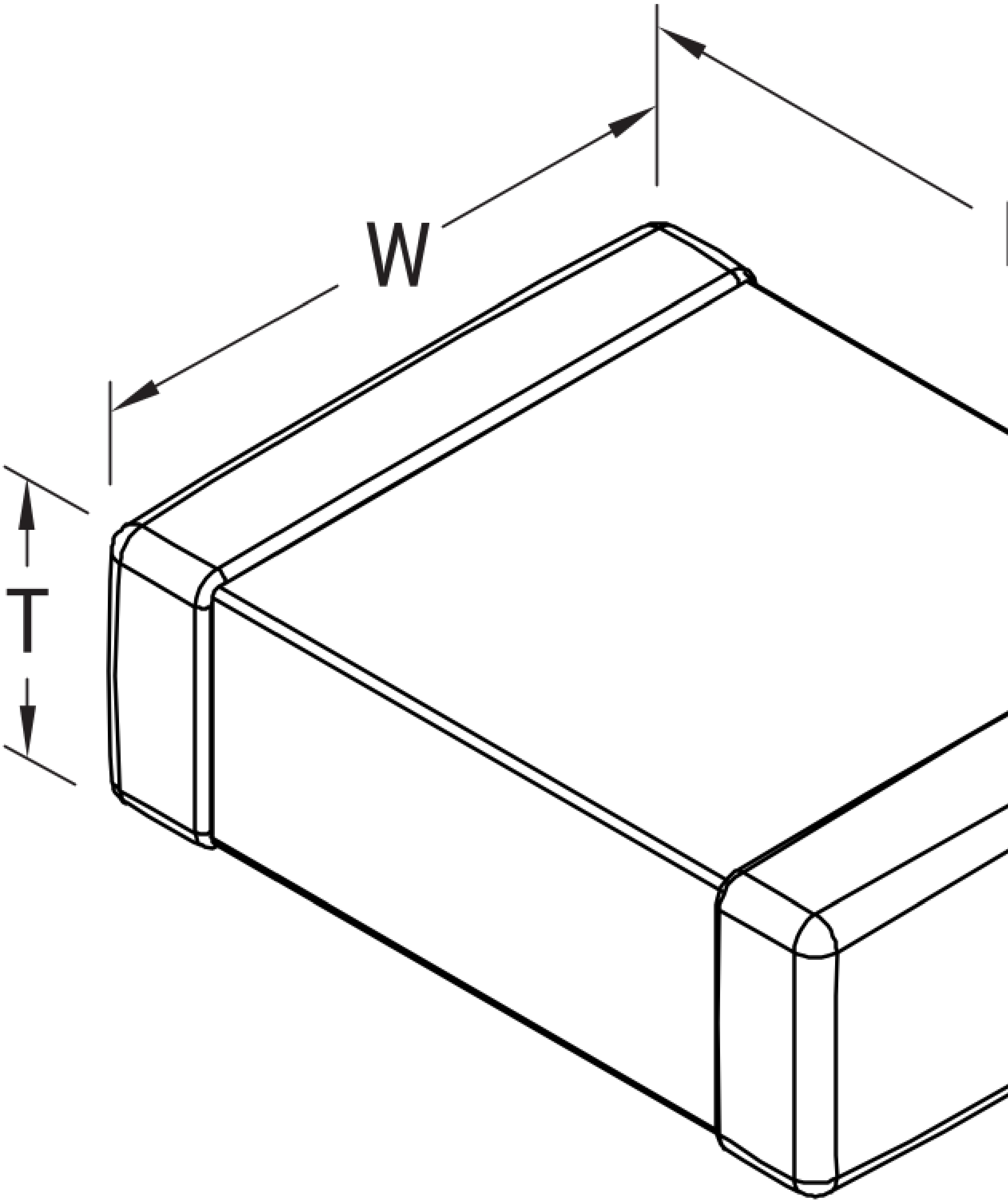
CKC18C153KDGACAUTO

KC-LINK Auto C0G, Ceramic, 0.015 uF, 10%, 1000 VDC, C0G, SMD, MLCC, Ultra-Stable, Low Loss, High Voltage, Automotive Grade, 1812



Click here for the 3D model.

Dimensions

Chip Size	1812
L	4.5mm +/-0.3mm
W	3.2mm +/-0.3mm
T	2.5mm +/-0.20mm

Dimensions	
B	0.6mm +/-0.35mm

Packaging Specifications	
Packaging	T&R, 180mm, Plastic Tape
Packaging Quantity	500

General Information	
Series	KC-LINK Auto C0G
Style	SMD Chip
Description	SMD, MLCC, Ultra-Stable, Low Loss, High Voltage, Automotive Grade
Features	Ultra-Stable, Low Loss, Automotive Grade
RoHS	Yes
Termination	Tin
Marking	No
Qualifications	AEC-Q200
AEC-Q200	Yes
Component Weight	87 mg
Shelf Life	78 Weeks
MSL	1

Specifications	
Capacitance	0.015 uF
Measurement Condition	1 kHz 1.0Vrms
Capacitance Tolerance	10%
Voltage DC	1000 VDC
Dielectric Withstanding Voltage	1200 VDC
Temperature Range	-55/+150°C
Temperature Coefficient	C0G
Capacitance Change with Reference to +25°C and 0 VDC Applied (TCC)	30 ppm/C, 1kHz 1.0Vrms
Dissipation Factor	0.1% 1 kHz 1.0Vrms
Aging Rate	0% Loss/Decade Hour
Insulation Resistance	66.6667 GOhms

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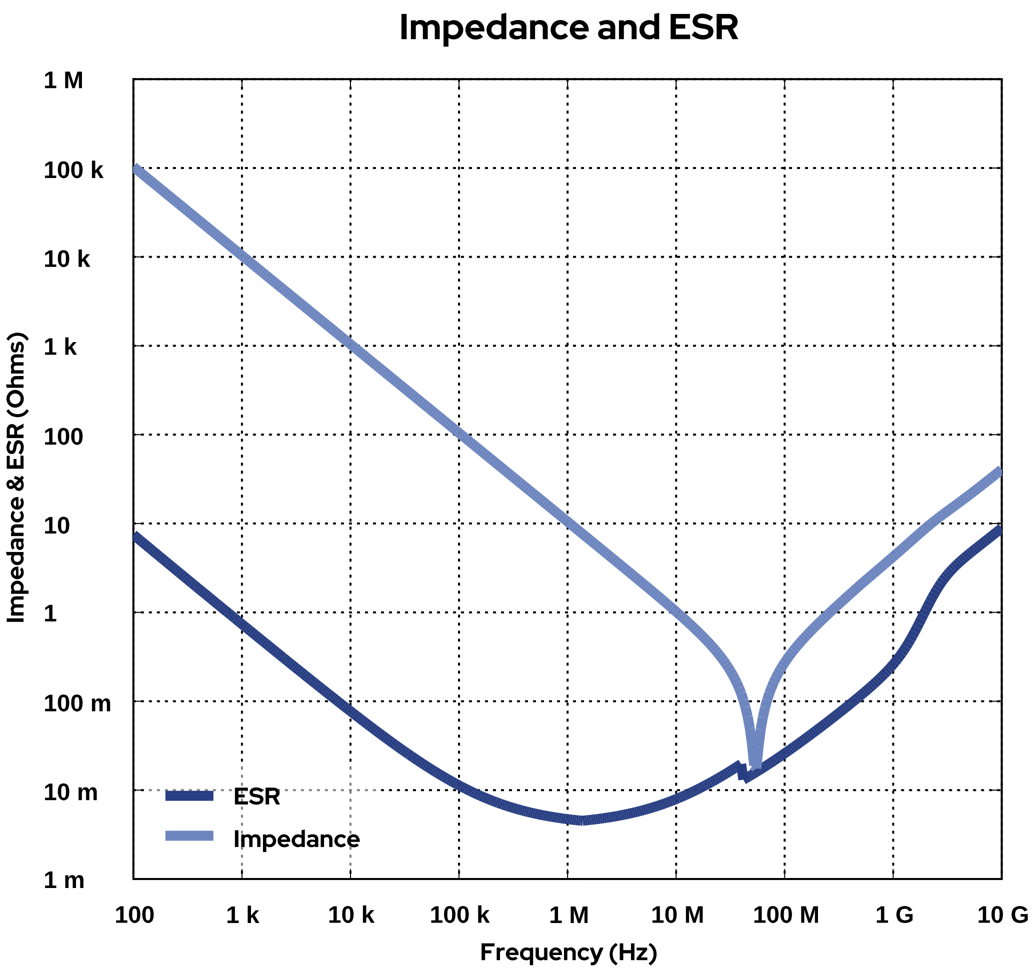
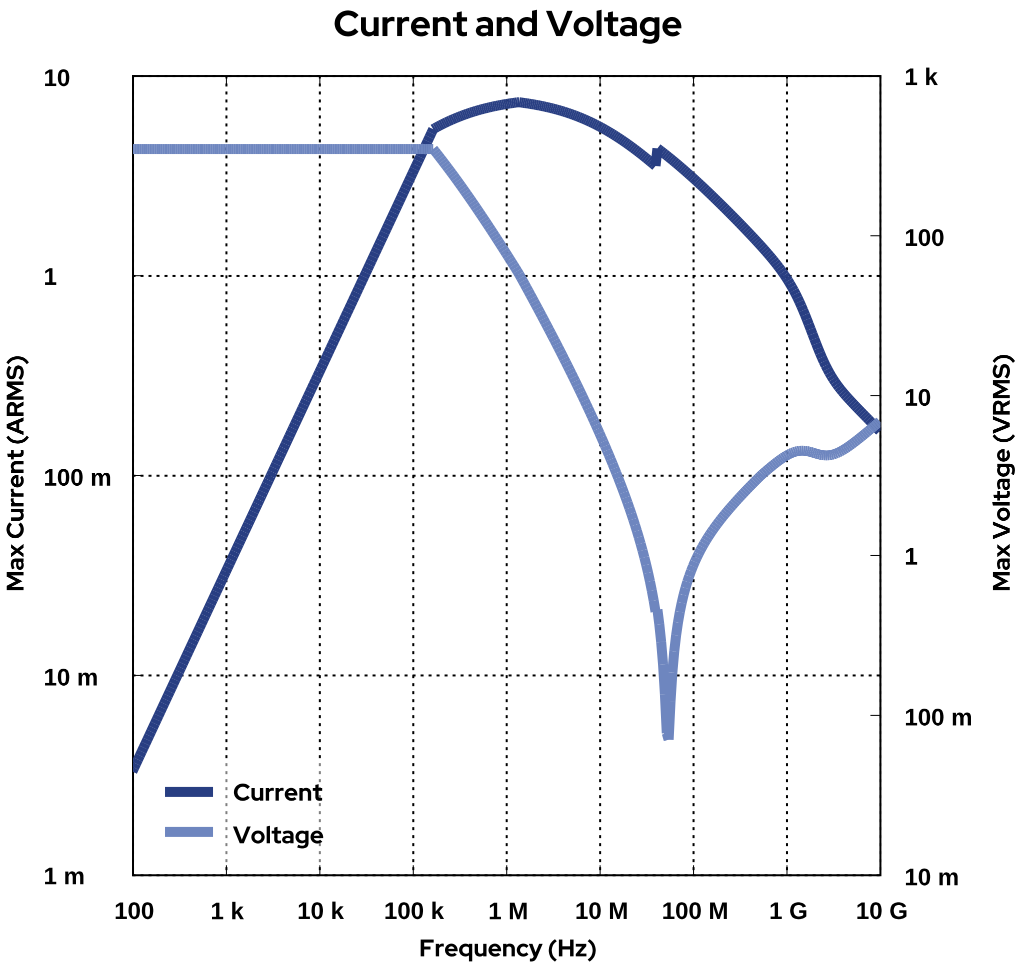
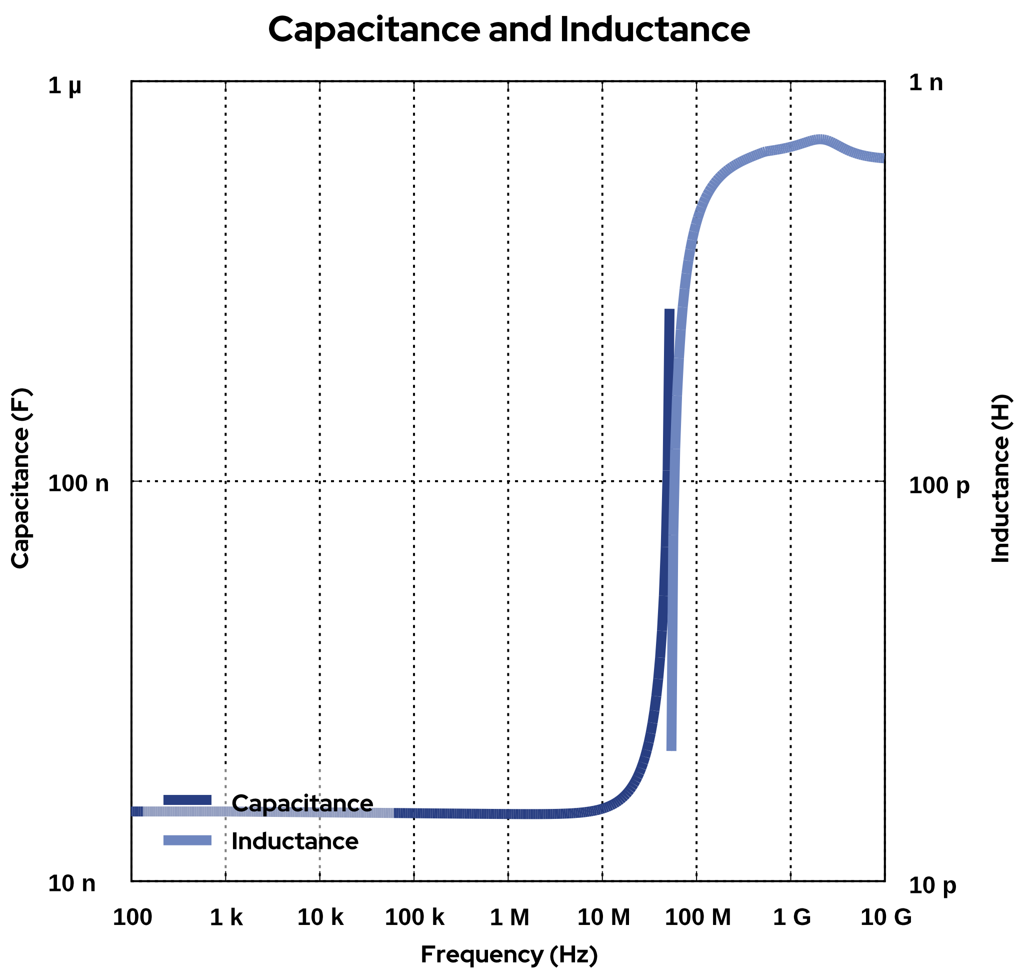
Simulations

For the complete simulation environment please visit K-SIM.

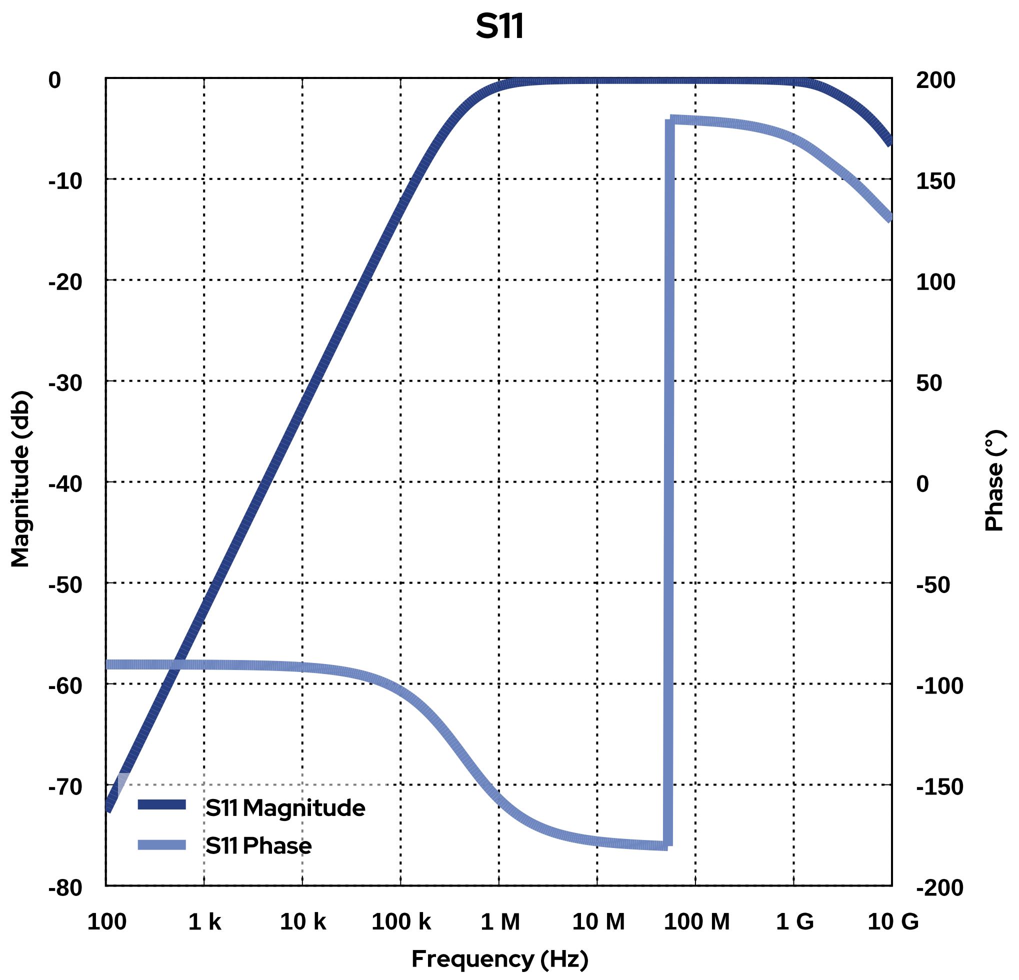




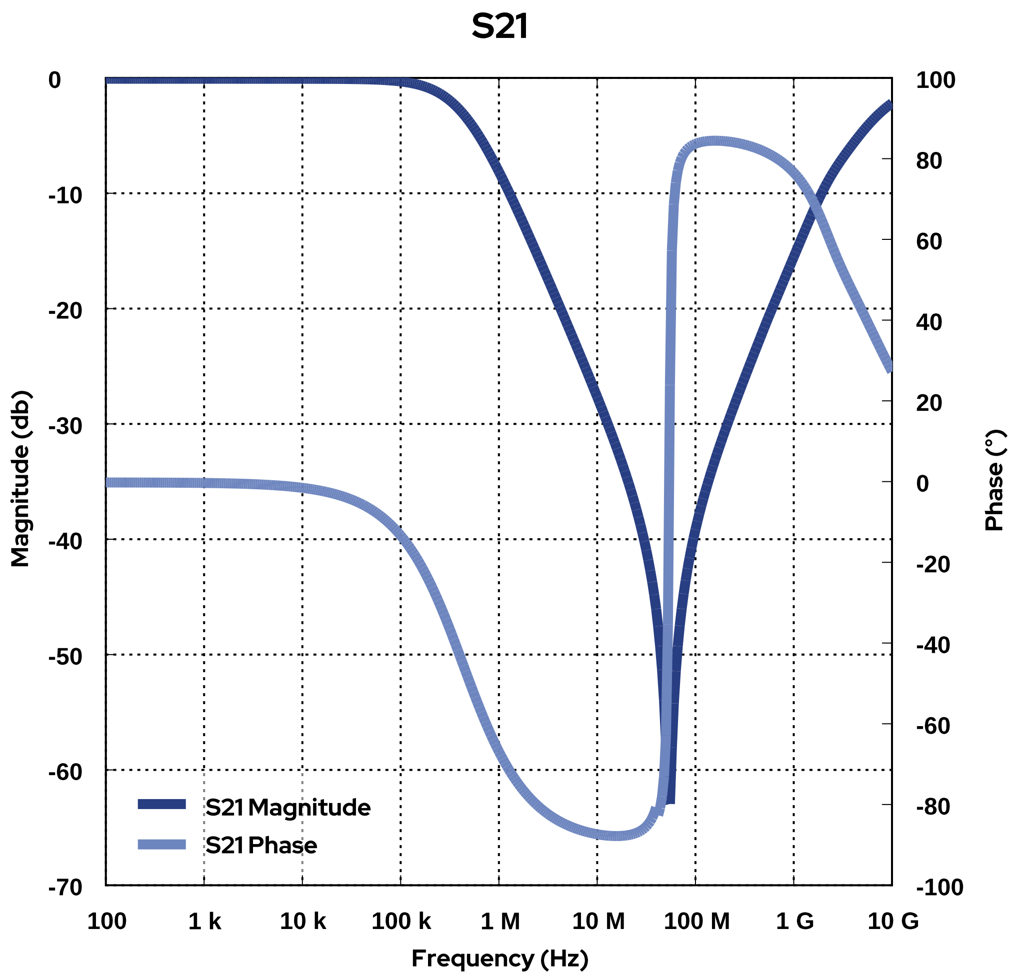
Current and Voltage
10
1
100 m
10 m
1 m
1 k
100
10
1
100 m
10 m
100
1 k
10 k
100 k
1 M
10 M
100 M
1 G
10 G
Frequency (Hz)
Max Current (ARMS)
Max Voltage (VRMS)
Current
Voltage



Capacitance and Inductance
1 µ
100 n
10 n
Capacitance (F)
1 n
100 p
10 p
Inductance (H)
Capacitance
Inductance
100
1 k
10 k
100 k
1 M
10 M
100 M
1 G
10 G
Frequency (Hz)



S11
0
-10
-20
-30
-40
-50
-60
-70
-80
200
150
100
50
0
-50
-100
-150
-200
Magnitude (db)
Phase (°)
S11 Magnitude
S11 Phase
100
1 k
10 k
100 k
1 M
10 M
100 M
1 G
10 G
Frequency (Hz)



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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