

Device Modeling Report

COMPONENTS: CAPACITOR/ CERAMIC
PART NUMBER: DE1E3KX332MA5B
MANUFACTURER: MURATA
REMARK: TA=40C



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

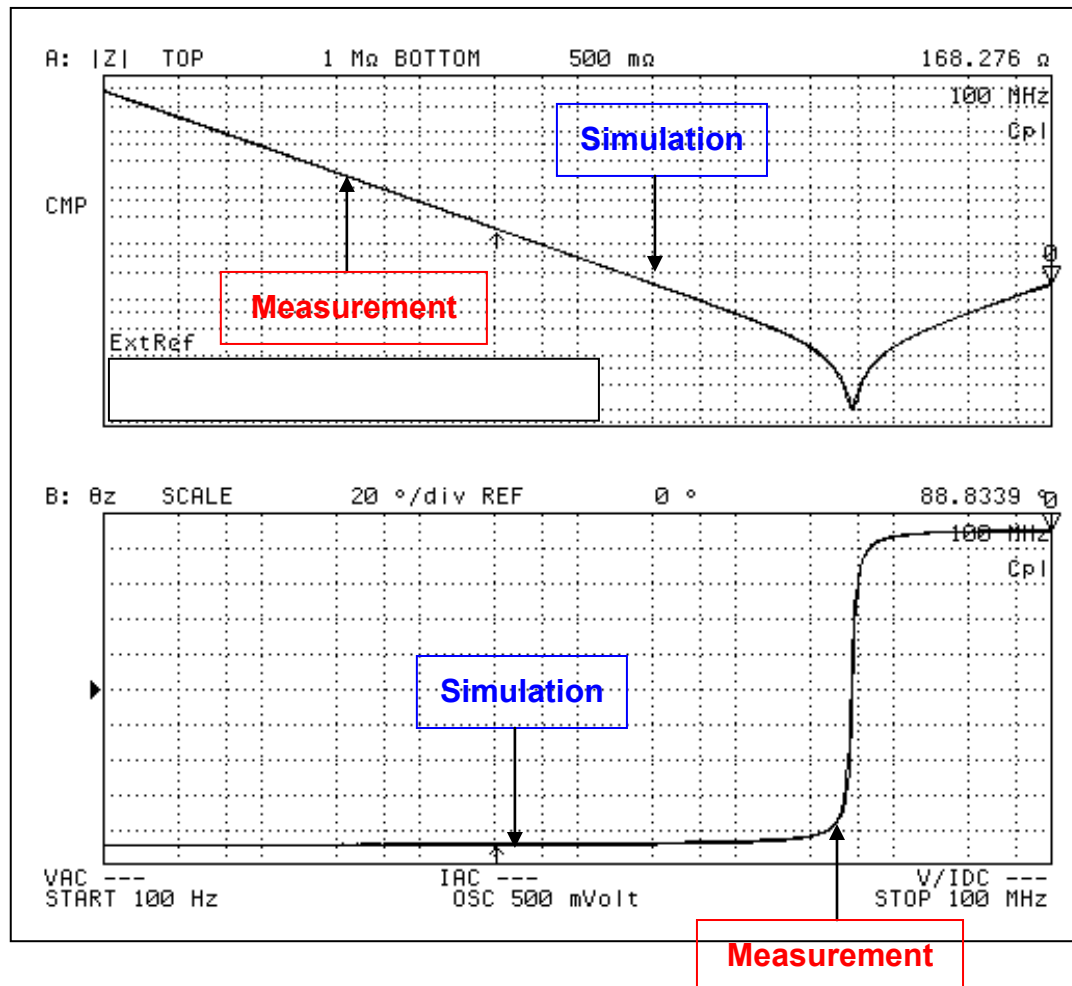
Optimization of Simulation

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)



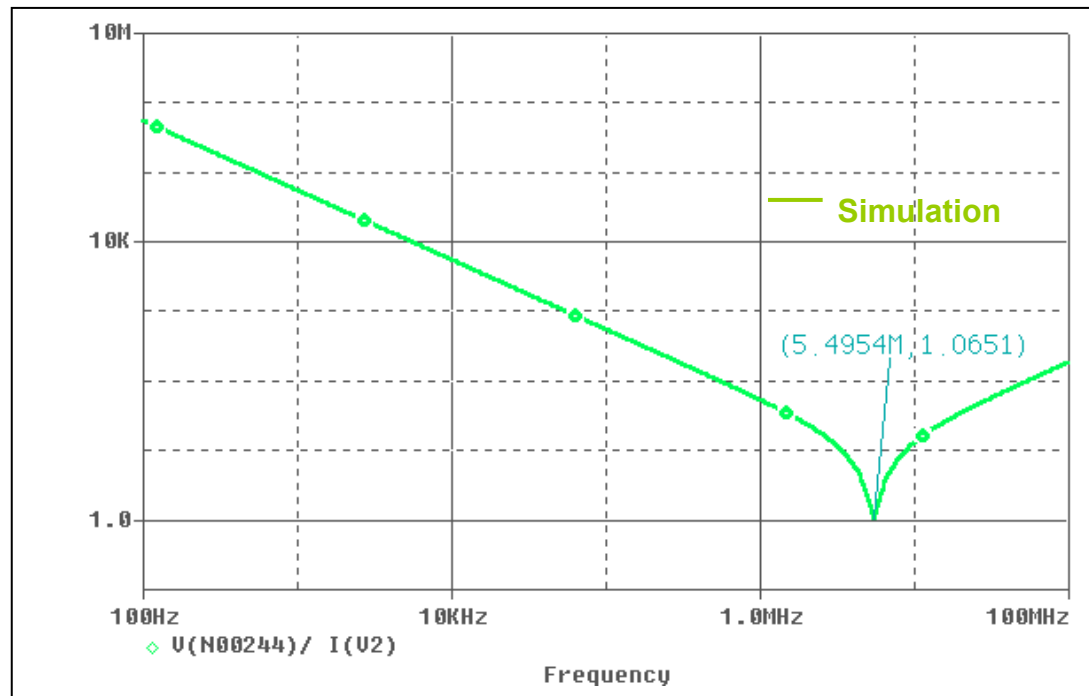
L1	
C1	
R1	

Equivalent circuit

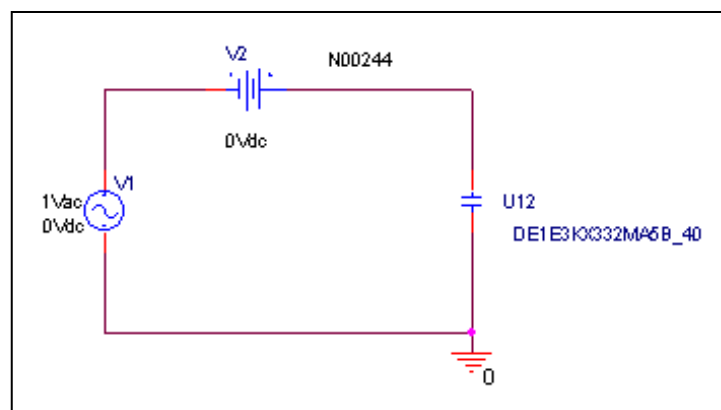


Frequency vs. |Z| Characteristic

Circuit Simulation result



Evaluation Circuit



Simulation result

Frequency (Hz)	IZI (ohm) :Measurement	IZI (ohm) :Simulation	% Error
100	531.908K	552.293K	3.8324
1K	53.656K	55.229K	2.9316
10K	5.41023K	5.5229K	2.0825
100K	548.577	552.111	0.6442
1M	54.5688	53.401	2.1401
10M	12.719	12.912	1.5174
100M	168.276	183.357	8.9621

	Measurement	Simulation	%Error
FSRF(Hz)	5.591M	5.7954M	3.6540
IZI (ohm)	1.00601	1.0651	5.8737