

Device Modeling Report

COMPONENTS: CAPACITOR/ CERAMIC
PART NUMBER: DE1B3KX151KA5B
MANUFACTURER: MURATA
REMARK: TA=25⁰C



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

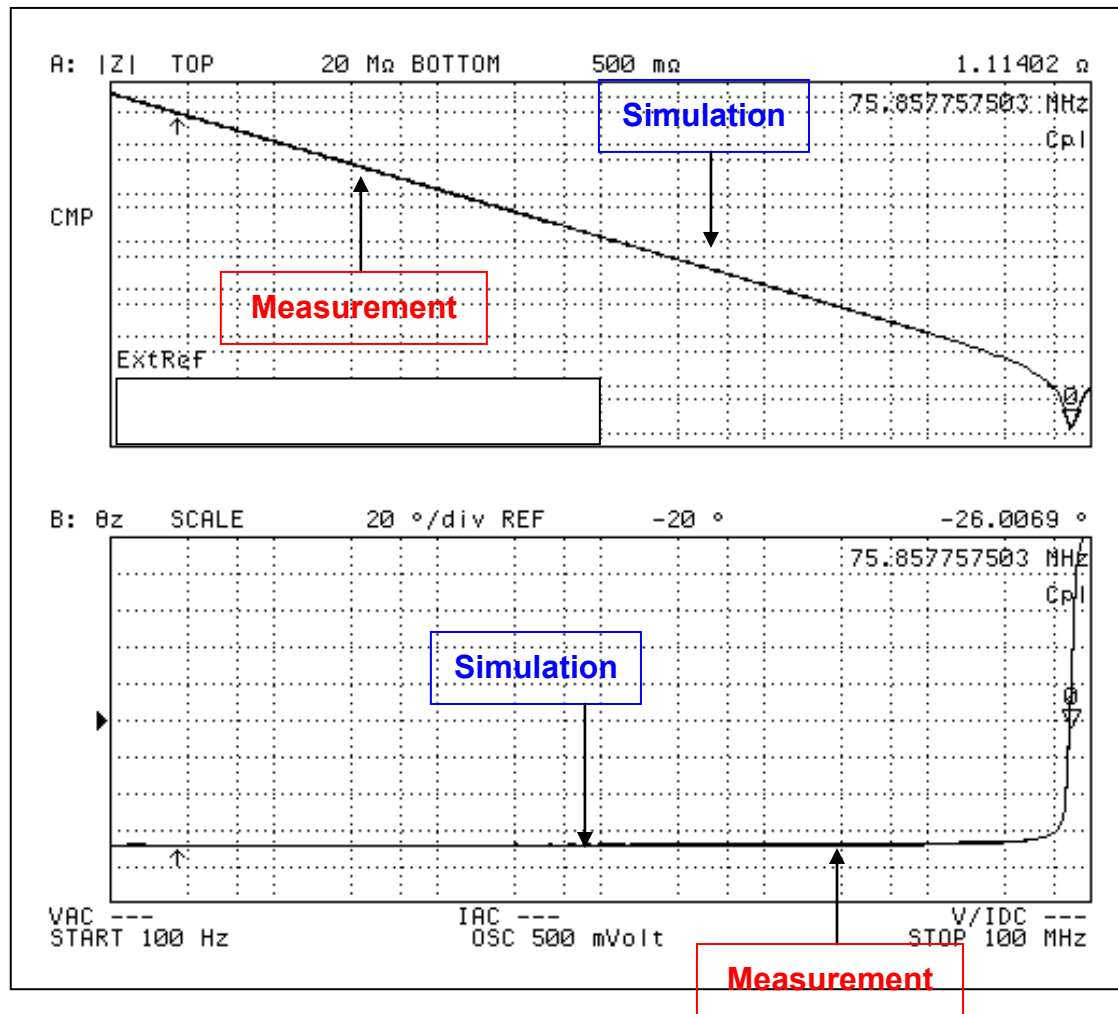
Optimization of Simulation

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)



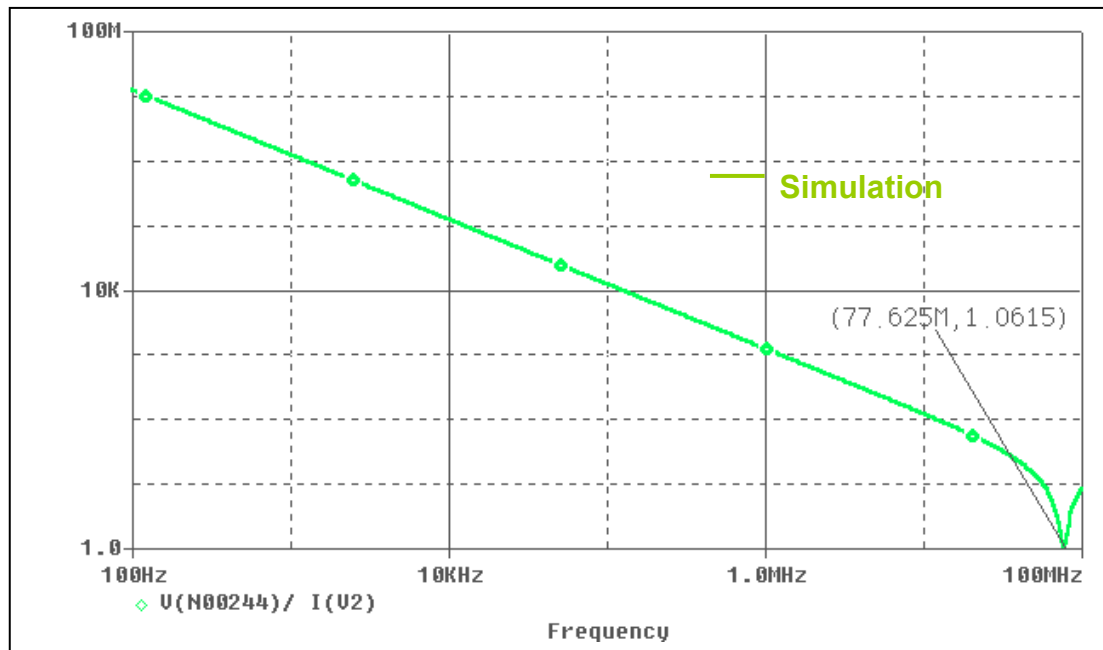
L1	
C1	
R1	

Equivalent circuit

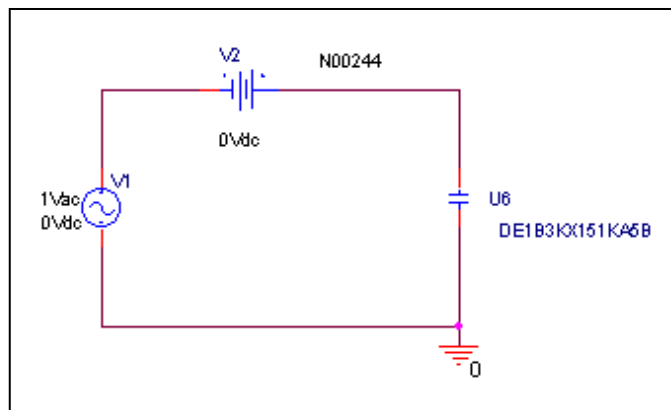


Frequency vs. |Z| Characteristic

Circuit Simulation result



Evaluation Circuit



Simulation result

Frequency (Hz)	IZI (ohm) :Measurement	IZI (ohm) :Simulation	% Error
100	11.4802M	12.417M	8.1601
1K	1.15678M	1.2417M	7.3411
10K	116.75K	124.17M	6.3555
100K	11.7965K	12.417K	5.2600
1M	1.19811K	1.2415K	3.6215
10M	120.642	122.076	1.1886
100M	8.55501	8.6305	0.8824

	Measurement	Simulation	%Error
FSRF(Hz)	75.857M	77.625M	2.3307
IZI (ohm)	1.11402	1.0615	4.7145