Device Modeling Report

COMPONENTS: CAPACITOR/ CERAMIC
PART NUMBER: DE1E3KX152MA5B
MANUFACTURER: MURATA
REMARK: TA=80C

Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

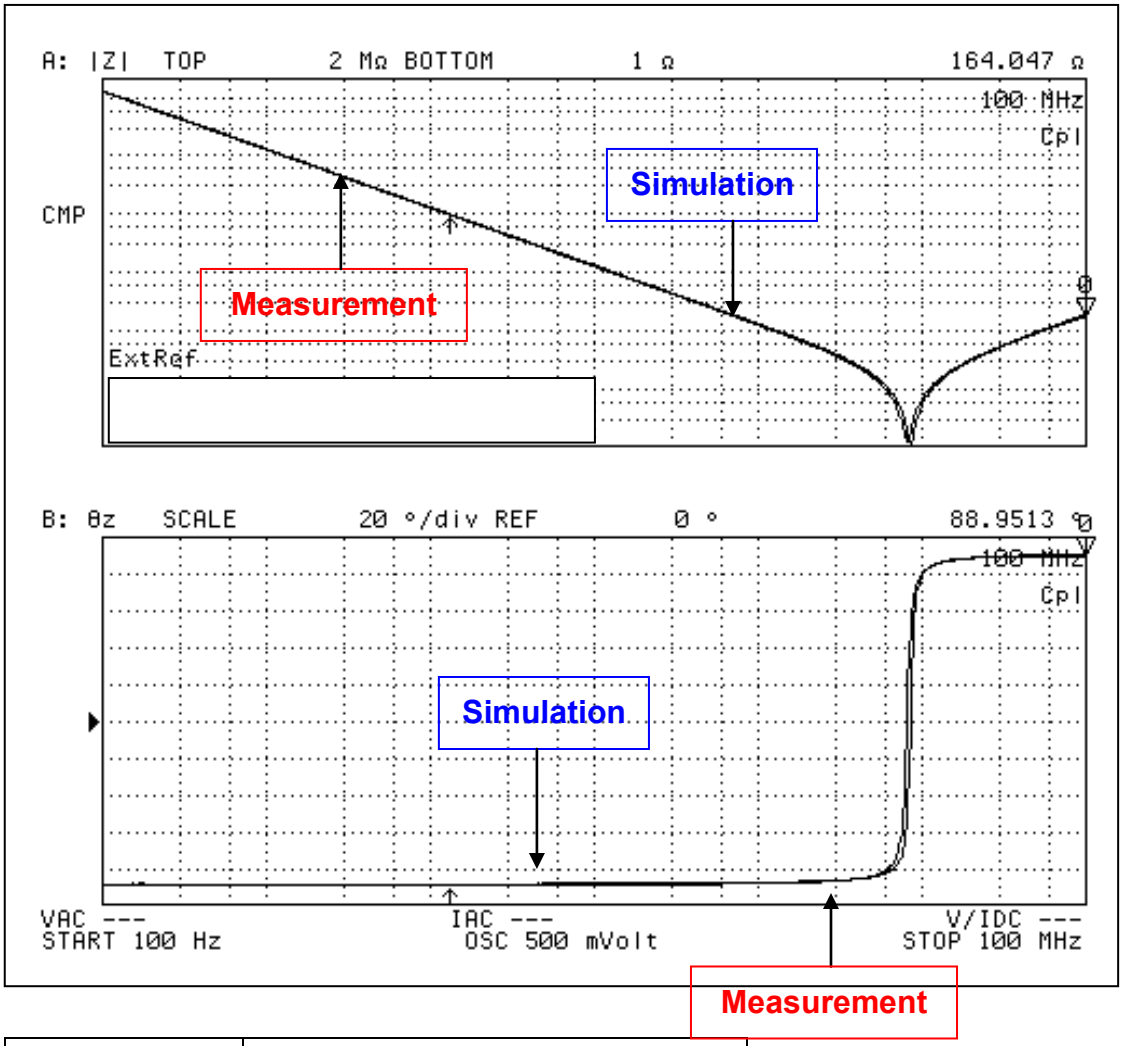
Optimization of Simulation

Range of adjustment Frequency:100Hz to100M(Hz)

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

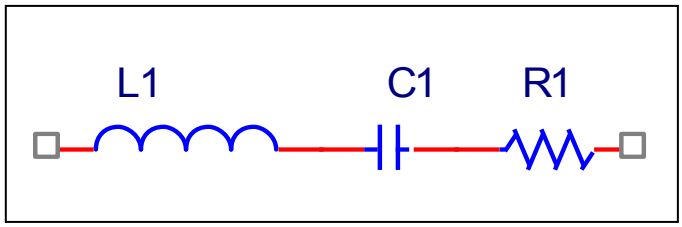
Attention)

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



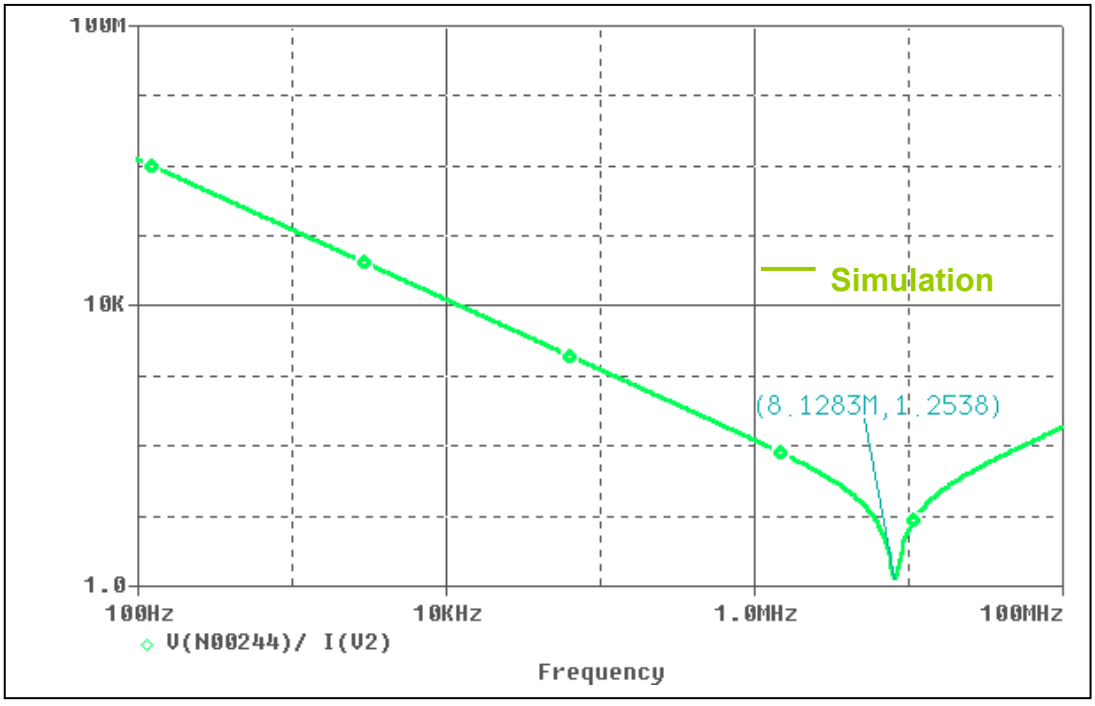
L1	
C1	
R1	

Equivalent circuit

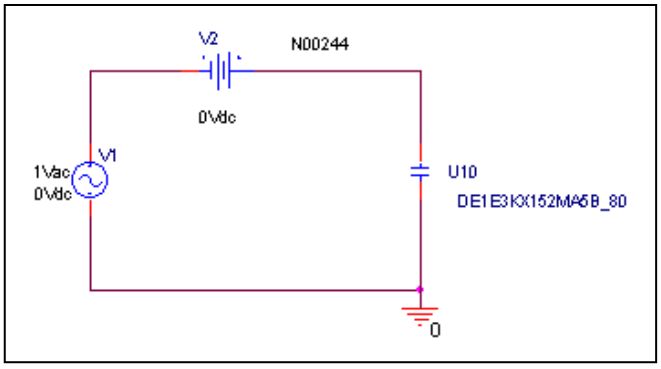


Frequency vs. IZI Characteristic

Circuit Simulation result



Evaluation Circuit



Simulation result

Frequency (Hz)	IZI (ohm) :Measurement	IZI (ohm) :Simulation	% Error
100	1.22305M	1.2286M	0.4538
1K	124.695K	122.863K	1.4692
10K	12.5426K	12.286K	2.0458
100K	1.26477K	1.2284K	2.8756
1M	126.639	121.043	4.4189
10M	4.6534	6.1278	31.6844
100M	164.047	181.313	10.5250
100	1.22305	1.2286	0.4538

	Measurement	Simulation	%Error
FSRF(Hz)	8.4025M	8.1283M	3.2633
IZI (ohm)	1.18625	1.25380	5.6944