

Device Modeling Report

COMPONENTS: CAPACITOR/ CERAMIC
PART NUMBER: DE1E3KX222MA5B
MANUFACTURER: MURATA
REMARK: TA=80C



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

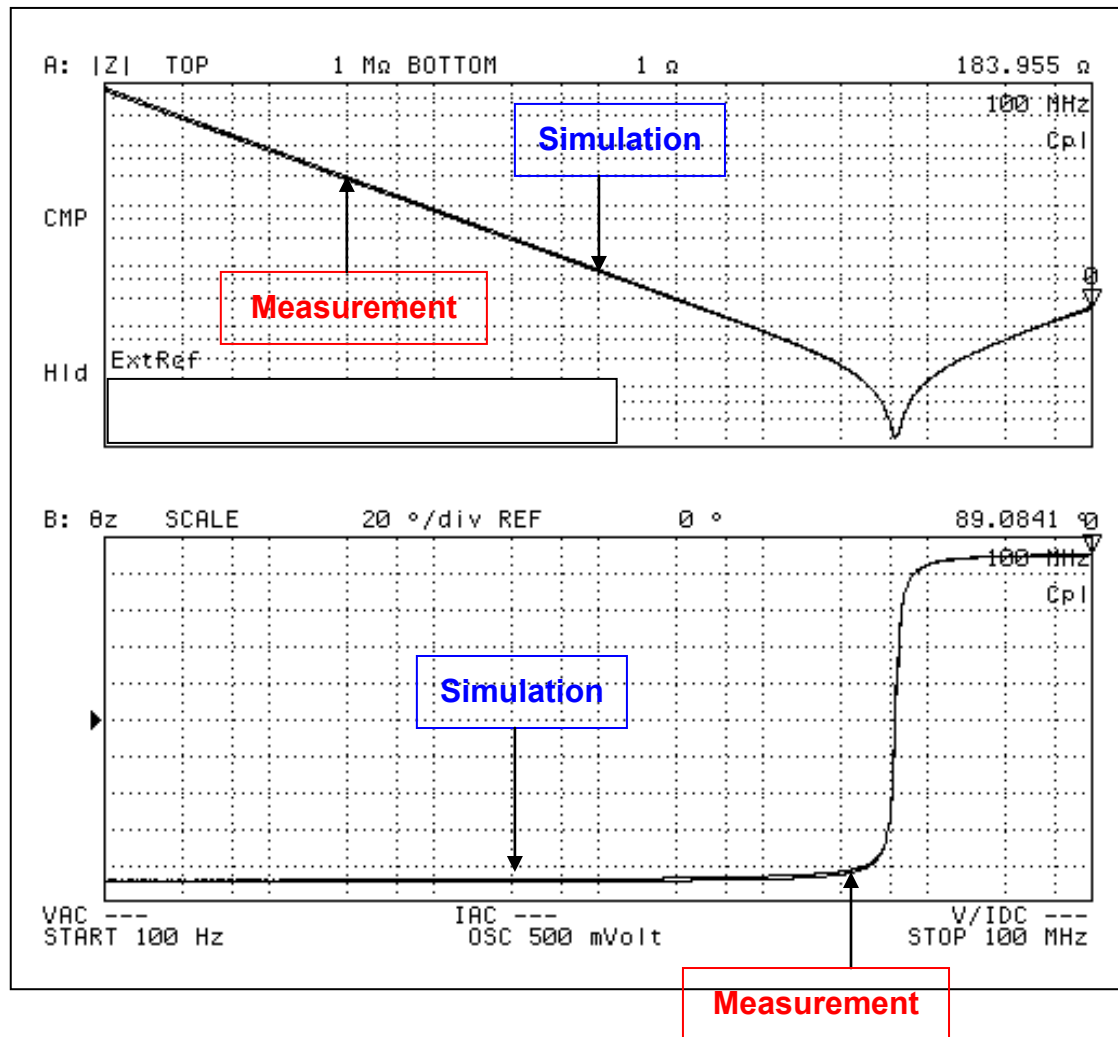
Optimization of Simulation

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

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

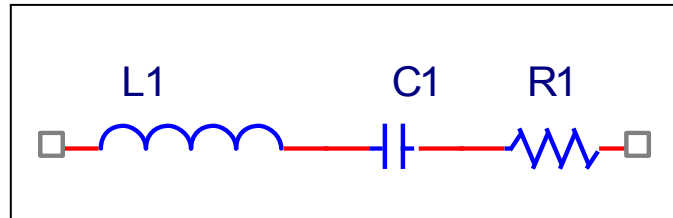
Attention)

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



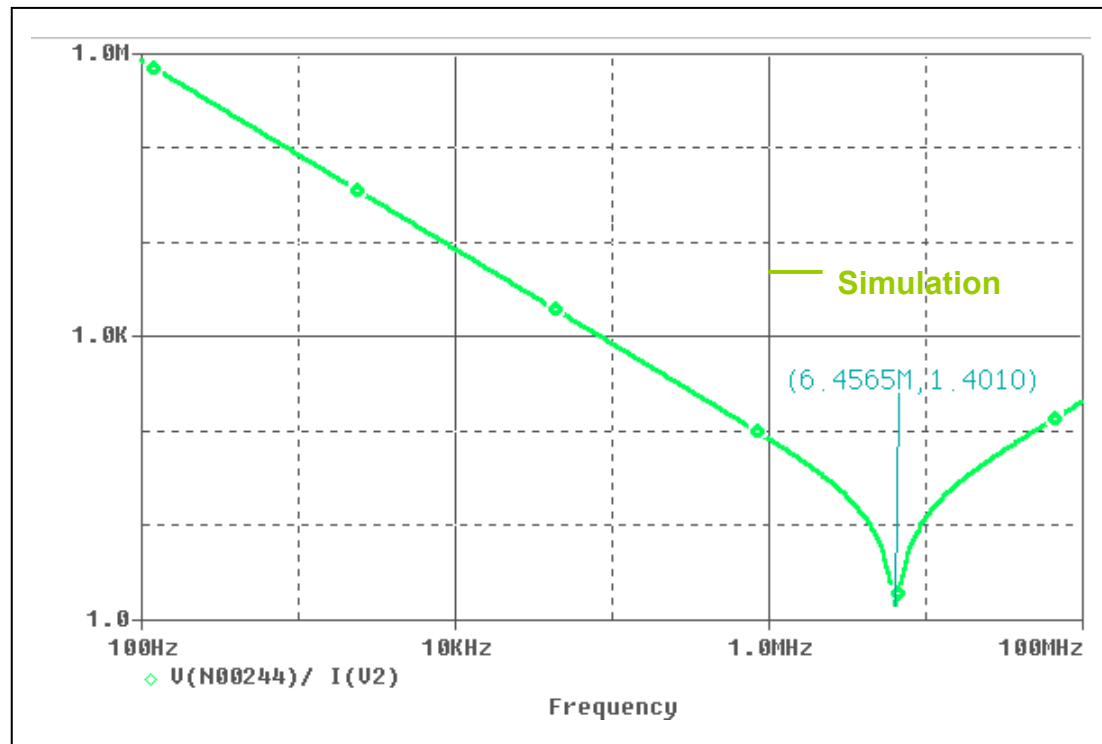
L1	
C1	
R1	

Equivalent circuit

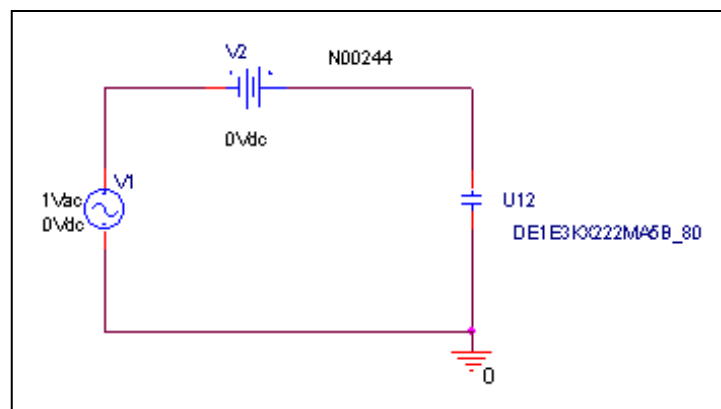


Frequency vs. |Z| Characteristic

Circuit Simulation result



Evaluation Circuit



Simulation result

Frequency (Hz)	IZI (ohm) :Measurement	IZI (ohm) :Simulation	% Error
100	758.608K	853.9960K	12.5741
1K	76.5113K	85.404K	11.6227
10K	7.73953K	8.5399K	10.3413
100K	788.157	853.793	8.3278
1M	79.8215	83.370	4.4455
10M	11.6459	12.182	4.6033
100M	183.955	203.311	10.5221

	Measurement	Simulation	%Error
FSRF(Hz)	6.531M	6.4565M	1.1453
IZI (ohm)	1.40173	1.4010	0.0521