

Device Modeling Report

COMPONENTS: CAPACITOR/ CERAMIC
PART NUMBER: DE1E3KX221KA5B
MANUFACTURER: MURATA
REMARK: TA=40C



Bee Technologies Inc.

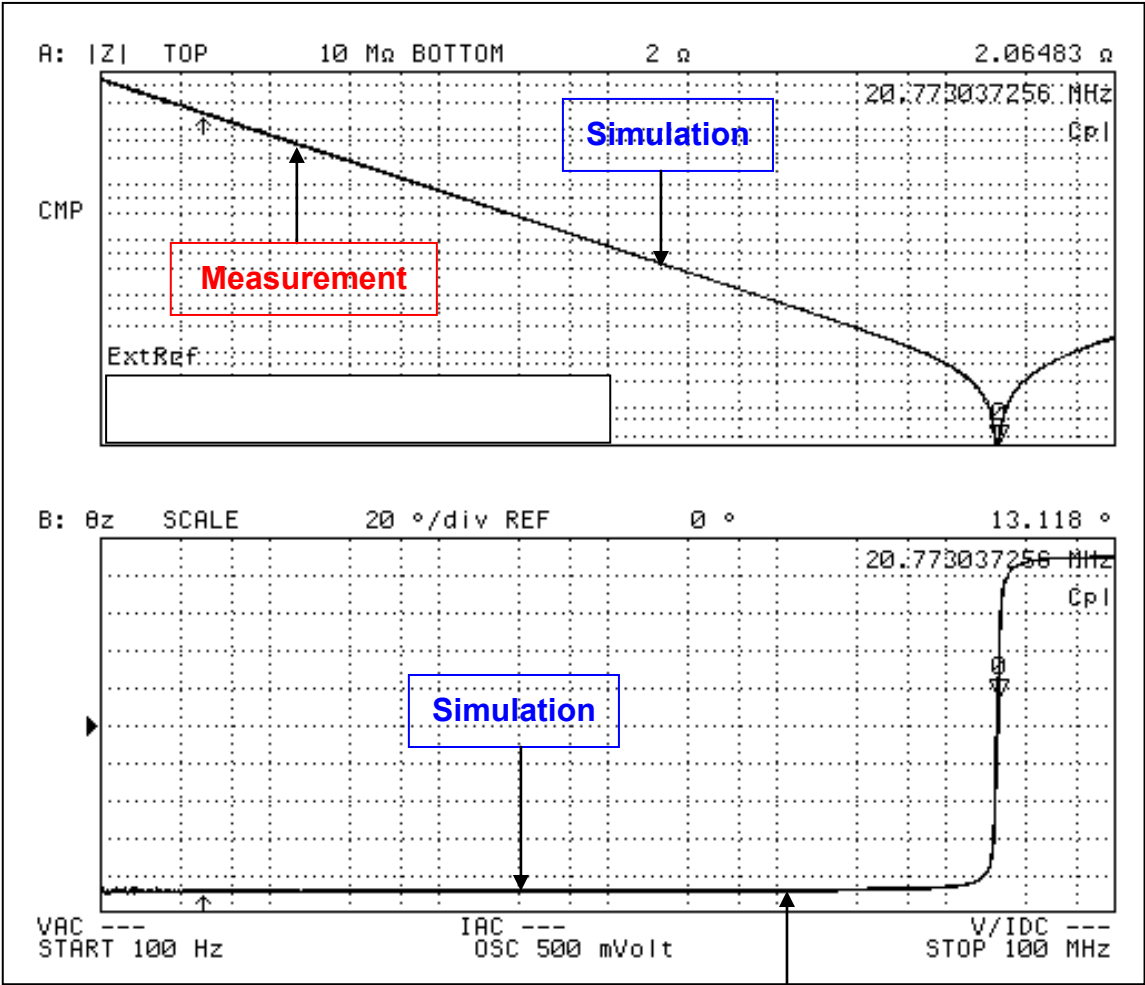
Theory: Auto Balancing Bridge Method

Optimization of Simulation

Range of adjustment Frequency:100Hz to100M(Hz)
Frequency vs. |Z| and Frequency vs. θ_z Characteristic

Attention)

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



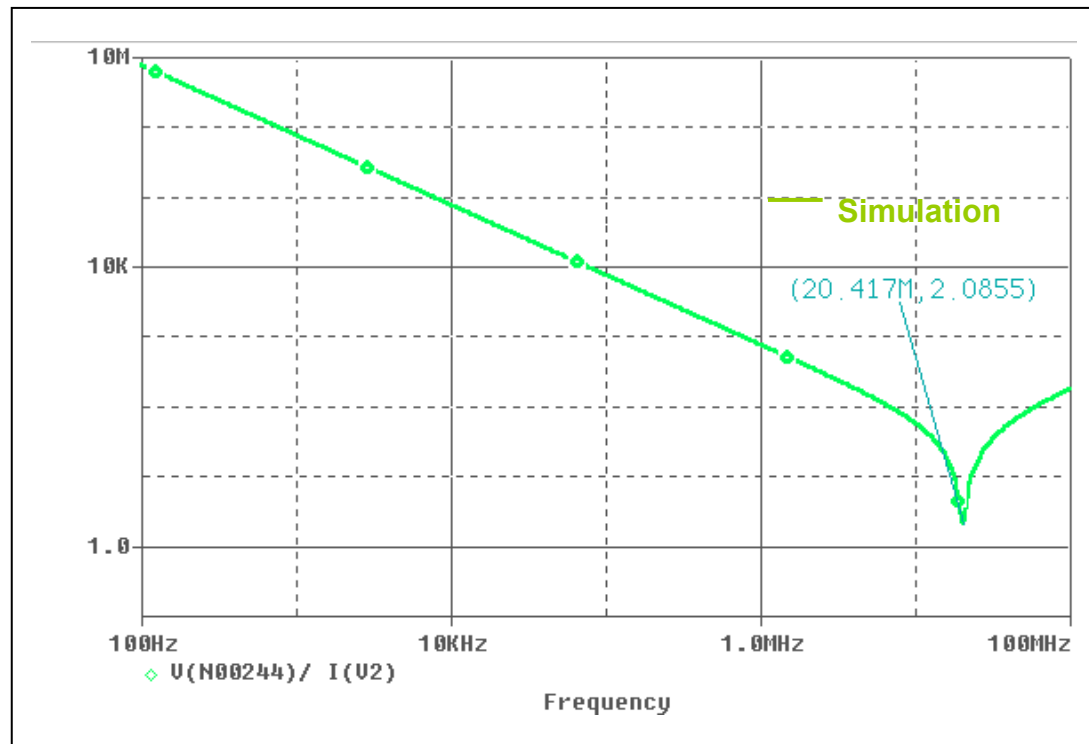
L1	
C1	
R1	

Equivalent circuit

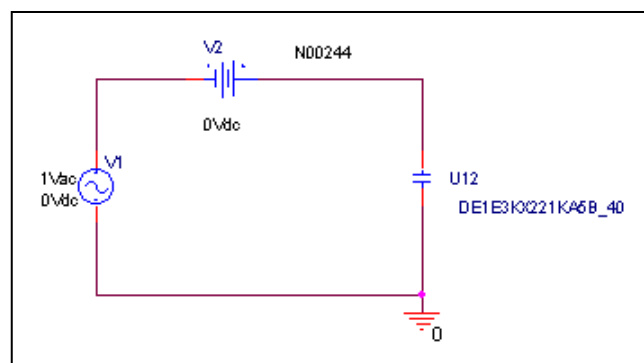


Frequency vs. |Z| Characteristic

Circuit Simulation result



Evaluation Circuit



Simulation result

Frequency (Hz)	IZI (ohm) :Measurement	IZI (ohm) :Simulation	% Error
100	7.20237M	7.739M	7.4507
1K	732.609K	773.90K	5.6362
10K	74.3925K	77.39K	4.0293
100K	7.57153K	7.739K	2.2105
1M	773.235	772.0300	0.1558
10M	61.0885	58.653	3.9868
100M	164.889	180.007	9.1686

	Measurement	Simulation	%Error
FSRF(Hz)	20.773M	20.417M	1.7138
IZI (ohm)	2.06715	2.0855	0.8877