

Device Modeling Report

COMPONENTS: CAPACITOR/ CERAMIC
PART NUMBER: DE1B3KX151KA5B
MANUFACTURER: MURATA
REMARK: TA=40⁰C



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

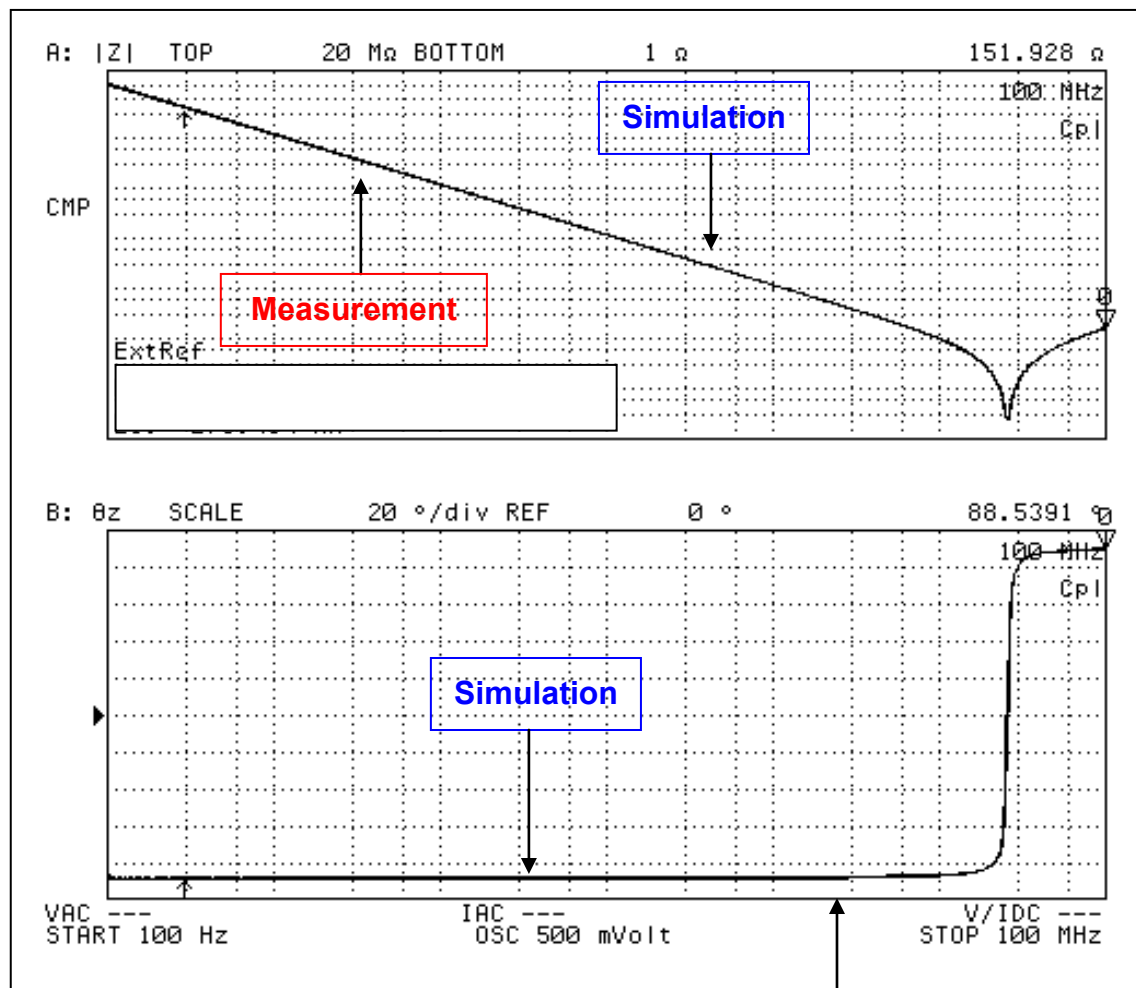
Optimization of Simulation

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)



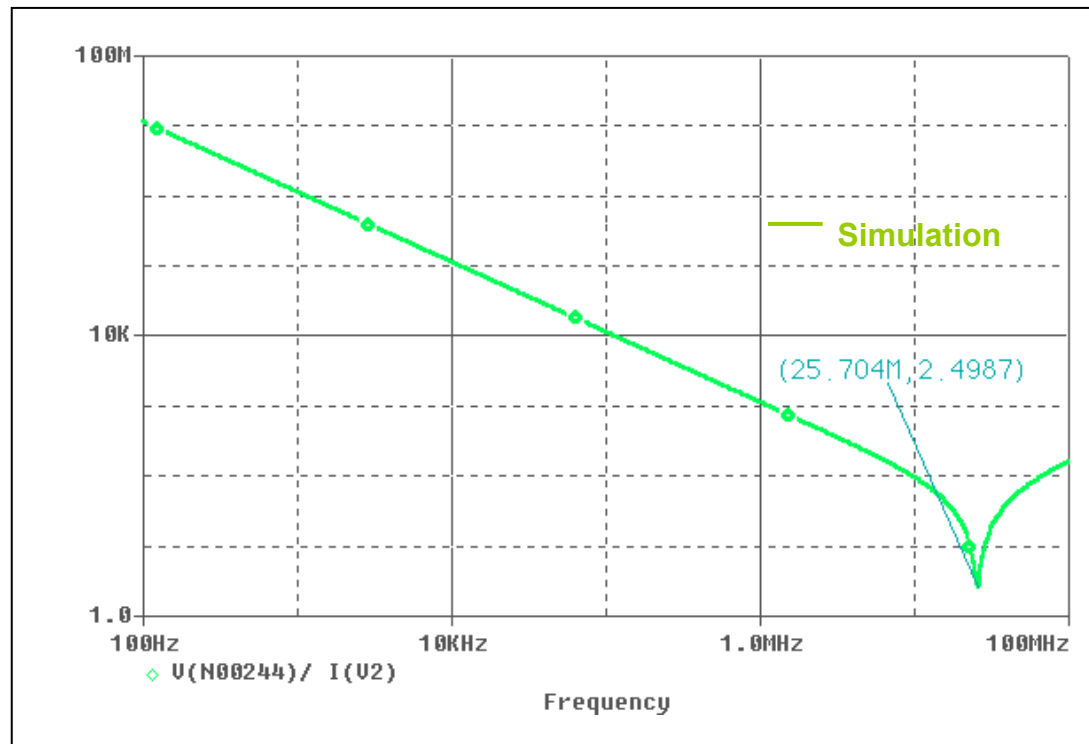
L1	
C1	
R1	

Equivalent circuit

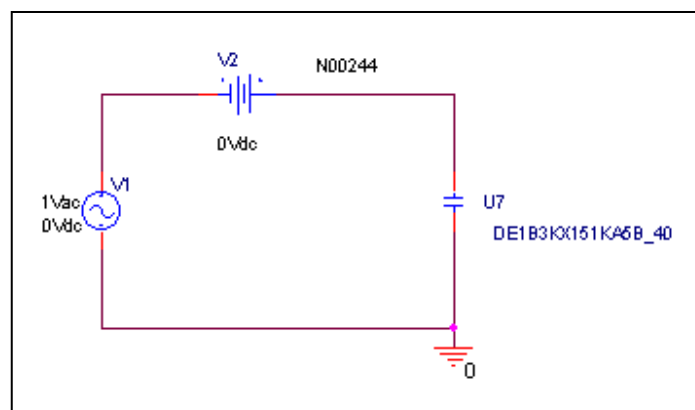


Frequency vs. |Z| Characteristic

Circuit Simulation result



Evaluation Circuit



Simulation result

Frequency (Hz)	IZI (ohm) :Measurement	IZI (ohm) :Simulation	% Error
100	10.5993M	11.432M	7.8562
1K	1.08347M	1.1432M	5.5128
10K	109.887K	114.32K	4.0341
100K	11.1682K	11.432K	2.3621
1M	1.13651K	1.1415K	0.4391
10M	100.378	97.169	3.1969
100M	151.966	160.410	5.5565

	Measurement	Simulation	%Error
FSRF(Hz)	26.0015M	25.704M	1.1442
IZI (ohm)	2.4771	2.4987	0.8720