



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

### Dimensions

L	18mm +/-0.5mm
H	14.5mm +0.3/-0.5mm
T	8.5mm +0.3/-0.5mm
S	15mm +/-0.4mm
LL	25mm +2/-1mm
F	0.8mm +/-0.05mm

### Packaging Specifications

Packaging	Bulk, Bag
Packaging Quantity	500

### General Information

Series	R53 X2 310 VAC
Dielectric	Metallized Polypropylene
Style	Radial
Features	Automotive Grade, EMI Safety
RoHS	Yes
Lead	Wire Leads
Safety Class	X2
Qualifications	ENEC, UL, cUL, CQC, AEC-Q200
AEC-Q200	Yes
THB Performance	Yes
Typical Component Weight	2.914 g

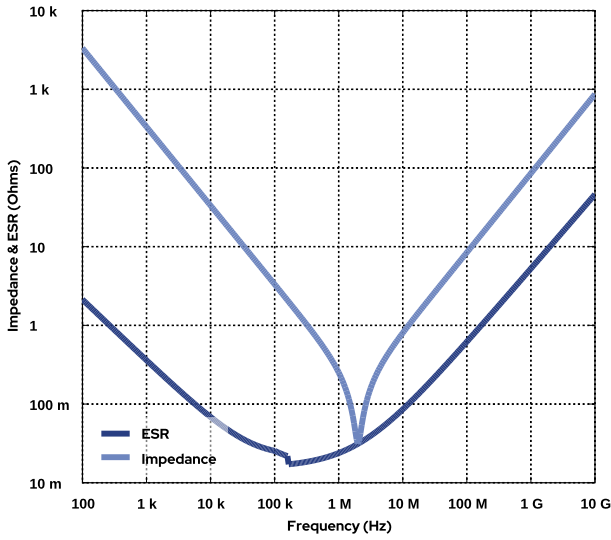
### Specifications

Capacitance	0.47 uF
Capacitance Tolerance	10%
Voltage AC	310 VAC (X2)
Voltage DC	630 VDC
Temperature Range	-40/+110°C
Rated Temperature	110°C
Dissipation Factor	0.2% 1kHz
Insulation Resistance	63.8298 GOhms
Max dV/dt	400 V/us

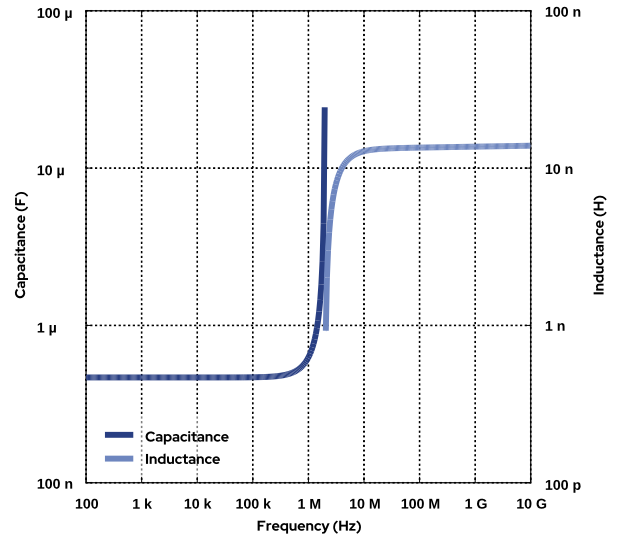
## Simulations

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

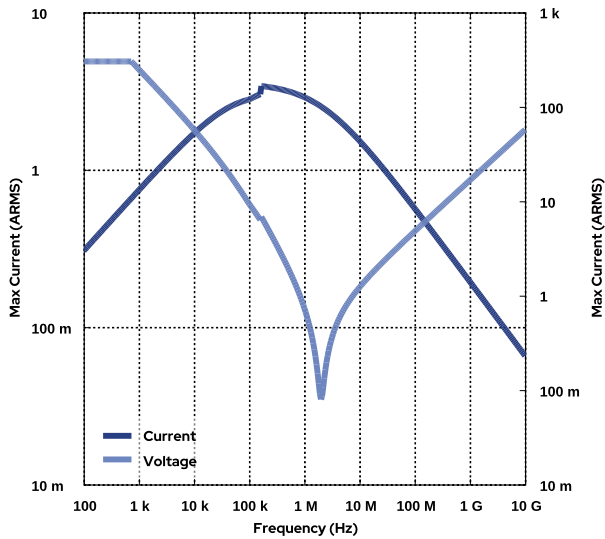
**Impedance and ESR**



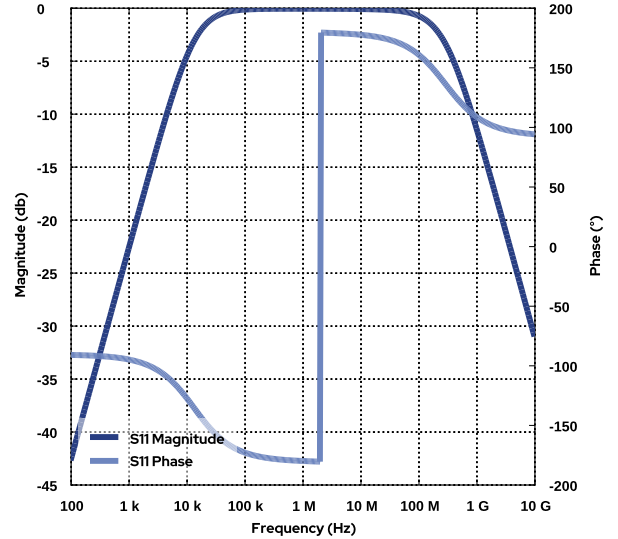
**Capacitance and Inductance**

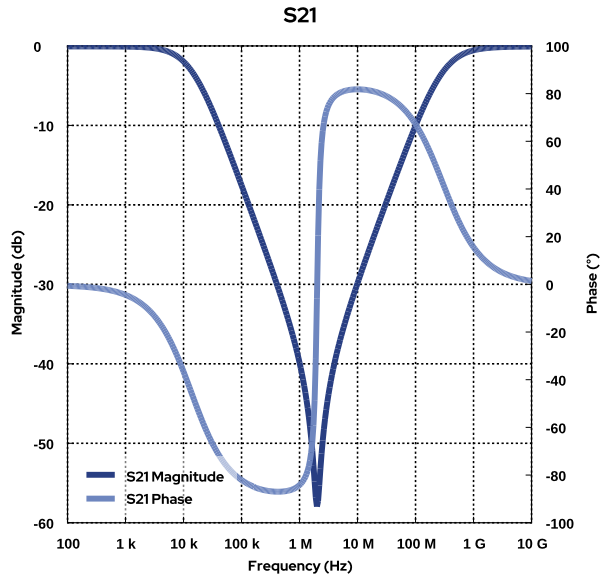


**Current and Voltage**



**S11**





**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.