

Device Modeling Report

COMPONENTS: CAPACITOR/ CERAMIC
PART NUMBER: DE1E3KX152MA5B
MANUFACTURER: MURATA
REMARK: TA=25C



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

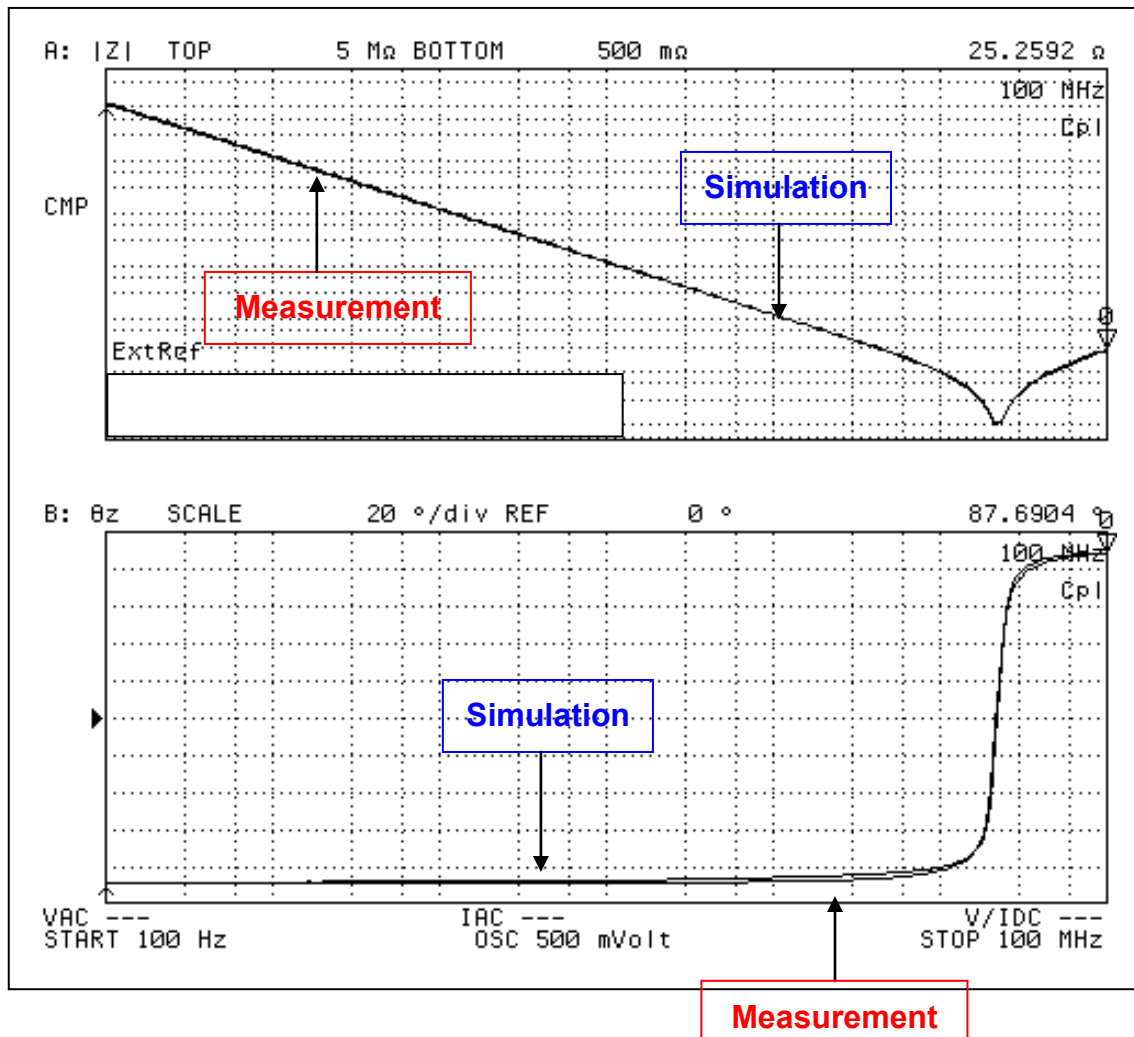
Optimization of Simulation

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

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

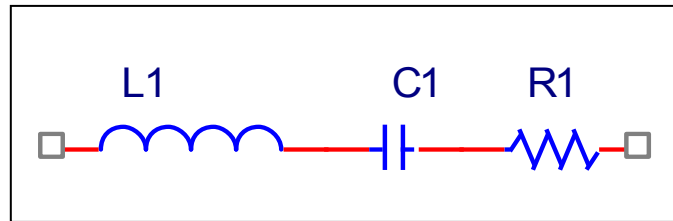
Attention)

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



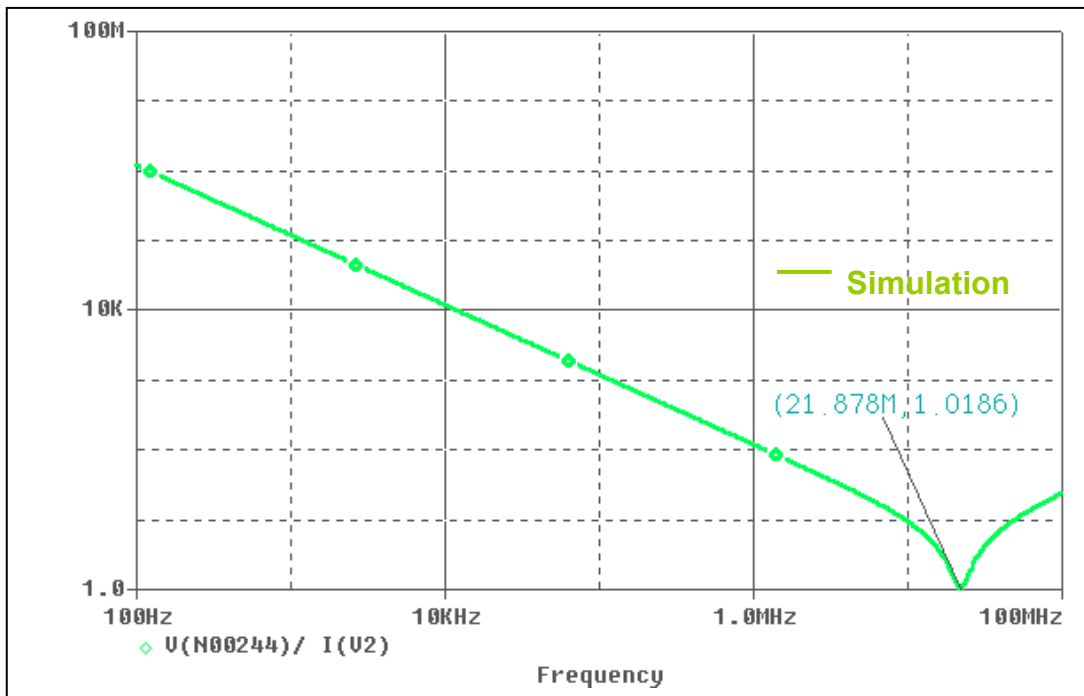
L1	
C1	
R1	

Equivalent circuit

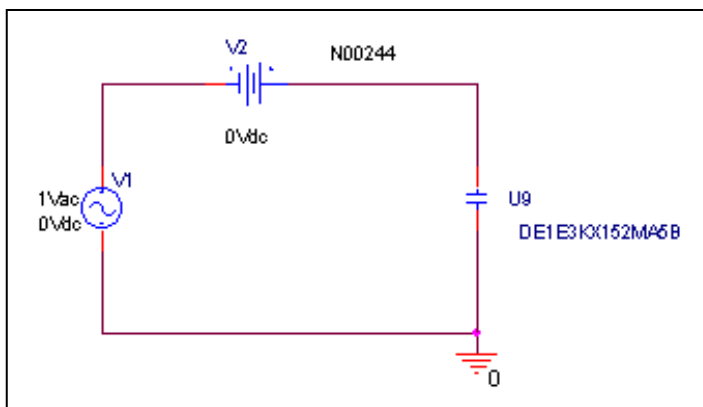


Frequency vs. IZI Characteristic

Circuit Simulation result



Evaluation Circuit



Simulation result

Frequency (Hz)	IZI (ohm) :Measurement	IZI (ohm) :Simulation	% Error
100	1.10387M	1.1963M	8.3733
1K	111.196K	119.628K	7.5830
10K	11.227K	11.963K	6.5556
100K	1.14251K	1.1963K	4.7081
1M	118.839	119.386	0.4603
10M	10.3914	9.556	8.0393
100M	25.2606	23.432	7.2389

	Measurement	Simulation	%Error
FSRF(Hz)	21.8776M	21.878	0.0018
IZI (ohm)	1.01608m	1.0186	0.2480