

MLCC Specsheet

Part Number

C 1210 X 223 K 102 T

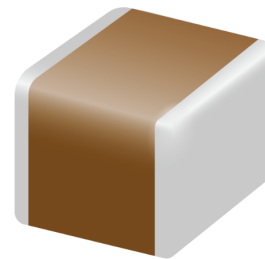
1 2 3 4 5 6 7

- | | |
|----------------|-----------------|
| 1 Ceramic Caps | 5 Tolerance |
| 2 Chip Sizes | 6 Rated Voltage |
| 3 Dielectric | 7 Packaging |
| 4 Capacitance | 8 Special Code |



Dimensions (Unit: mm)

Chip Size	1210
L	3.20±0.25mm
W	2.50±0.20mm
T	1.25±0.20mm
BW	0.30 min



Specifications

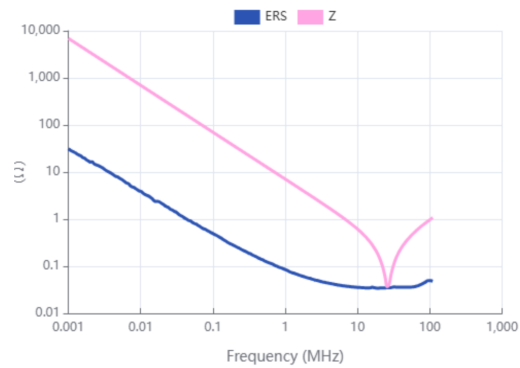
Capacitance	22nF
Measurement Condition	1.00KHz±10%, 1.00±0.2Vrms
Capacitance Tolerance	± 10%
Voltage	1KVdc
Dielectric Withstanding Voltage	1200Vdc
Temperature Range	-55°C~+125°C
Temperature Coefficient	X7R
Dissipation Factor	2.5%
Insulation Resistance	10000 Mohms min.

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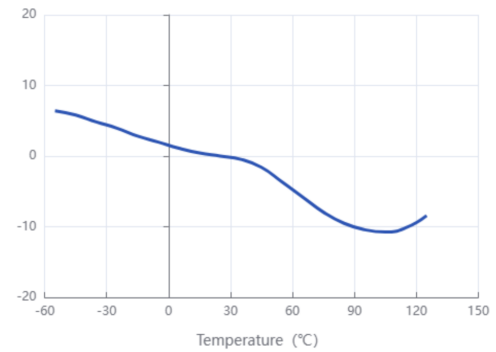
Specifications

Simulations

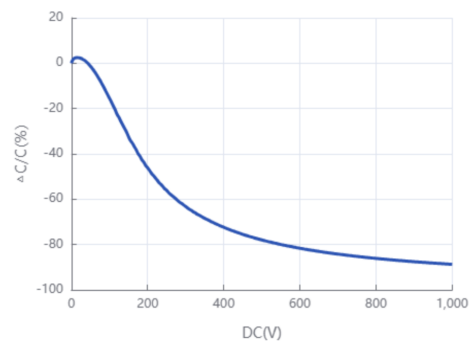
Impedance /ESR - Frequency



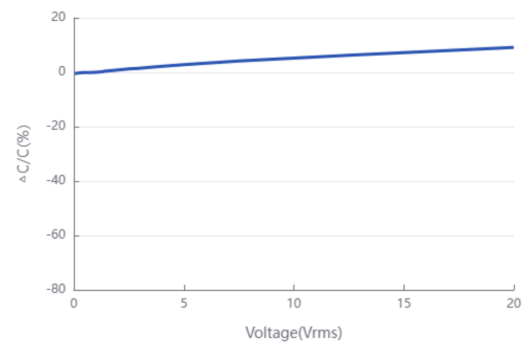
Capacitance-Temperature Characteristics



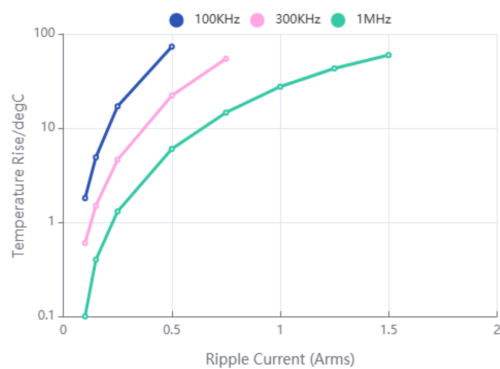
Capacitance-DC Voltage Characteristics



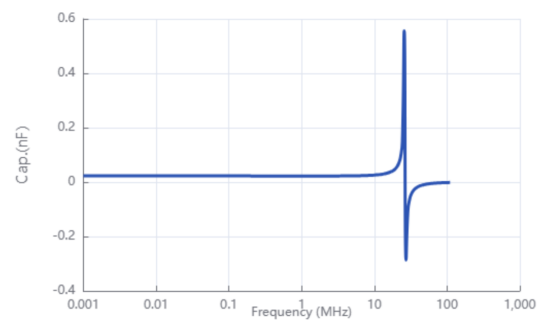
Capacitance-AC Voltage Characteristics



Temperature Rise-Ripple Current



Capacitance-Frequency



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For the complete simulation environment please contract our sales representatives or product engineers.
Test data are for reference only.

The above specification and simulations are applied to Multilayer Ceramic Chip Capacitor (MLCC) used for electronic equipments.

The responses shown represent the typical response for each part type. Specific responses may vary, depending on manufacturing variation effects of all parameters involved, including the specified tolerances applied to capacitance and unspecified variations of ESR, ESL, and leakage resistance.

The responses shown do not represent a specified or implied maximum capability of the device for all applications.

The ESR used for ripple "Ripple Current/Voltage vs. Frequency" plots is the ESR at ambient temperature.

The ESR in the "Temperature Rise vs. Ripple Current" plots is adjusted to each incremental temperature rise before the power and ripple current is calculated.

The effects shown herein are based on measured data from a multiple part sample of the parts in question.

Ripple capability of this device will be factored by thermal resistance (R_{th}) created by circuit traces (addi affects of all parameters involved, including the specified tolerances applied to capacitance and unspecified variations of ESR, ESL, and leakage resistance.

The peak voltages generated in the "Temperature Rise vs. Combined Ripple Currents" plot are calculated for each frequency and are not combined with voltages generated at any other harmonics.

Please consult with the catalog or field applications engineer for maximum capability of the device in specific applications.

All product specifications description and data (collectively, the "Information") are subject to change without notice.

Holy Stone is designed to simulate behavior of components with respect to frequency, ambient temperature, and DC bias levels. The responses shown represent the typical response for each part type.

Specific responses may vary, depending on manufacturing variation effects of all parameters involved, including the specified tolerances applied to capacitance and unspecified variations of ESR, ESL, and leakage resistance.

All Information given herein is believed to be accurate and reliable, but is presented without guarantee, warranty, or responsibility of any kind, expressed or implied.

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