

Device Modeling Report

COMPONENTS: CAPACITOR/ CERAMIC
PART NUMBER: DE1B3KX151KA5B
MANUFACTURER: MURATA
REMARK: TA=80⁰C



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

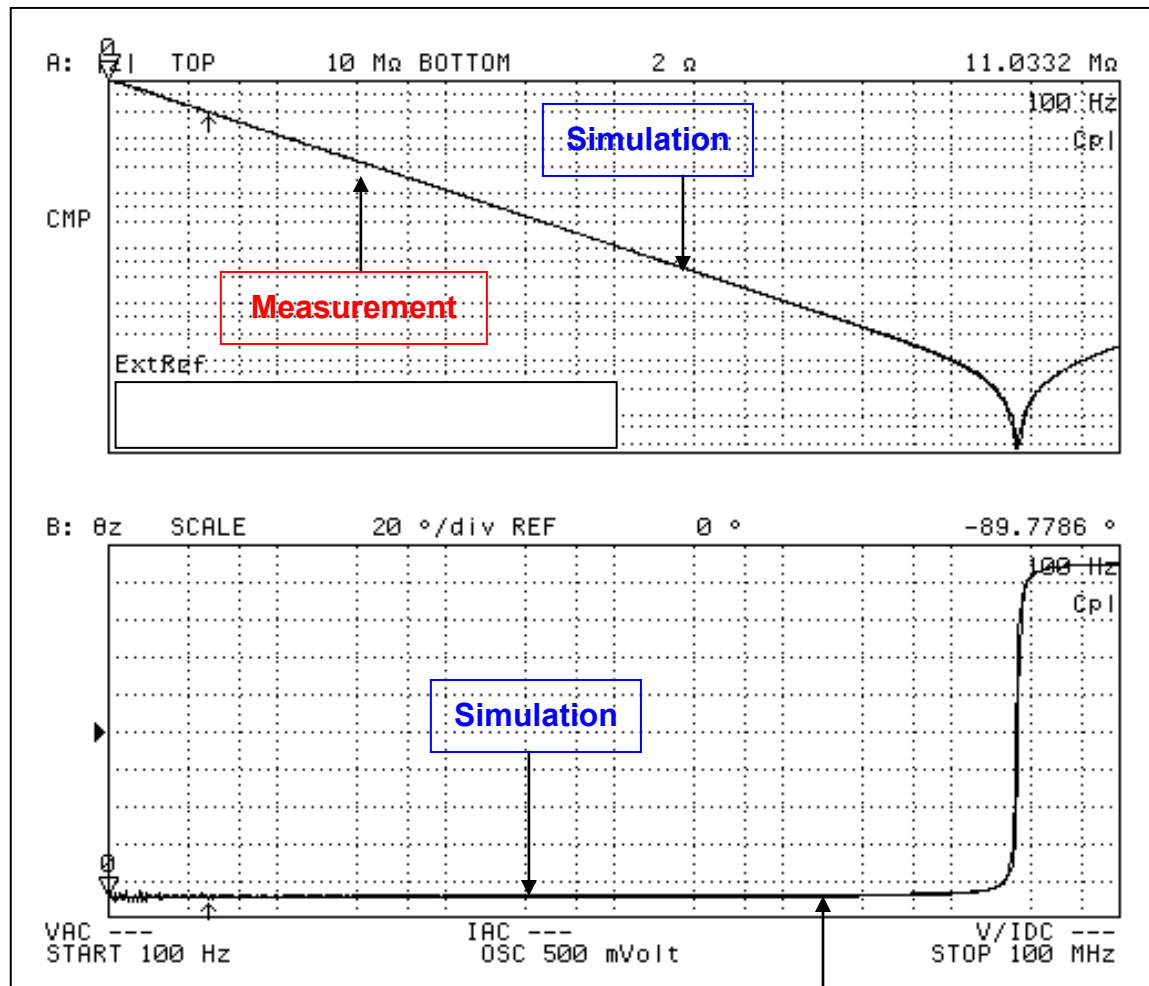
Optimization of Simulation

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)



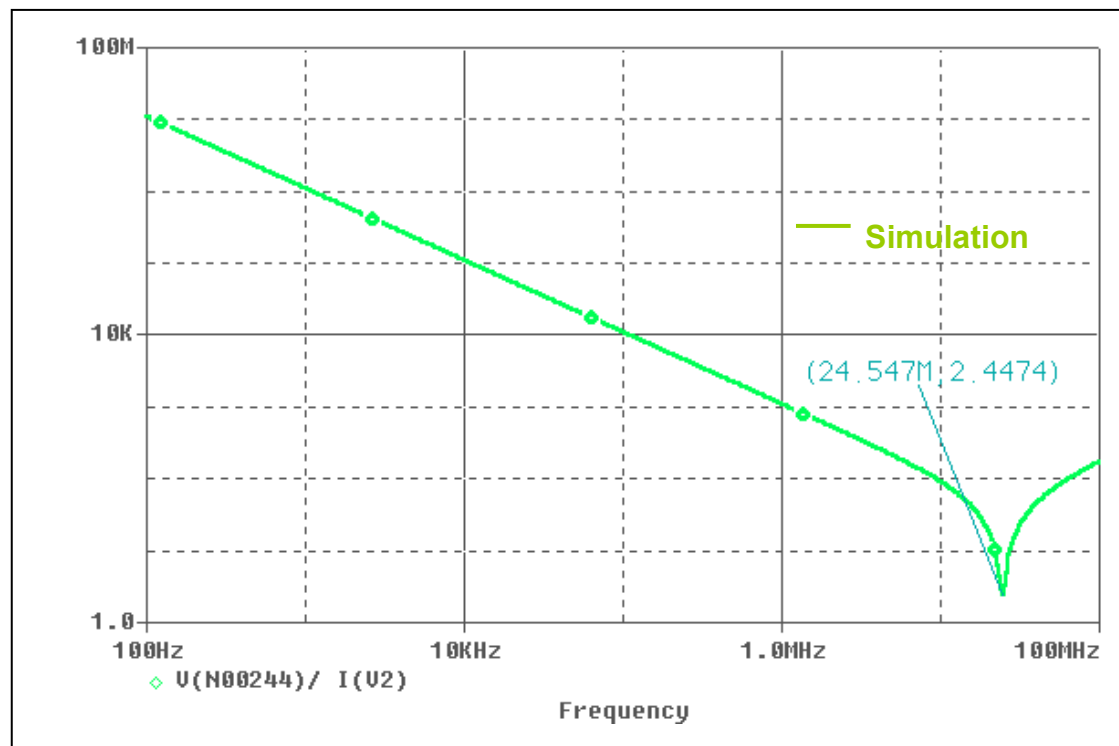
L1	
C1	
R1	

Equivalent circuit

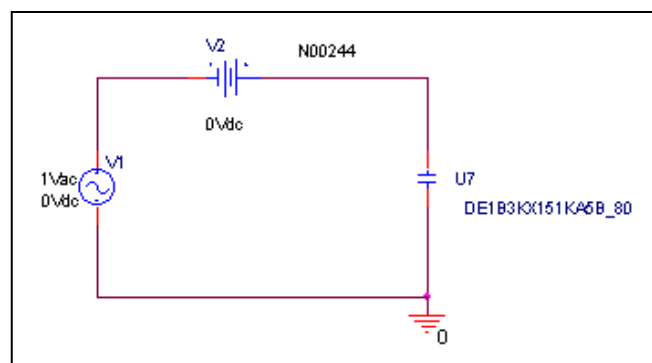


Frequency vs. |Z| Characteristic

Circuit Simulation result



Evaluation Circuit



Simulation result

Frequency (Hz)	IZI (ohm) :Measurement	IZI (ohm) :Simulation	% Error
100	10.5335M	11.084M	5.2262
1K	1.0138M	1.1084M	9.3312
10K	110.764K	110.84K	0.0713
100K	11.2071K	11.084K	1.0984
1M	1.13903K	1.1066K	2.8472
10M	98.9373	92.731	6.2730
100M	161.744	170.350	5.3208

	Measurement	Simulation	%Error
FSRF(Hz)	25.556M	24.547M	3.9482
IZI (ohm)	2.38702	2.4474	2.5295