

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

General Information

Series	KPS SMD Auto X7R HV
Style	Stacked Chip
Description	SMD, MLCC, Stacked, Double Chip, High Voltage, Class II, Automotive Grade
Features	Automotive Grade
RoHS	Yes
Termination	Tin
Qualifications	AEC-Q200
AEC-Q200	Yes
Typical Component Weight	800 mg
Miscellaneous	X7R dielectric is not recommended for AC line filtering or pulse applications.
Shelf Life	78 Weeks
MSL	1

Dimensions

L	6mm +/-0.5mm
W	5mm +/-0.5mm
T	5mm +/-0.50mm
B	1.6mm +/-0.3mm

Packaging Specifications

Packaging	T&R, 330mm, Plastic Tape
Packaging Quantity	800

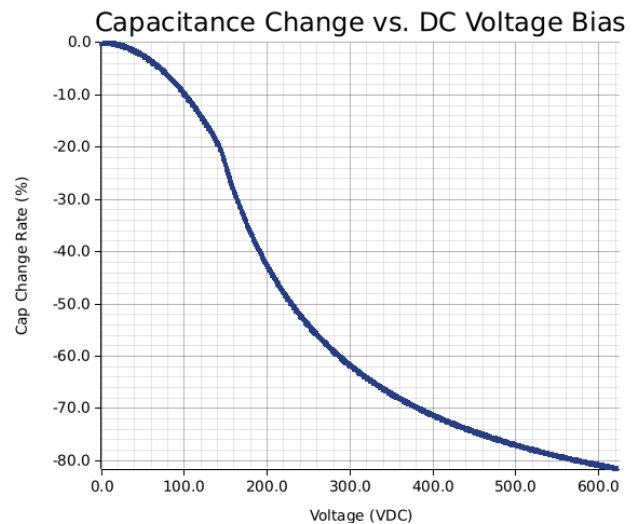
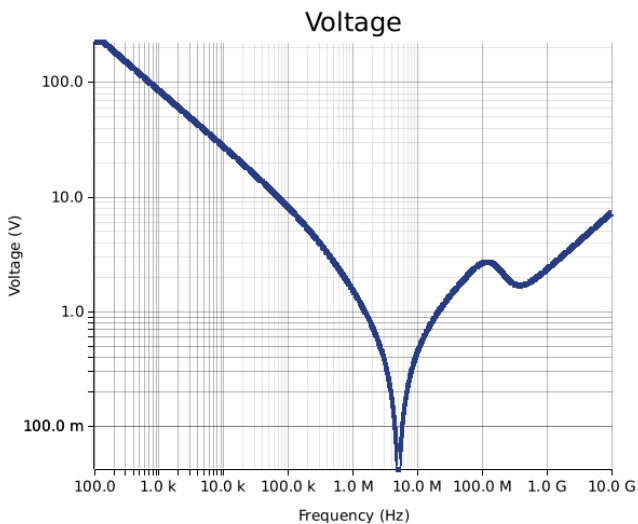
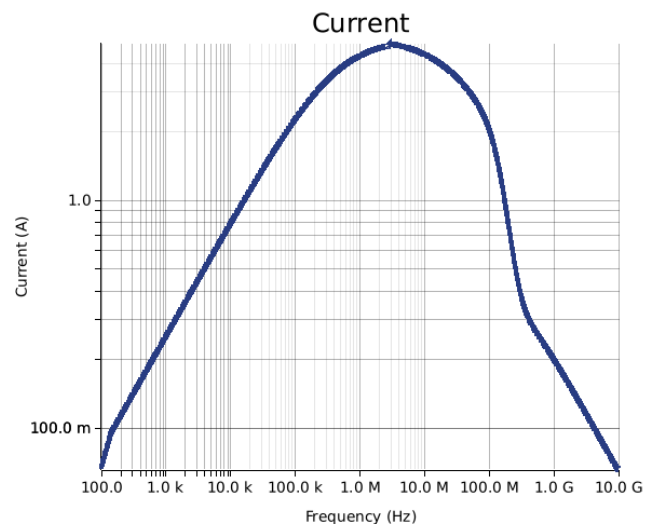
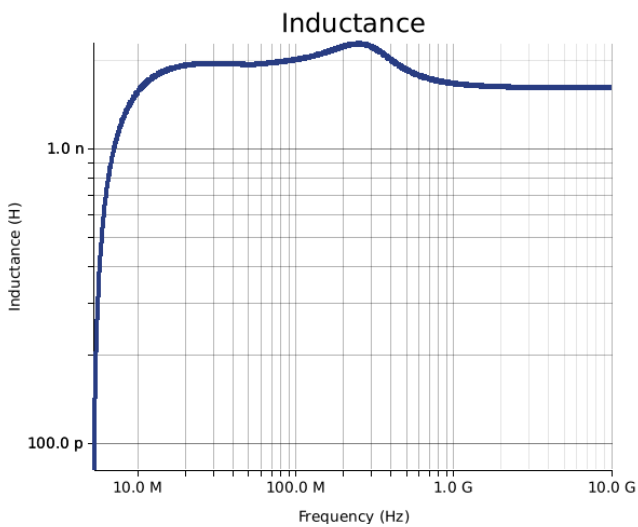
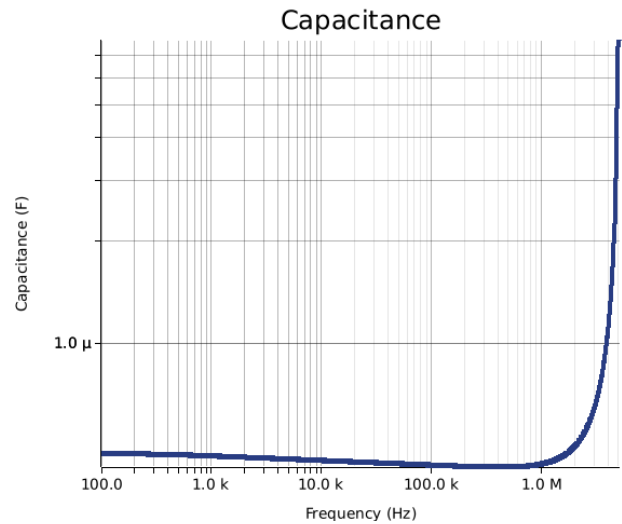
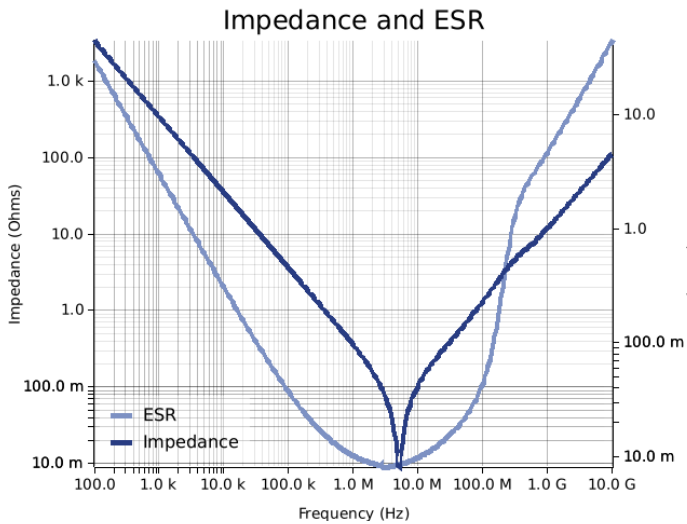
Specifications

Capacitance	0.47 uF
Measurement Condition	1 kHz 1.0Vrms
Tolerance	20%
Voltage DC	630 VDC
Dielectric Withstanding Voltage	945 VDC
Temperature Range	-55/+125°C
Temp. Coefficient	X7R
Capacitance Change with Reference to +25°C and 0 VDC Applied (TCC)	15%, 1kHz 1.0Vrms
Dissipation Factor	2.5% 1 kHz 1.0Vrms
Aging Rate	3% Loss/Decade Hour: Referee Time is 1000 Hours
Insulation Resistance	2.1277 GOhms

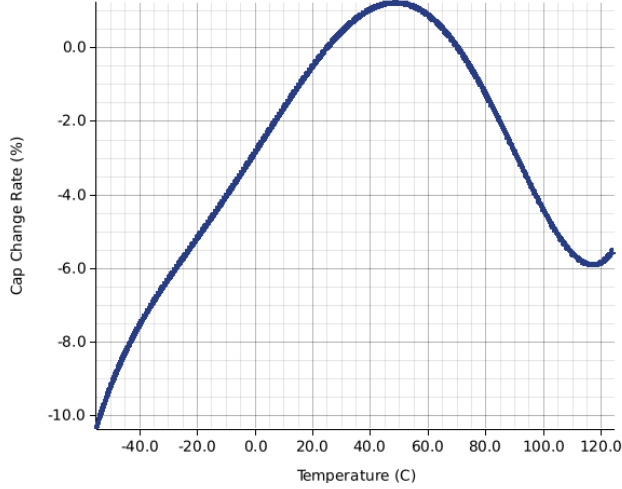
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Simulations

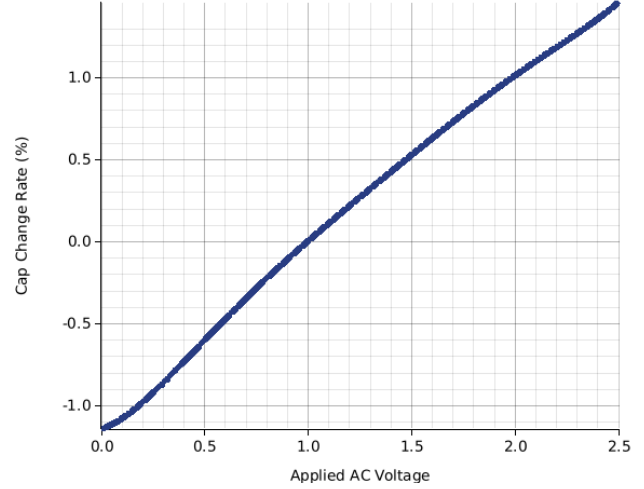
For the complete simulation environment please visit [Y-SIM](#).



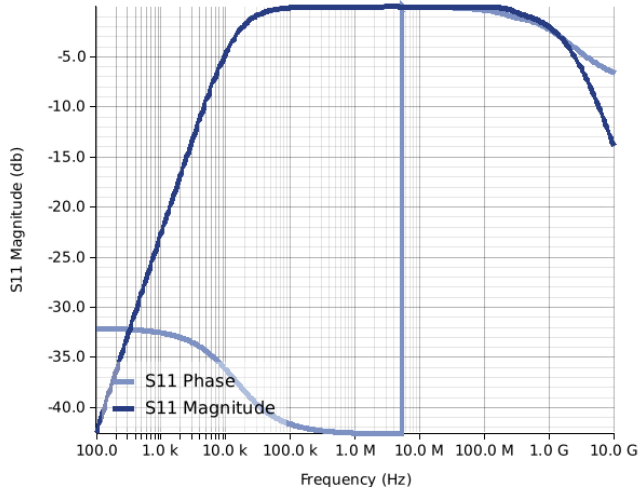
Capacitance Change vs. Temperature



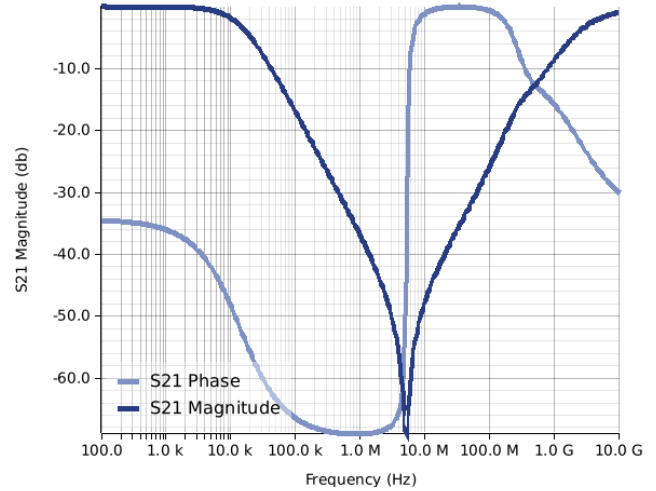
Capacitance Change vs. AC Voltage



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 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 (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.