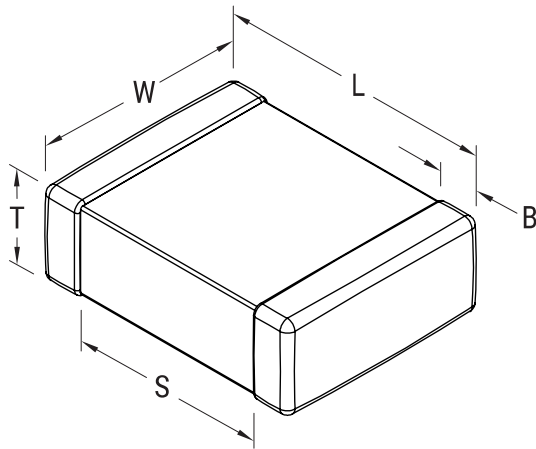


## C1812C103KDRACAUTO

SMD Auto X7R HV, Ceramic, 0.01 uF, 10%, 1,000 VDC, X7R, SMD, MLCC, High Voltage, Temperature Stable, Automotive Grade, 2.3 mm, 1812 / 4532



Click [here](#) for the 3D model.

### General Information

|        |                                                               |
|--------|---------------------------------------------------------------|
| 类别     | SMD Auto X7R HV                                               |
| 样式     | SMD Chip                                                      |
| 描述     | SMD, MLCC, High Voltage, Temperature Stable, Automotive Grade |
| 特征     | High Voltage, Temp Stable, Automotive Grade                   |
| RoHS   | Yes                                                           |
| 端子     | Tin                                                           |
| 标记     | No                                                            |
| 认证     | AEC-Q200                                                      |
| 典型元件重量 | 95 mg                                                         |
| 保质期    | 78 Weeks                                                      |
| MSL    | 1                                                             |

### Dimensions

|                       |                 |
|-----------------------|-----------------|
| L                     | 4.5mm +/-0.3mm  |
| W                     | 3.2mm +/-0.3mm  |
| T                     | 1.4mm +/-0.15mm |
| S                     | 2.3mm MIN       |
| B                     | 0.6mm +/-0.35mm |
| Chip Size / Footprint | 1812 / 4532     |

### Packaging Specifications

|      |                          |
|------|--------------------------|
| 包装   | T&R, 180mm, Plastic Tape |
| 包装数量 | 1000                     |

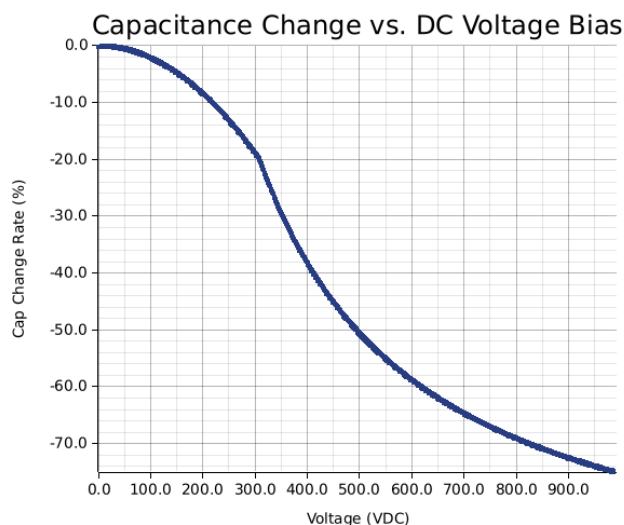
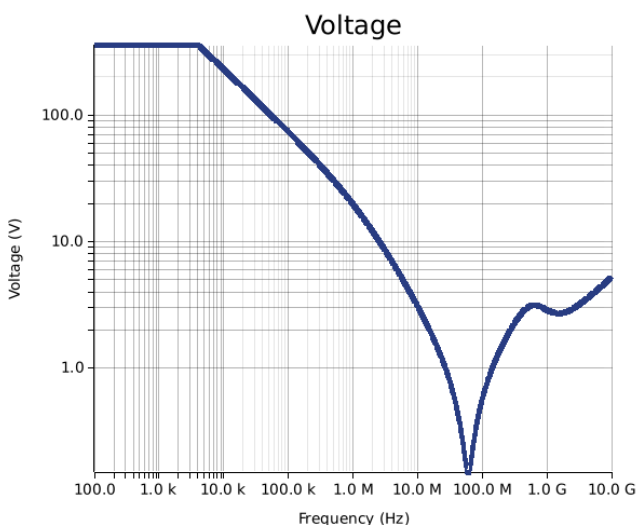
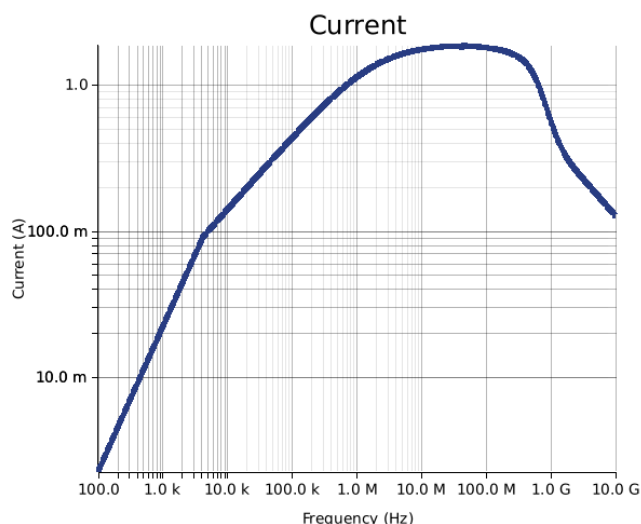
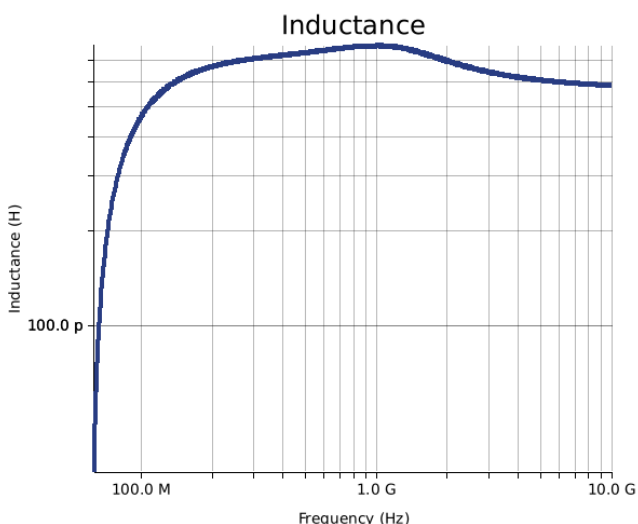
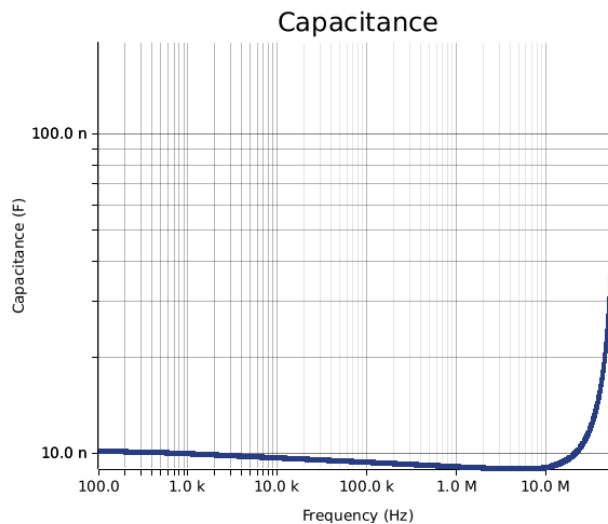
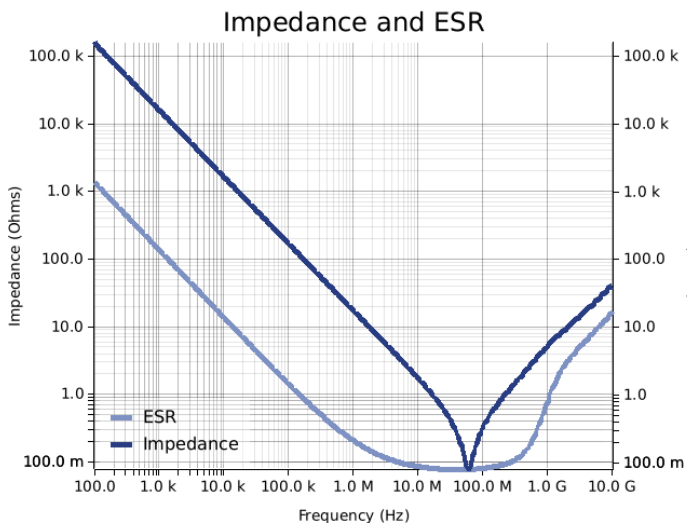
### Specifications

|                              |                                                 |
|------------------------------|-------------------------------------------------|
| 容值                           | 0.01 uF                                         |
| 测量条件                         | 1 kHz 1.0Vrms                                   |
| 容差                           | 10%                                             |
| 直流电压                         | 1000 VDC                                        |
| 耐压电压                         | 1,200 VDC                                       |
| 温度范围                         | -55/+125°C                                      |
| 温度系数                         | X7R                                             |
| 电容变化 (相对于+25°C, 0 VDC) (TCC) | 15%, 1kHz 1.0Vrms                               |
| 损耗因数                         | 2.5% 1 kHz 1.0Vrms                              |
| 老化率                          | 3% Loss/Decade Hour: Referee Time is 1000 Hours |
| 绝缘阻抗                         | 100 GOhms                                       |

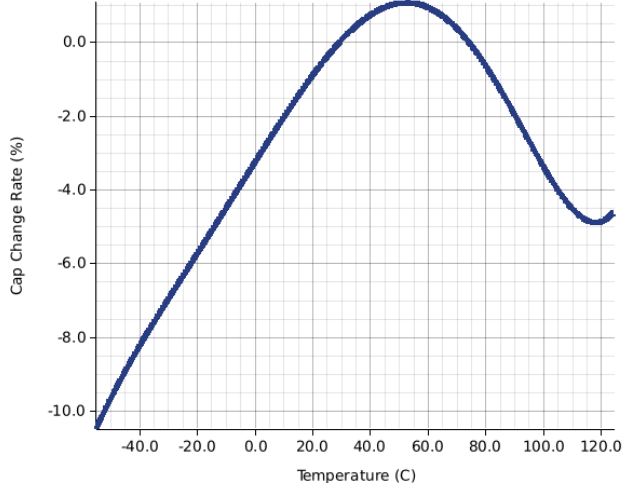
Statements of suitability for certain applications are based on our knowledge of typical operating conditions for such applications, but are not intended to constitute - and we specifically disclaim - any warranty concerning suitability for a specific customer application or use. This Information is intended for use only by customers who have the requisite experience and capability to determine the correct products for their application. Any technical advice inferred from this Information or otherwise provided by us with reference to the use of our products is given gratis, and we assume no obligation or liability for the advice given or results obtained.

## Simulations

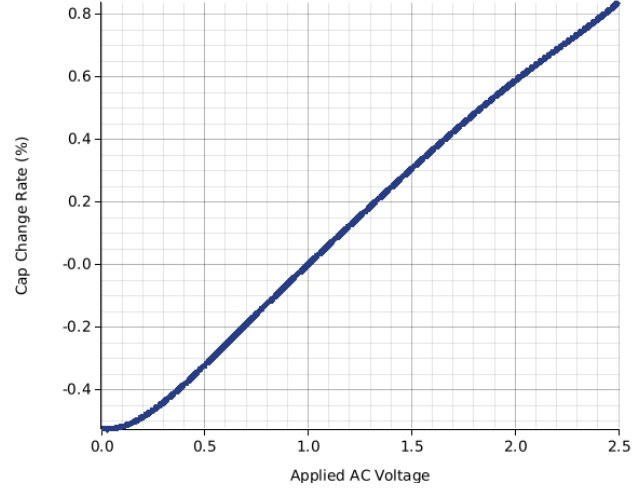
For the complete simulation environment please visit [K-SIM](#).



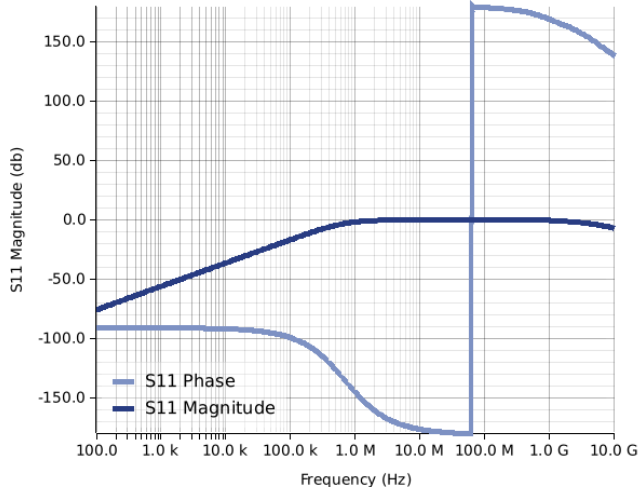
Capacitance Change vs. Temperature



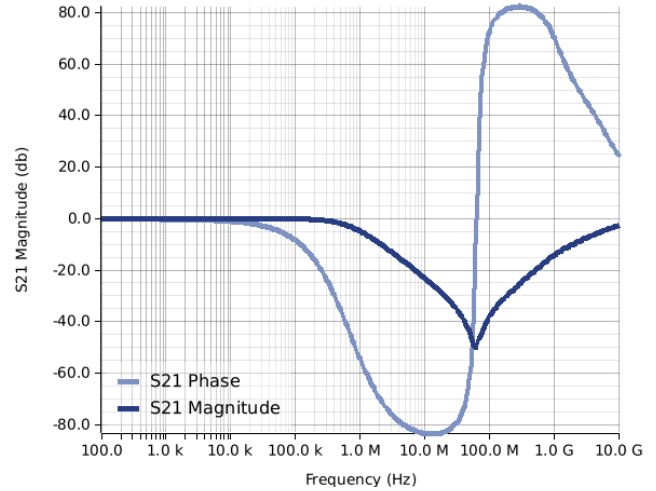
Capacitance Change vs. AC Voltage



S11



S21



**These are simulations.**

This is not a specification!

The responses shown represent the typical response for each part type. Specific responses may vary, depending on manufacturing variation affects 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 (Rth) 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 information and data (collectively, the “Information” ) are subject to change without notice.

KEMET K-SIM 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.

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If you have any questions please contact K-SIM.