 5.5  | 5.5 | 3.8 | 0.45<br>0.50 | 25V                | 100-103                       | 471-105                       | 472-155                   |
|           |                       |           |      |     |     |              | 50V                | 100-103                       | 471-105                       | 472-205                   |
|           |                       |           |      |     |     |              | 100V               | 5R0-103                       | 101-105                       | ---                       |
| 1812      | 4.57                  | 10        | 8.5  | 6.5 | 3.8 | 0.45<br>0.50 | 25V                | 100-153                       | 471-335                       | 103-335                   |
|           |                       |           |      |     |     |              | 50V                | 100-103                       | 471-225                       | 103-225                   |
|           |                       |           |      |     |     |              | 100V               | 5R0-103                       | 101-105                       | ---                       |
| 2225      | 5.50                  | 10        | 10.5 | 9.5 | 4.2 | 0.45<br>0.50 | 25V                | 100-473                       | 102-475                       | 103-475                   |
|           |                       |           |      |     |     |              | 50V                | 100-273                       | 102-335                       | 103-335                   |
|           |                       |           |      |     |     |              | 100V               | 5R0-273                       | 101-105                       | ---                       |

## Taping And Dimensions (mm)



Note: P1=3.85mm for F=5.08mm; P1=5.1mm for F=2.54mm

| Code | P         | P0        | P1        | P2        | $\Phi d$  | $\Delta h$ | W         | W0        | W1        | W2        | H     | H0        | I    | $\Phi D0$ | t   |
|------|-----------|-----------|-----------|-----------|-----------|------------|-----------|-----------|-----------|-----------|-------|-----------|------|-----------|-----|
| Dim  | 12.7      | 12.7      | 3.85      | 6.35      | 0.5       | 0          | 18.5      | 8         | 9         | 1.5       | 32.25 | 15-20     | 1.42 | 4.0       | 0.7 |
|      |           |           | 5.1       |           |           |            |           | 10        |           |           |       |           |      |           |     |
| TOL  | $\pm 1.0$ | $\pm 0.2$ | $\pm 0.7$ | $\pm 1.3$ | $\pm 0.1$ | $\pm 1.0$  | $\pm 1.0$ | $\pm 1.0$ | $\pm 0.5$ | $\pm 1.5$ | Max   | $\pm 0.5$ | Max  | $\pm 0.2$ | Max |

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