

Device Modeling Report

COMPONENTS: CAPACITOR/ CERAMIC
PART NUMBER: DE1B3KX151KA5B
MANUFACTURER: MURATA
REMARK: TA=60⁰C



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

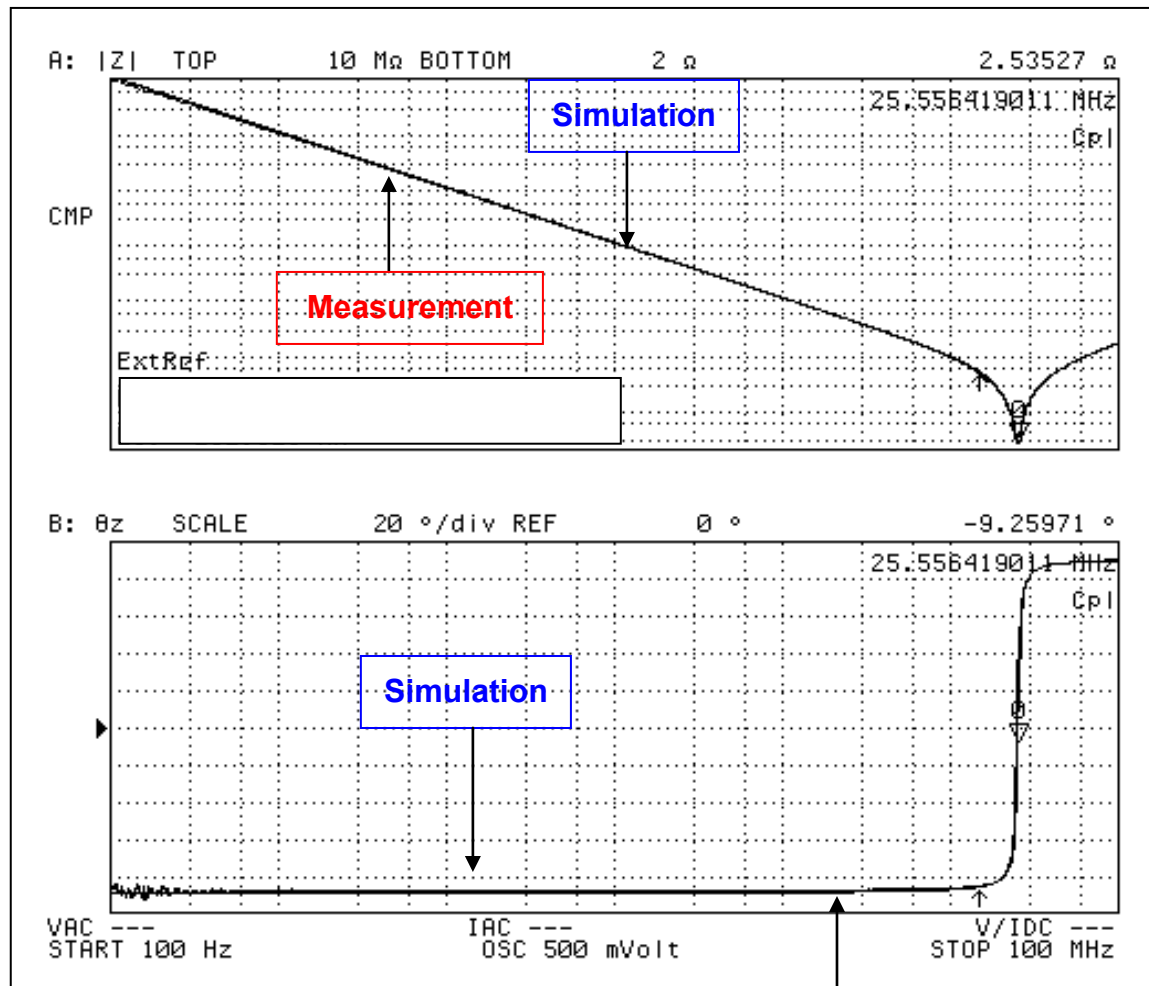
Optimization of Simulation

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)



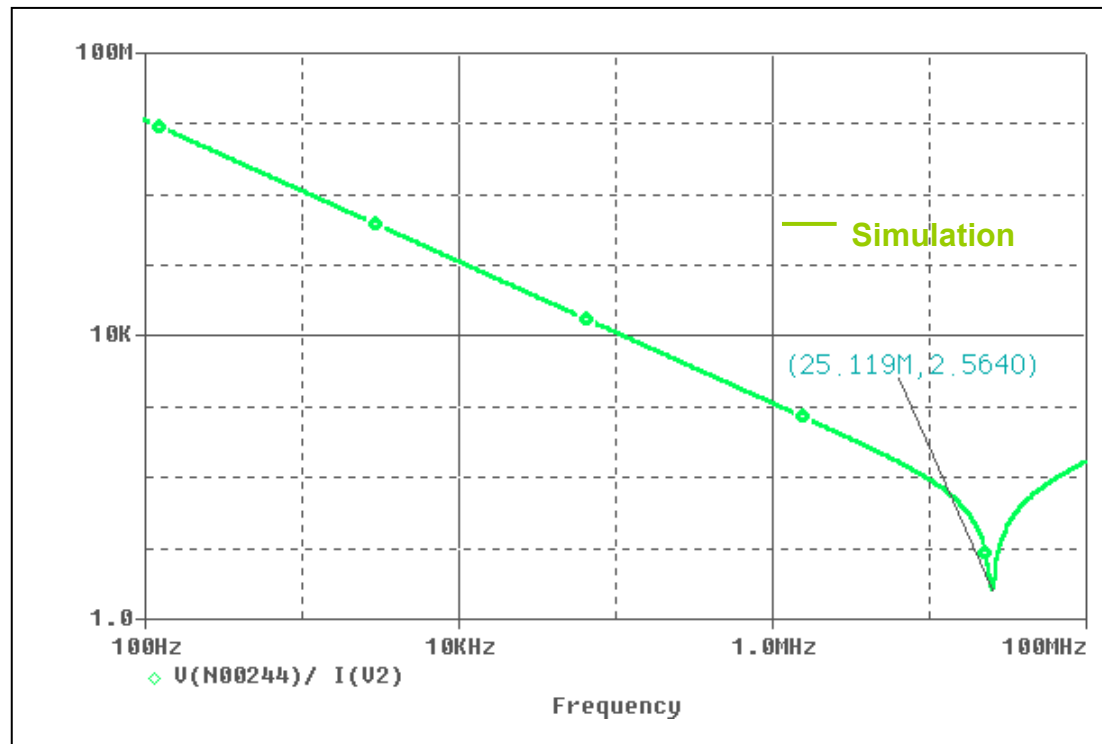
L1	
C1	
R1	

Equivalent circuit

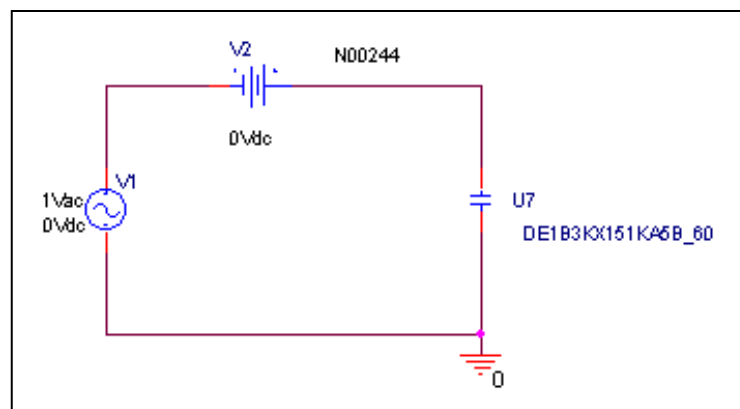


Frequency vs. |Z| Characteristic

Circuit Simulation result



Evaluation Circuit



Simulation result

Frequency (Hz)	IZI (ohm) :Measurement	IZI (ohm) :Simulation	% Error
100	10.1497M	11.269M	11.0279
1K	1.06017M	1.1269M	6.2943
10K	107.766K	112.69K	4.5682
100K	10.9749K	11.269K	2.6798
1M	1.12268K	1.1251K	0.2156
10M	98.4892	94.984	3.5590
100M	162.011	166.139	2.5480

	Measurement	Simulation	%Error
FSRF(Hz)	25.556M	25.119M	1.7100
IZI (ohm)	2.53527	2.5640	1.1332