

Device Modeling Report

COMPONENTS: CAPACITOR/ CERAMIC
PART NUMBER: DE1B3KX101KA5B
MANUFACTURER: MURATA
REMARK: TA=25⁰C



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

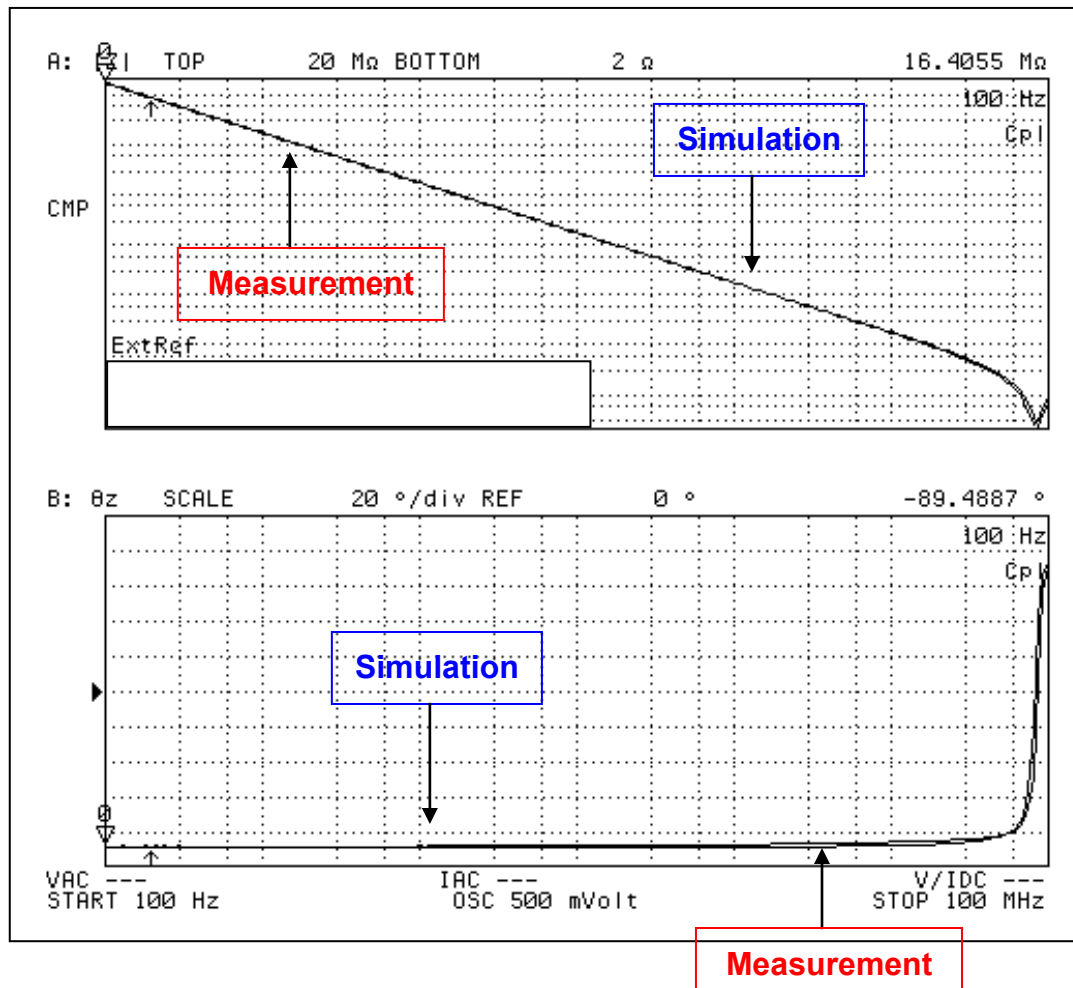
Optimization of Simulation

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)



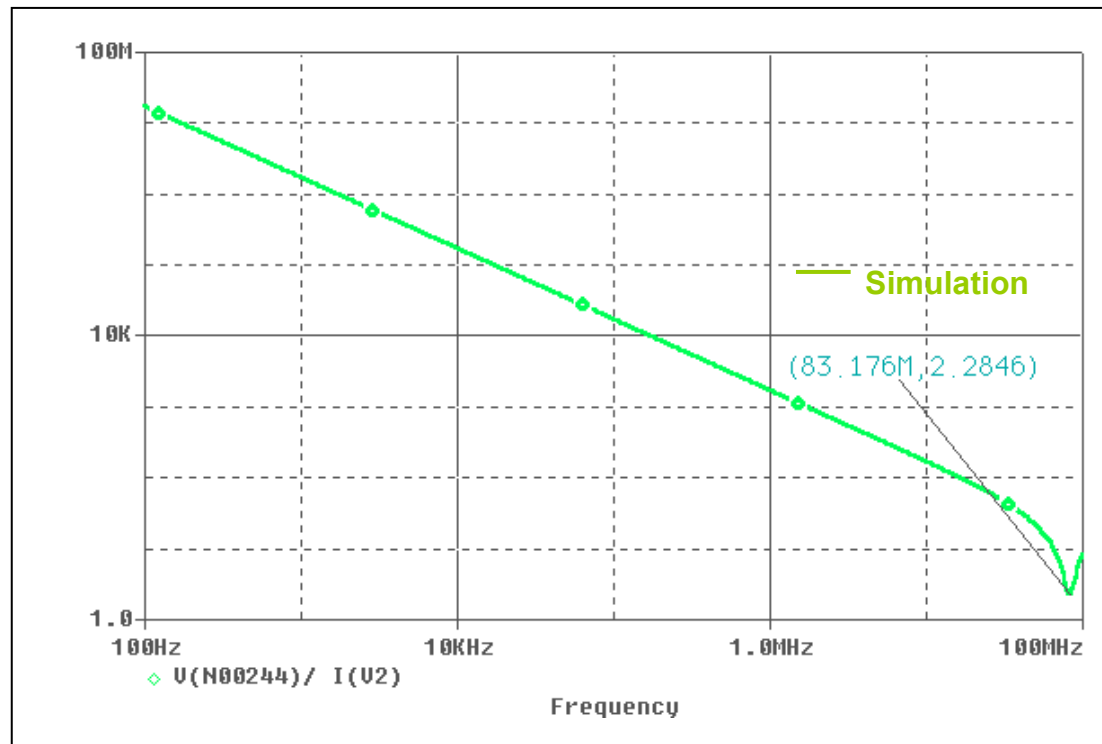
L1	
C1	
R1	

Equivalent circuit

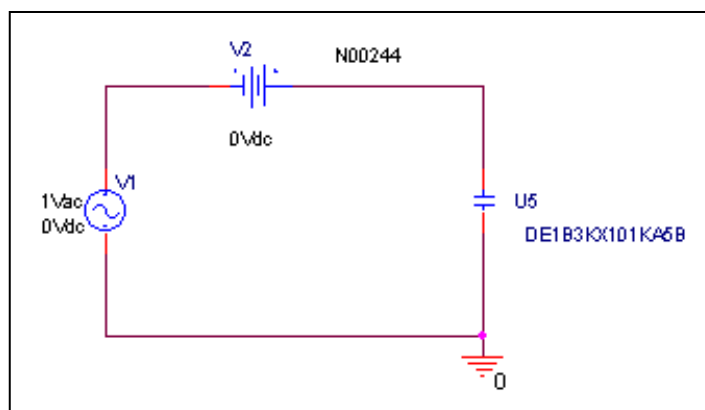


Frequency vs. |Z| Characteristic

Circuit Simulation result



Evaluation Circuit



Simulation result

Frequency (Hz)	IZI (ohm) :Measurement	IZI (ohm) :Simulation	% Error
100	16.3457M	17.215M	5.3182
1K	1.65149M	1.7215M	4.2392
10K	166.302K	172.152K	3.5177
100K	16.8008K	17.215K	2.4654
1M	1.7149K	1.7213K	0.3732
10M	176.86	169.670	4.0654
100M	6.56466	8.0806	23.0924

	Measurement	Simulation	%Error
FSRF(Hz)	87.0963M	83.176M	4.5011
IZI (ohm)	2.28614	2.2846	0.0674