

Device Modeling Report

COMPONENTS: CAPACITOR/ CERAMIC
PART NUMBER: DE1B3KX101KA5B
MANUFACTURER: MURATA
REMARK: TA=40 °C



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

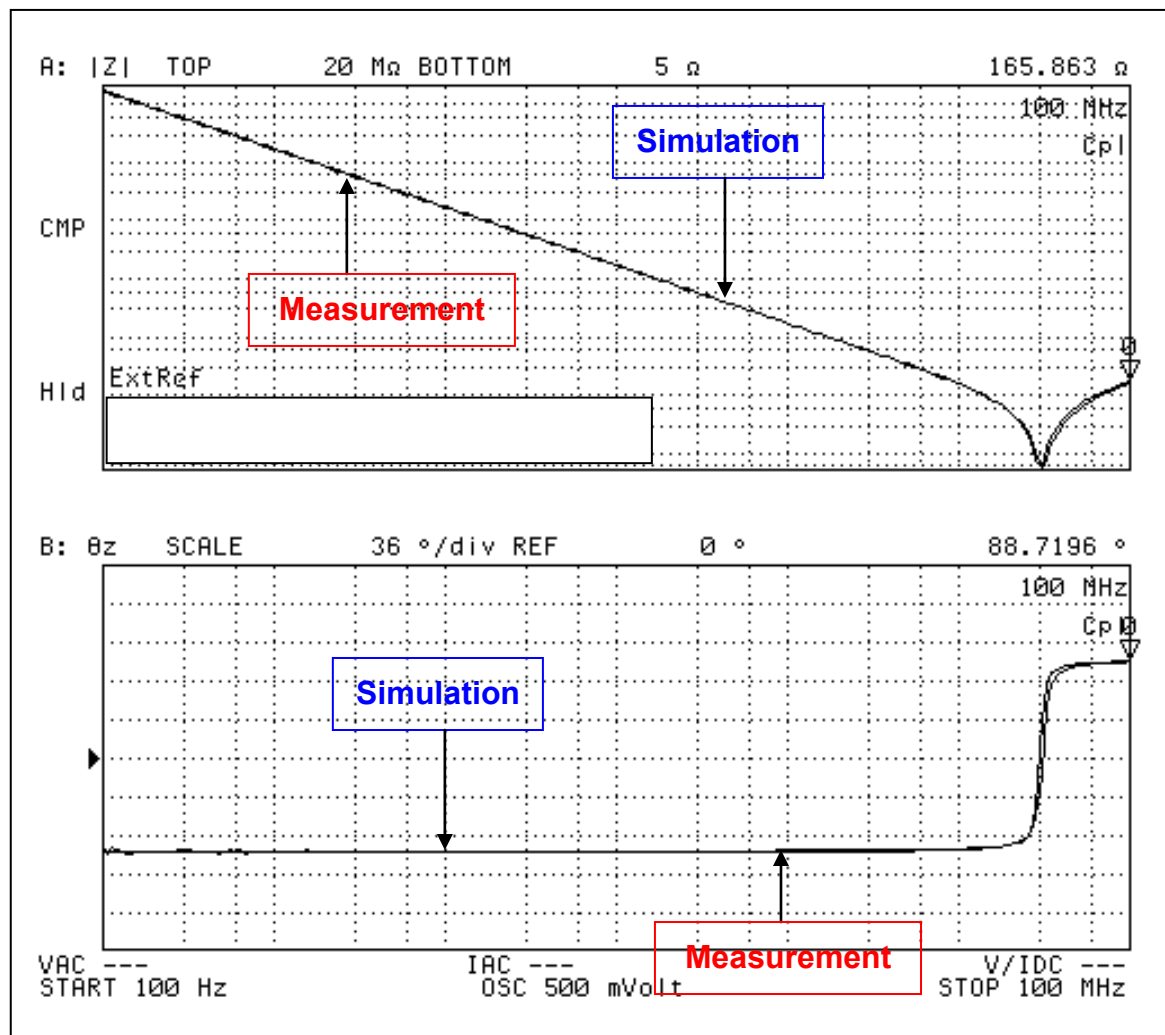
Optimization of Simulation

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)



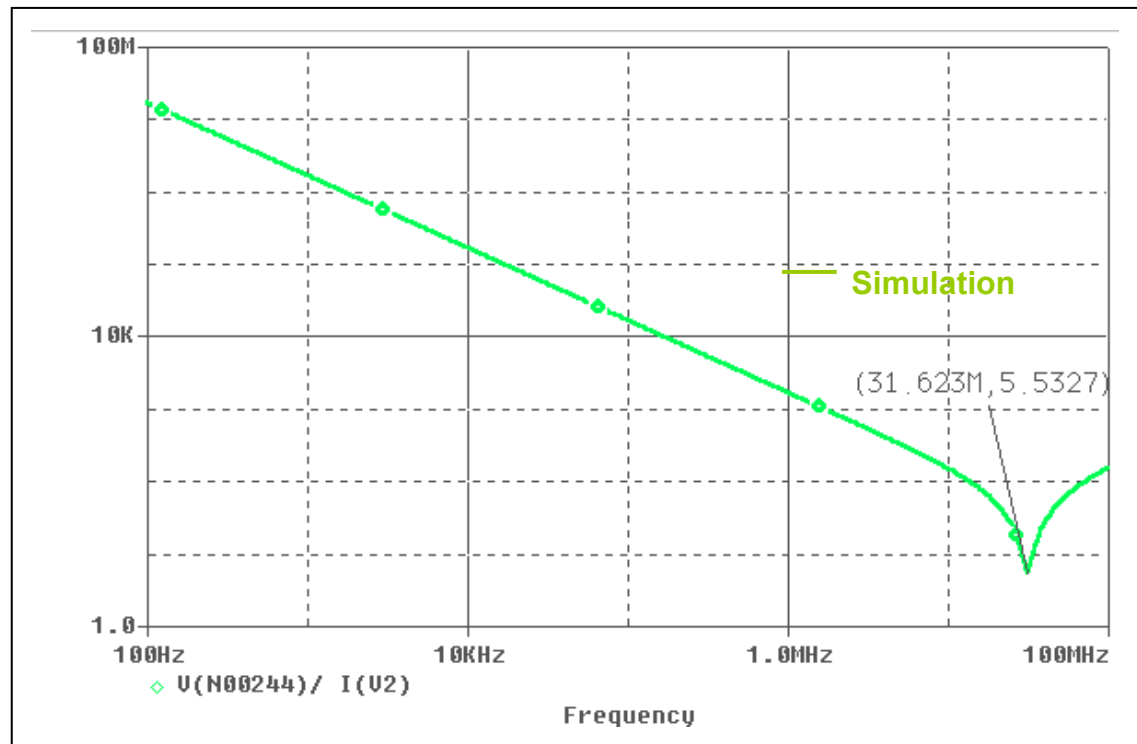
L1	
C1	
R1	

Equivalent circuit

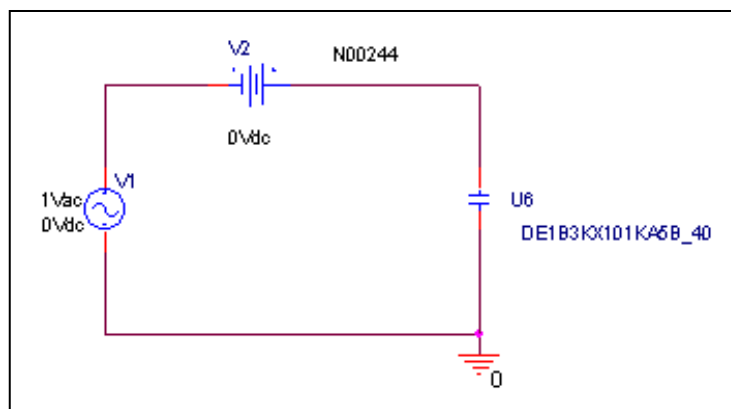


Frequency vs. |Z| Characteristic

Circuit Simulation result



Evaluation Circuit



Simulation result

Frequency (Hz)	IZI (ohm) :Measurement	IZI (ohm) :Simulation	% Error
100	17.7626M	16.9720M	4.4509
1K	1.63348M	1.6972M	3.9009
10K	164.573K	169.718K	3.1263
100K	16.6105K	16.9720K	2.1763
1M	1.69105K	1.6955K	0.2632
10M	158.41	152.573	3.6847
100M	145.851	155.557	6.6547

	Measurement	Simulation	%Error
FSRF(Hz)	33.1131M	31.623M	4.5000
IZI (ohm)	5.46881	5.5327	1.1683