

Device Modeling Report

COMPONENTS: CAPACITOR/ CERAMIC
PART NUMBER: DE1E3KX392MA5B
MANUFACTURER: MURATA
REMARK: TA=25C



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

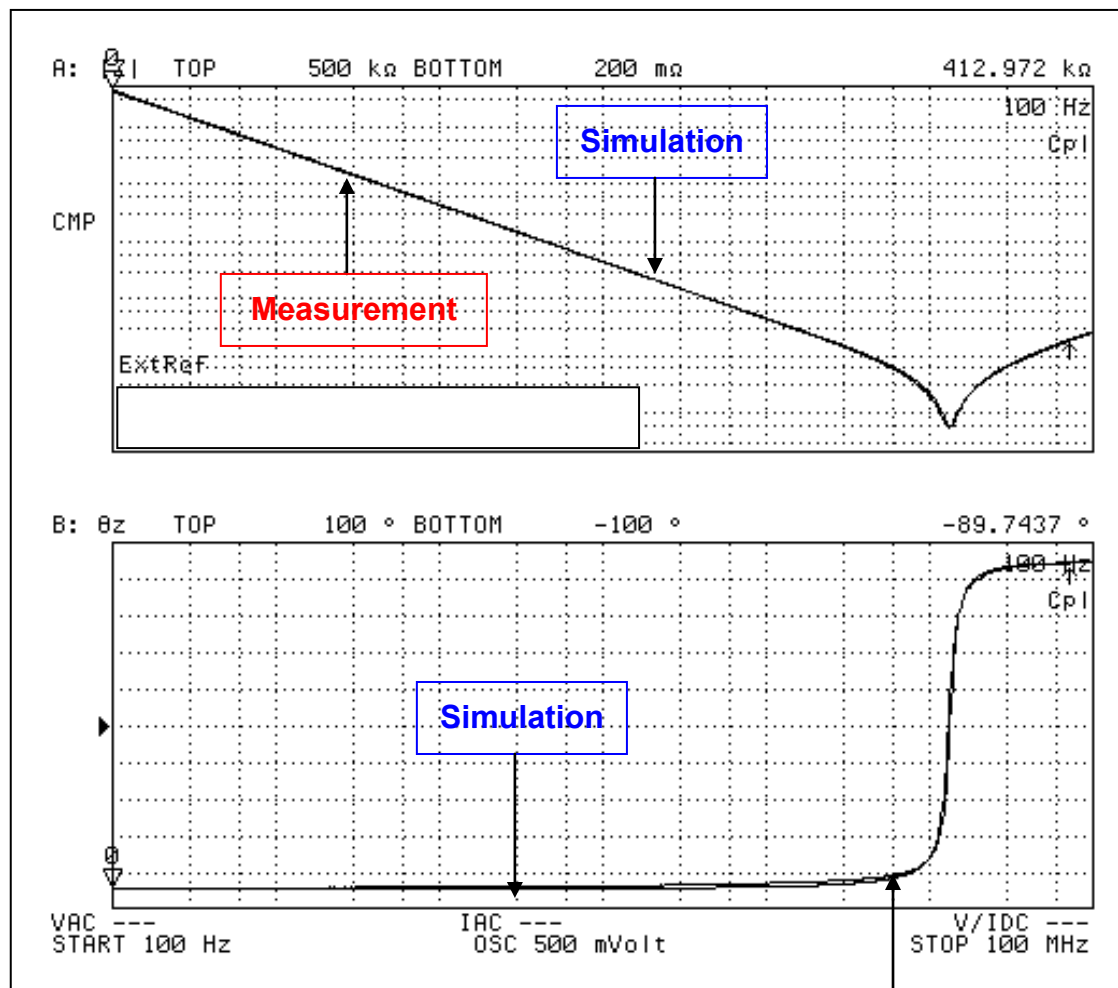
Optimization of Simulation

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

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

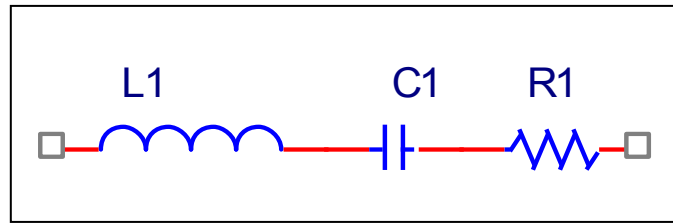
Attention)

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



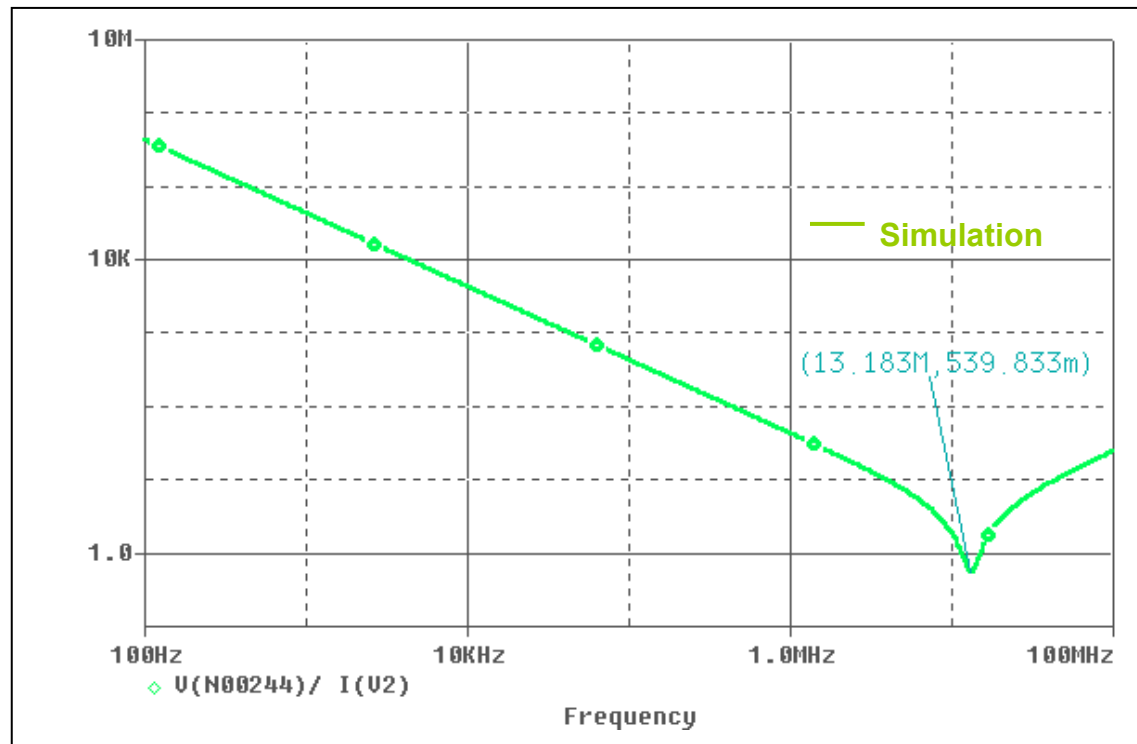
L1	
C1	
R1	

Equivalent circuit

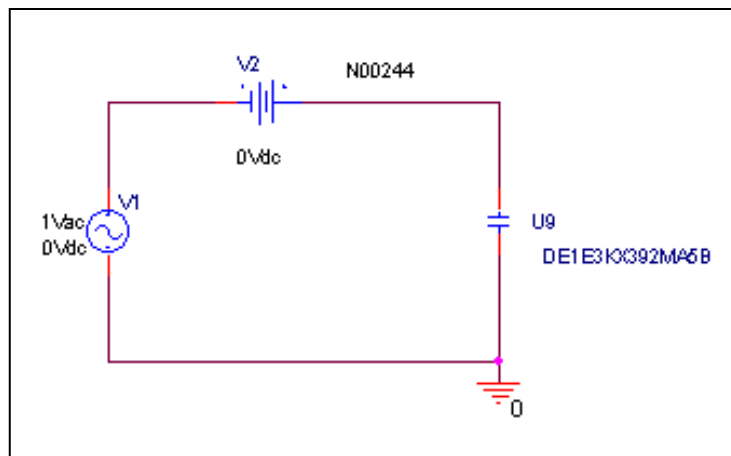


Frequency vs. |Z| Characteristic

Circuit Simulation result



Evaluation Circuit



Simulation result

Frequency (Hz)	IZI (ohm) :Measurement	IZI (ohm) :Simulation	% Error
100	412.816K	432.977K	4.8838
1K	41.5751K	43.298K	4.1441
10K	4.19018K	4.3298K	3.3321
100K	426.107	432.953	1.6066
1M	44.0397	43.054	2.2382
10M	2.20936	1.9735	10.6755
100M	25.5403	24.314	4.8014

	Measurement	Simulation	%Error
FSRF(Hz)	13.4896M	13.183M	2.2729
IZI (ohm)	539.6m	539.833m	0.0432