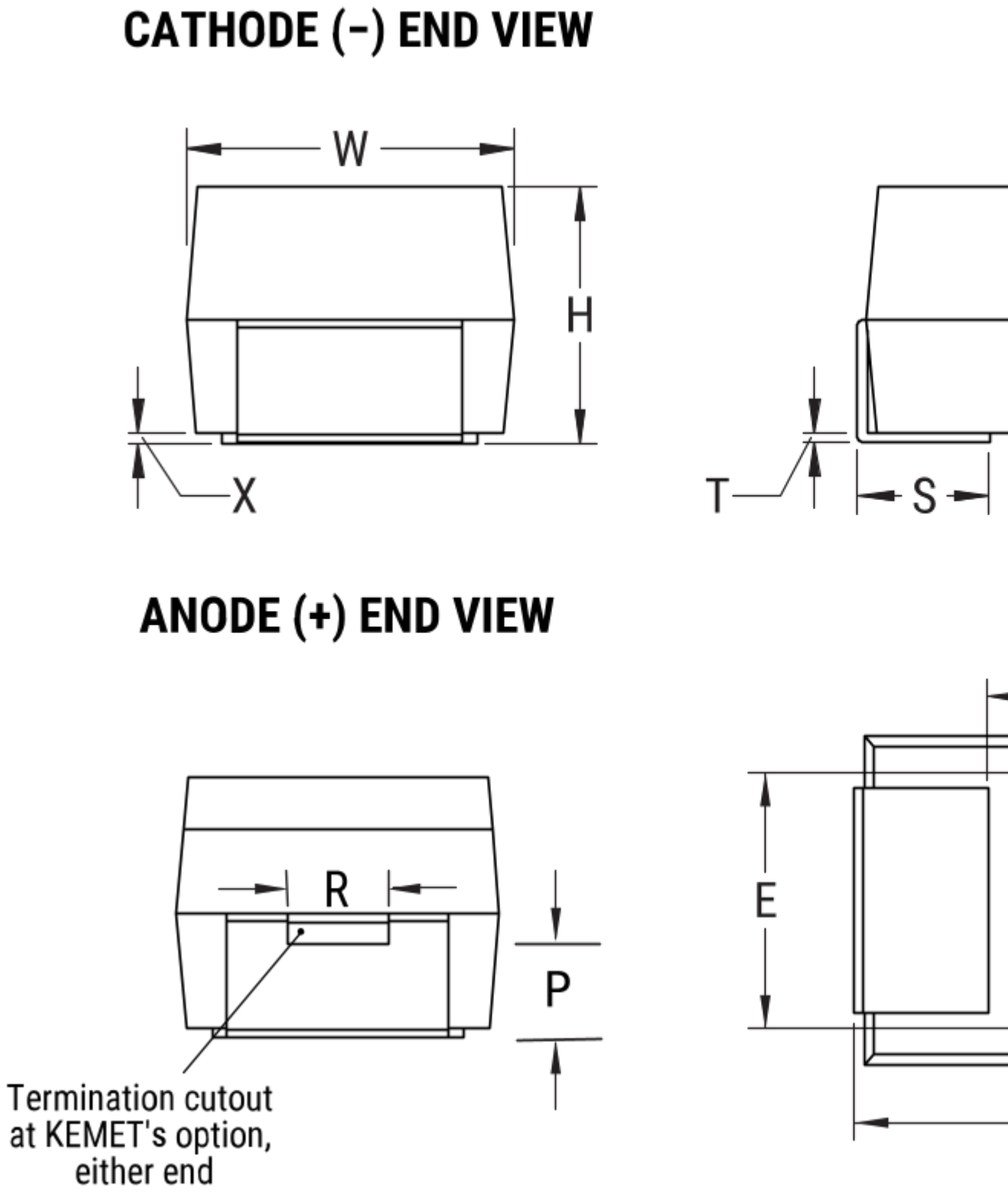
T491D476M006AT7280

T491, Tantalum, MnO2 Tantalum, 47 uF, 20%, 6.3 VDC, SMD, MnO2, Molded, 800 mOhms, 7343, Height Max = 3.1mm



Click here for the 3D model.

Dimensions

Footprint	7343
L	7.3mm +/-0.3mm
W	4.3mm +/-0.3mm
H	2.8mm +/-0.3mm
T	0.13mm REF
S	1.3mm +/-0.3mm
F	2.4mm +/-0.1mm
A	3.6mm MIN
B	0.5mm +/-0.15mm
E	3.5mm REF
G	3.5mm REF
P	0.9mm REF
R	1mm REF
X	0.1mm +/-0.1mm

Packaging Specifications

Packaging	T&R, 330mm
Packaging Quantity	2500

General Information

Series	T491
Dielectric	MnO2 Tantalum
Style	SMD Chip
Description	SMD, MnO2, Molded
RoHS	Yes
Termination	Tin
AEC-Q200	No
Component Weight	446.84 mg
Shelf Life	156 Weeks
MSL	1

Specifications

Capacitance	47 uF
Capacitance Tolerance	20%
Voltage DC	6.3 VDC (85C), 4.22 VDC (125C)
Temperature Range	-55/+125°C
Rated Temperature	85°C
Dissipation Factor	6% 120Hz 25C
Failure Rate	N/A
Resistance	0.8 Ohms (100kHz 25C)
Ripple Current	433 mA (rms, 100kHz 25C), 389.7 mA (rms, 85C), 173.2 mA (rms, 125C)
Leakage Current	3 uA (5min 25°C)

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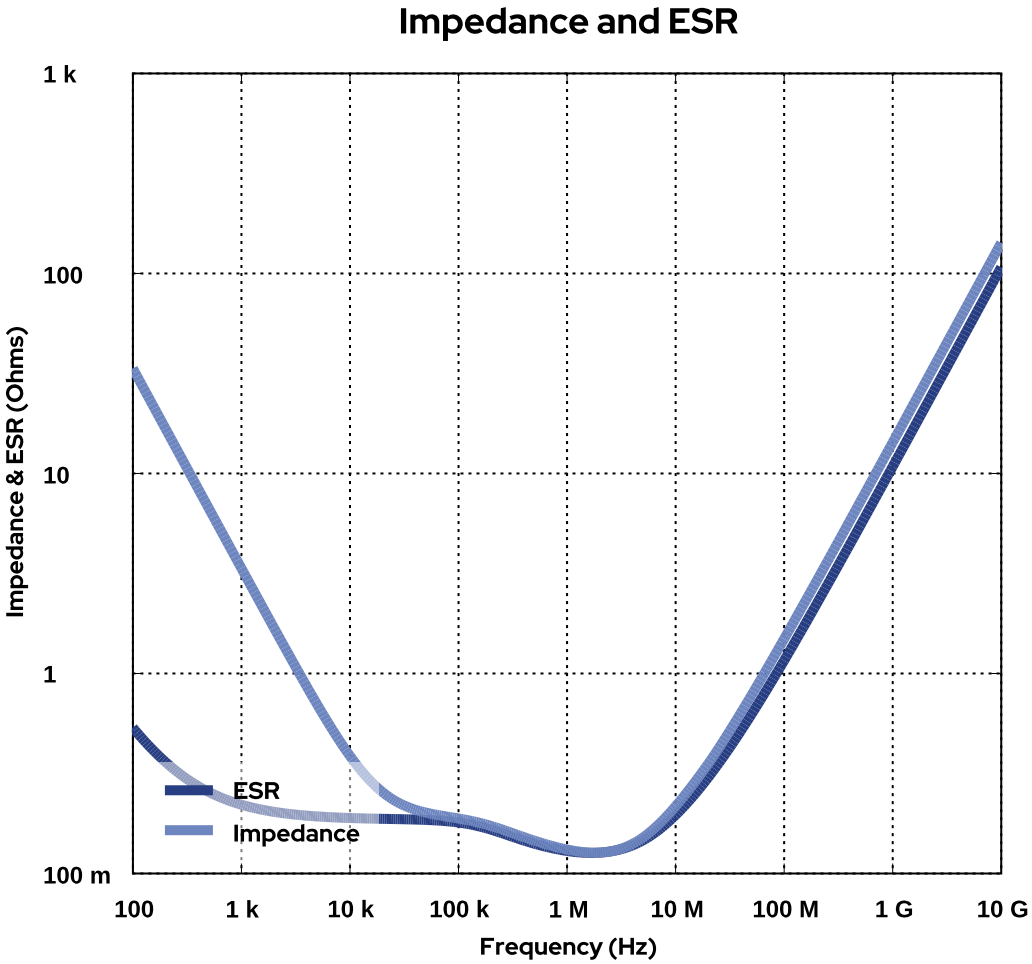
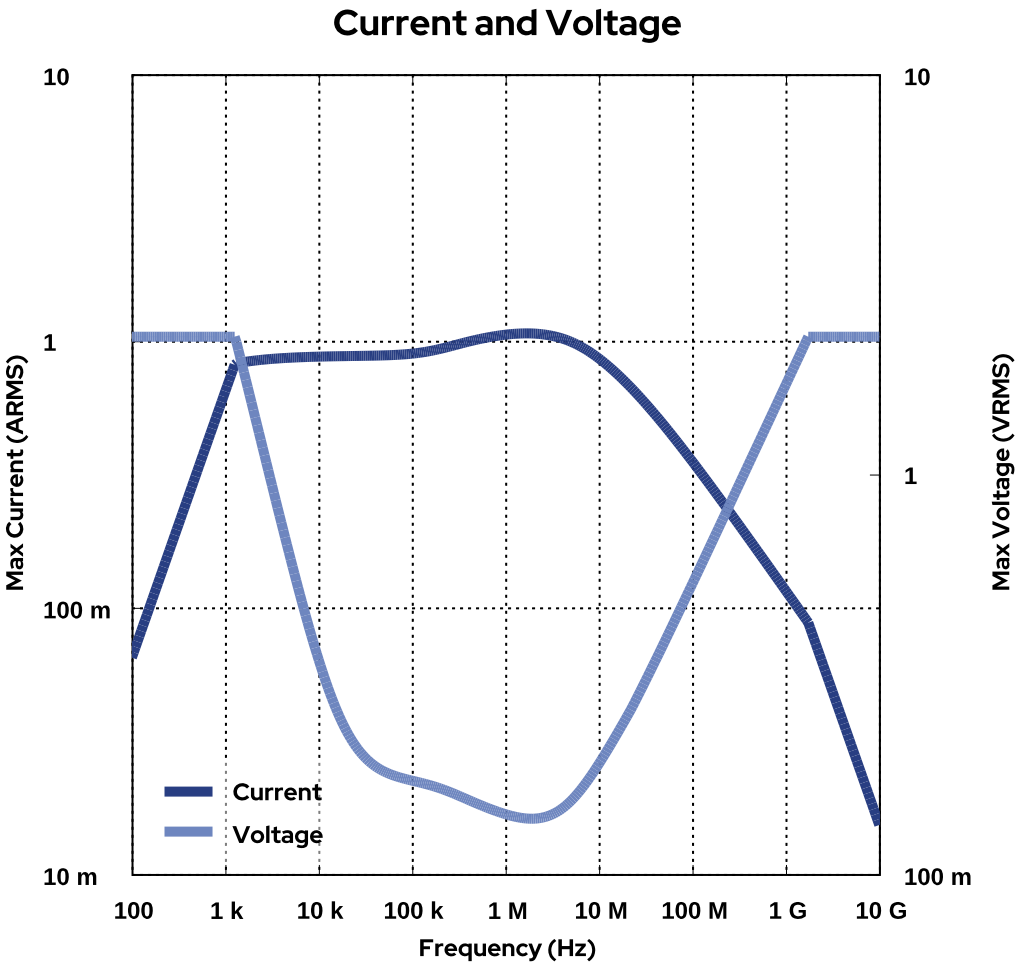
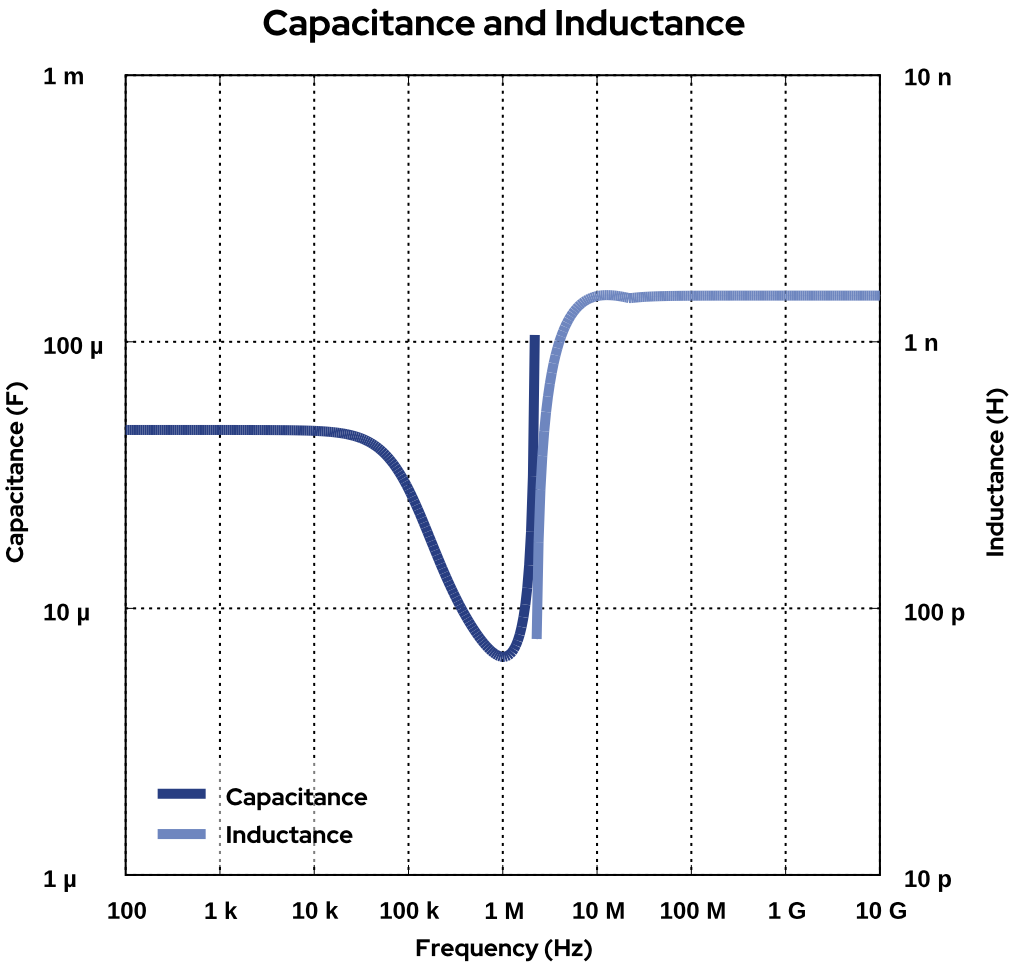
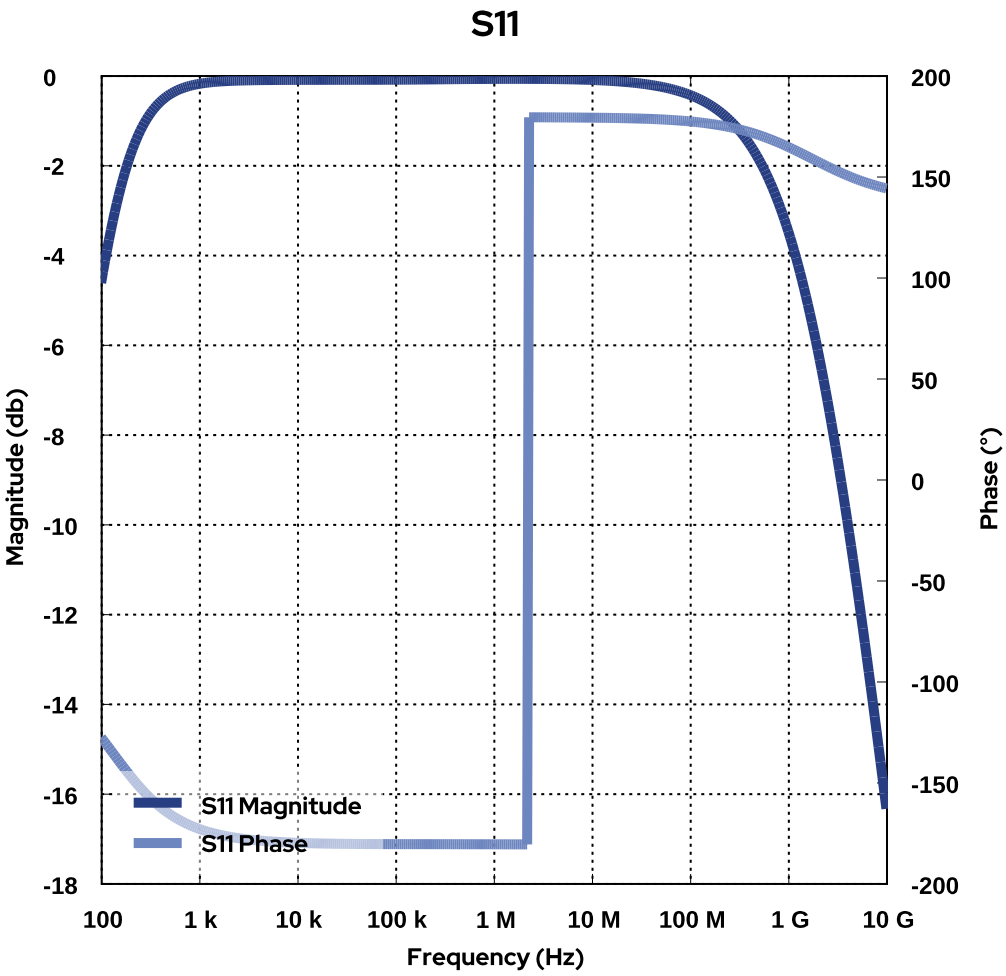
Simulations

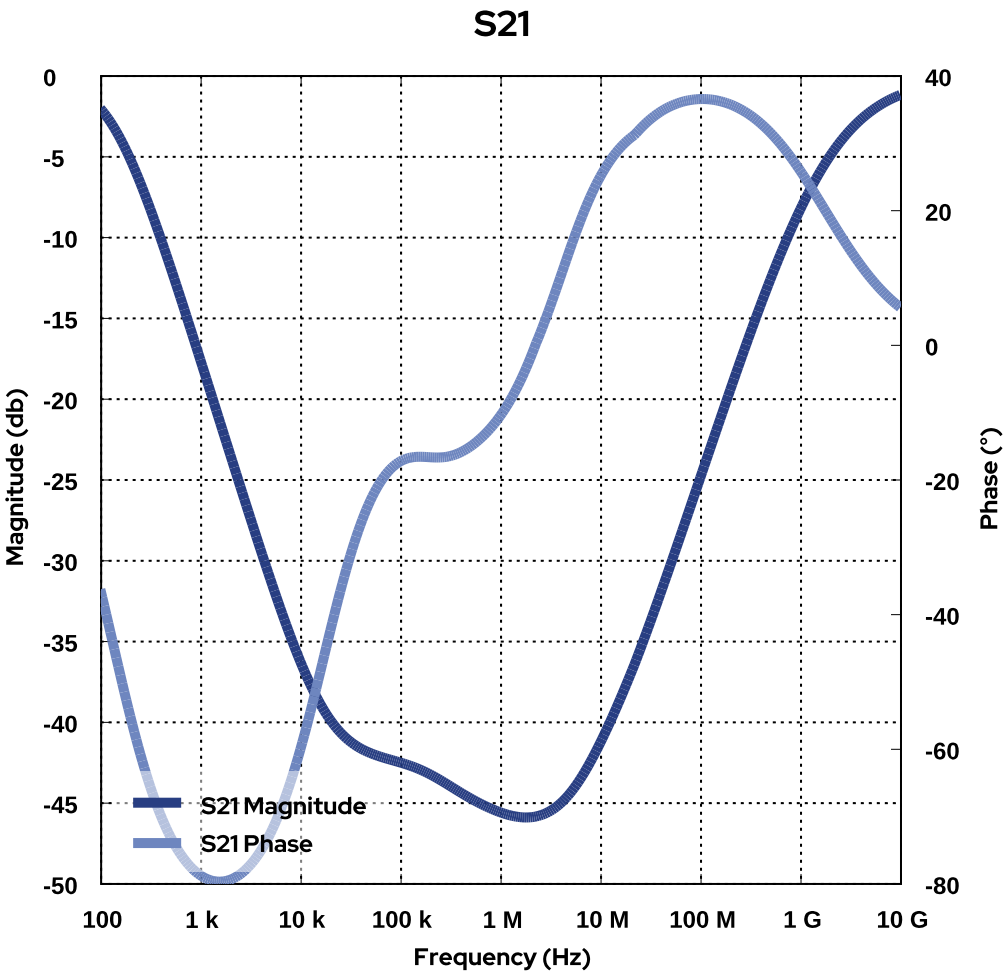
For the complete simulation environment please visit K-SIM.




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


Capacitance and Inductance
1 m
100 µ
10 µ
1 µ
Capacitance (F)
10 n
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
-2
-4
-6
-8
-10
-12
-14
-16
-18
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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