

Device Modeling Report

COMPONENTS: CAPACITOR/ CERAMIC
PART NUMBER: DE1E3KX392MA5B
MANUFACTURER: MURATA
REMARK: TA=40C



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

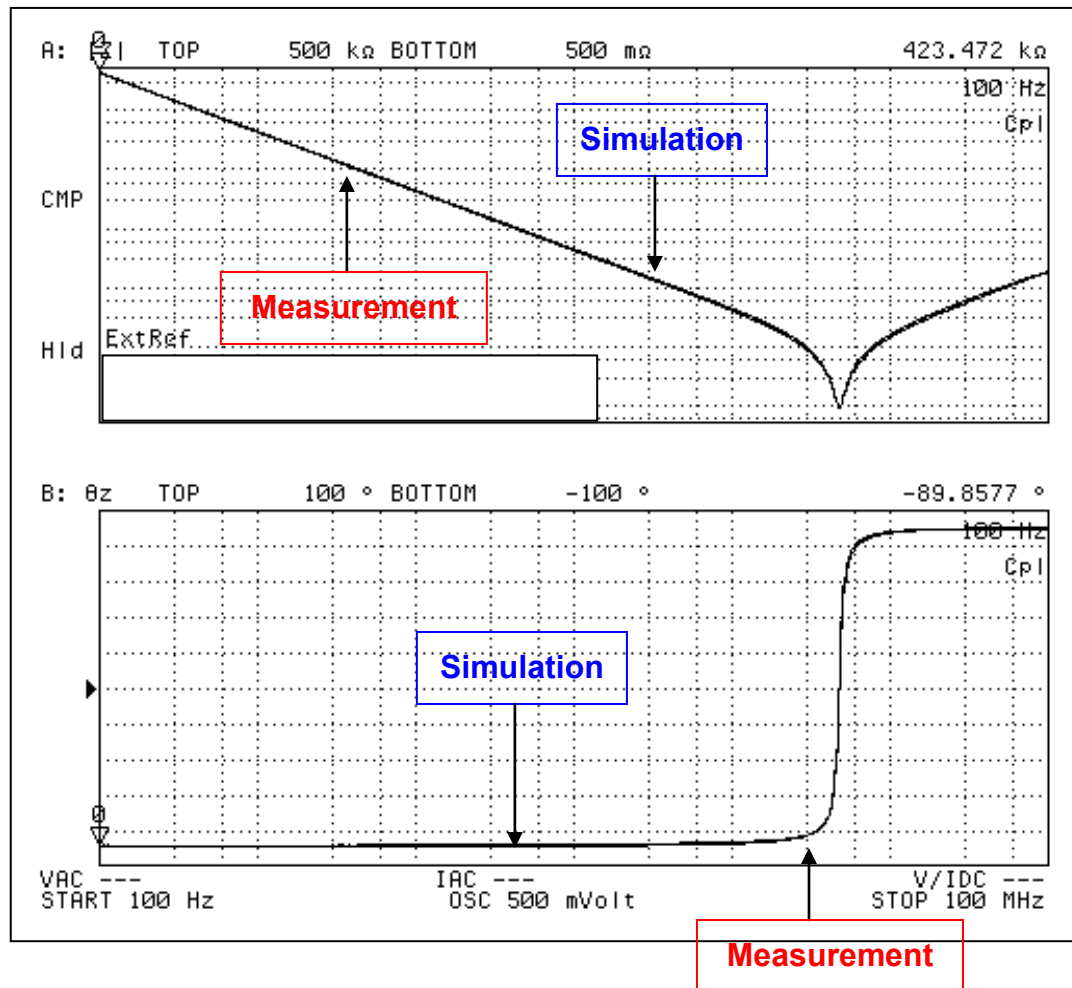
Optimization of Simulation

Range of adjustment Frequency: 100Hz to 100M(Hz)

Frequency vs. $|Z|$ and Frequency vs. θz Characteristic

Attention)

Please use SPICE MODEL within the range from 100Hz to 100M(Hz)



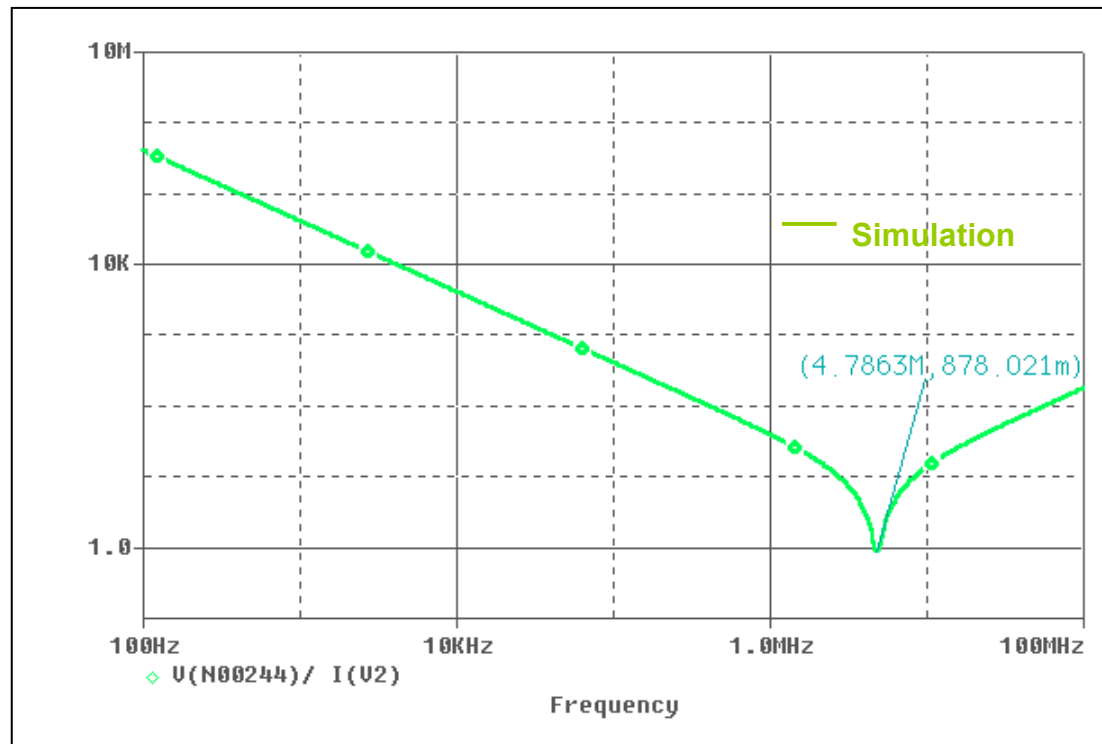
L1	
C1	
R1	

Equivalent circuit

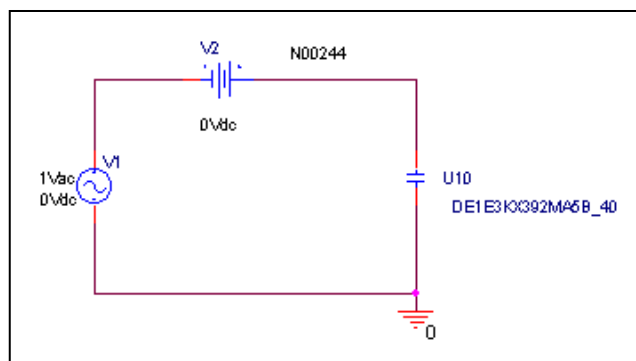


Frequency vs. |Z| Characteristic

Circuit Simulation result



Evaluation Circuit



Simulation result

Frequency (Hz)	IZI (ohm) :Measurement	IZI (ohm) :Simulation	% Error
100	423.472K	411.719K	2.7754
1K	42.6624K	41.172K	3.4935
10K	4.30284K	4.1172K	4.3144
100K	435.785	411.544	5.5626
1M	42.8504	39.421	8.0032
10M	15.088	13.511	10.4520
100M	176.807	175.603	0.6810

	Measurement	Simulation	%Error
FSRF(Hz)	4.86967M	4.7863M	1.7120
IZI (ohm)	858.138m	878.021m	2.3170