

Device Modeling Report

COMPONENTS: CAPACITOR/ CERAMIC
PART NUMBER: DE1E3KX222MA5B
MANUFACTURER: MURATA
REMARK: TA=40C



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

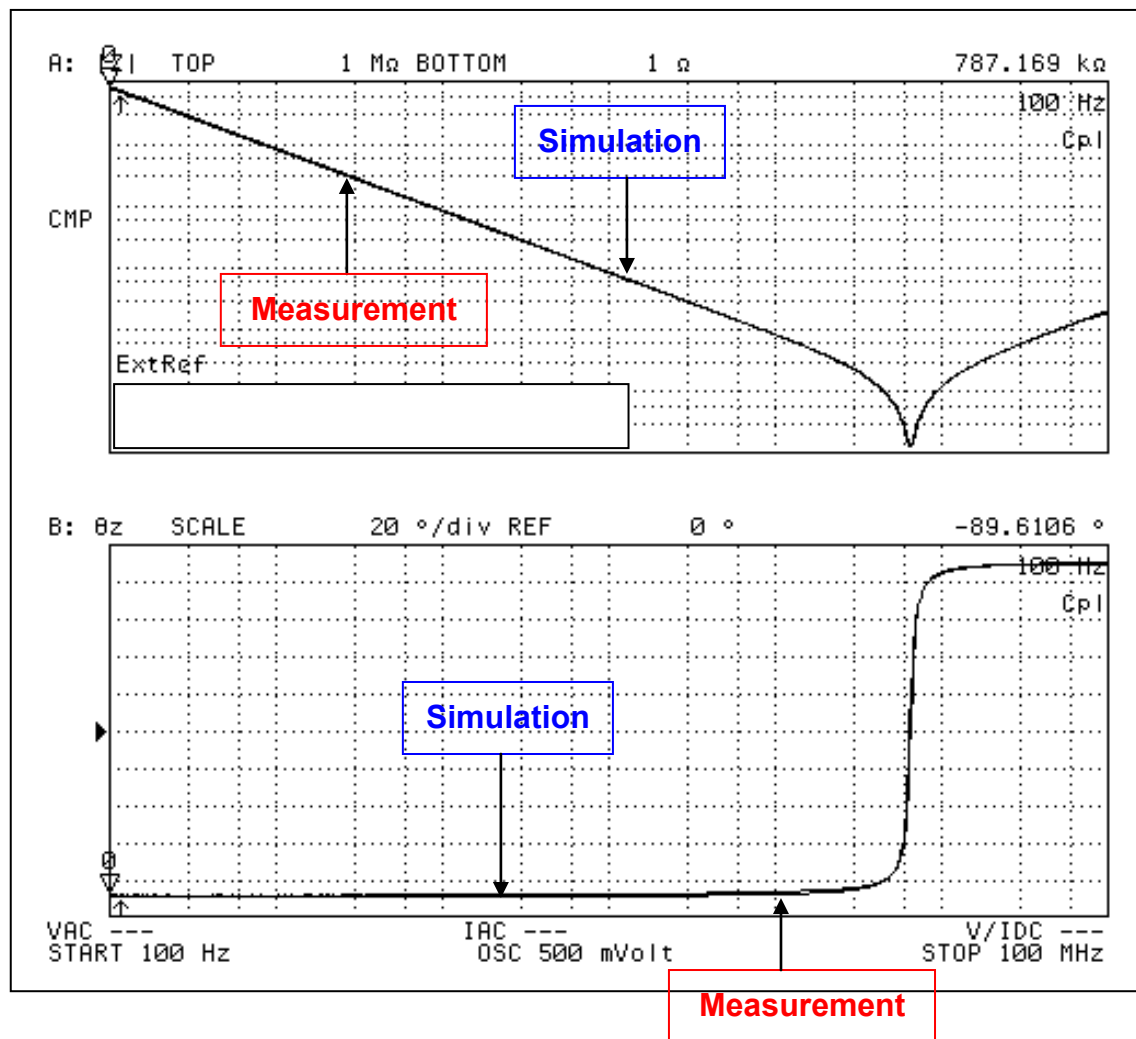
Optimization of Simulation

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

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

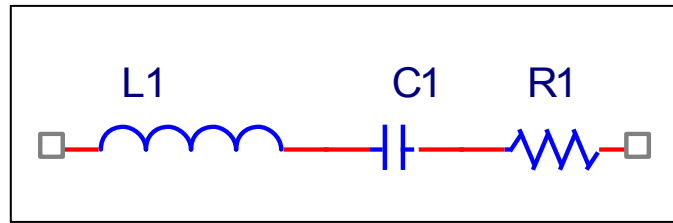
Attention)

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



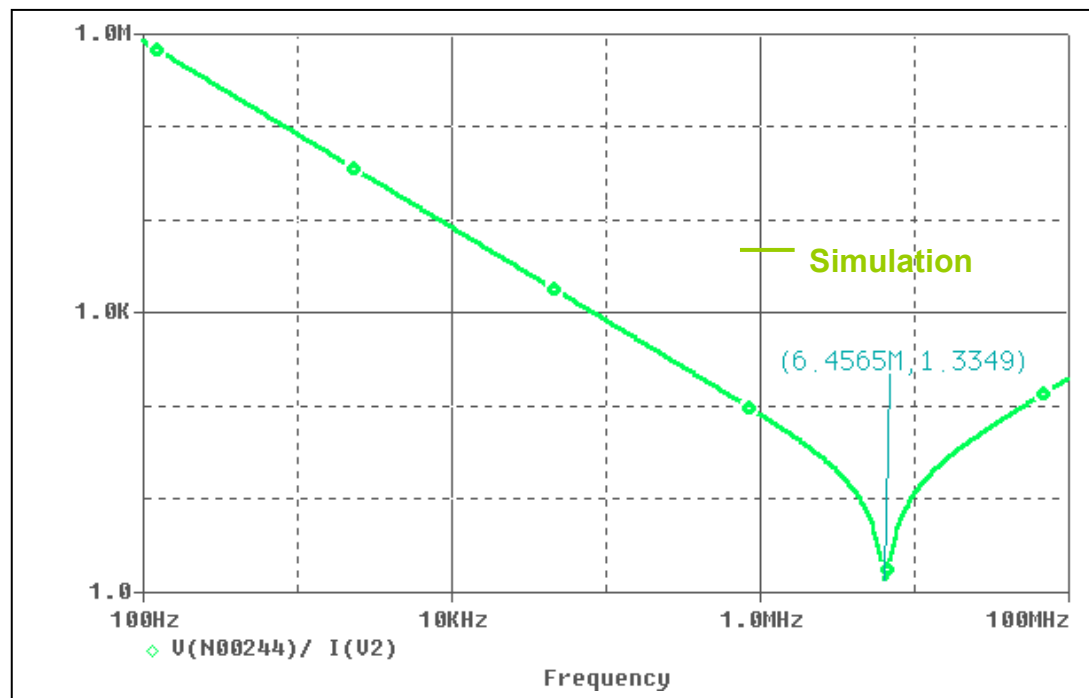
L1	
C1	
R1	

Equivalent circuit

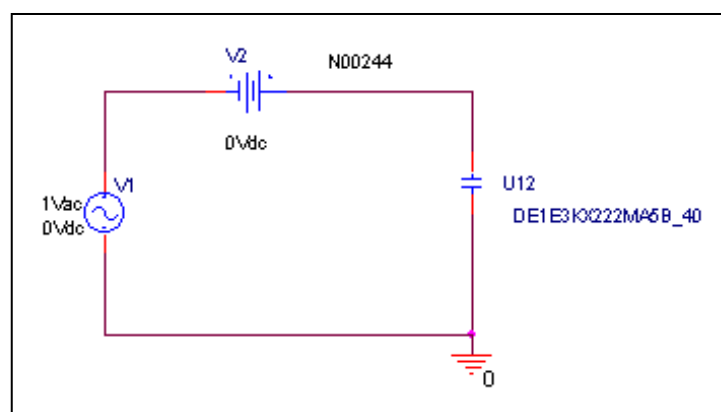


Frequency vs. |Z| Characteristic

Circuit Simulation result



Evaluation Circuit



Simulation result

Frequency (Hz)	IZI (ohm) :Measurement	IZI (ohm) :Simulation	% Error
100	794.021K	840.169K	5.8119
1K	79.5355K	84.017K	5.6346
10K	8.02742K	8.4017K	4.6625
100K	815.115	839.973	3.0496
1M	82.1	82.050	0.0609
10M	11.2187	11.446	2.0261
100M	180.144	196.882	9.2915

	Measurement	Simulation	%Error
FSRF(Hz)	6.6450M	6.4565M	2.8367
IZI (ohm)	1.30062	1.3349	2.6357