

Device Modeling Report

COMPONENTS: CAPACITOR/CERAMIC
PART NUMBER: DE1B3KX681KA5B
MANUFACTURER: MURATA
REMARK: TA=80C



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

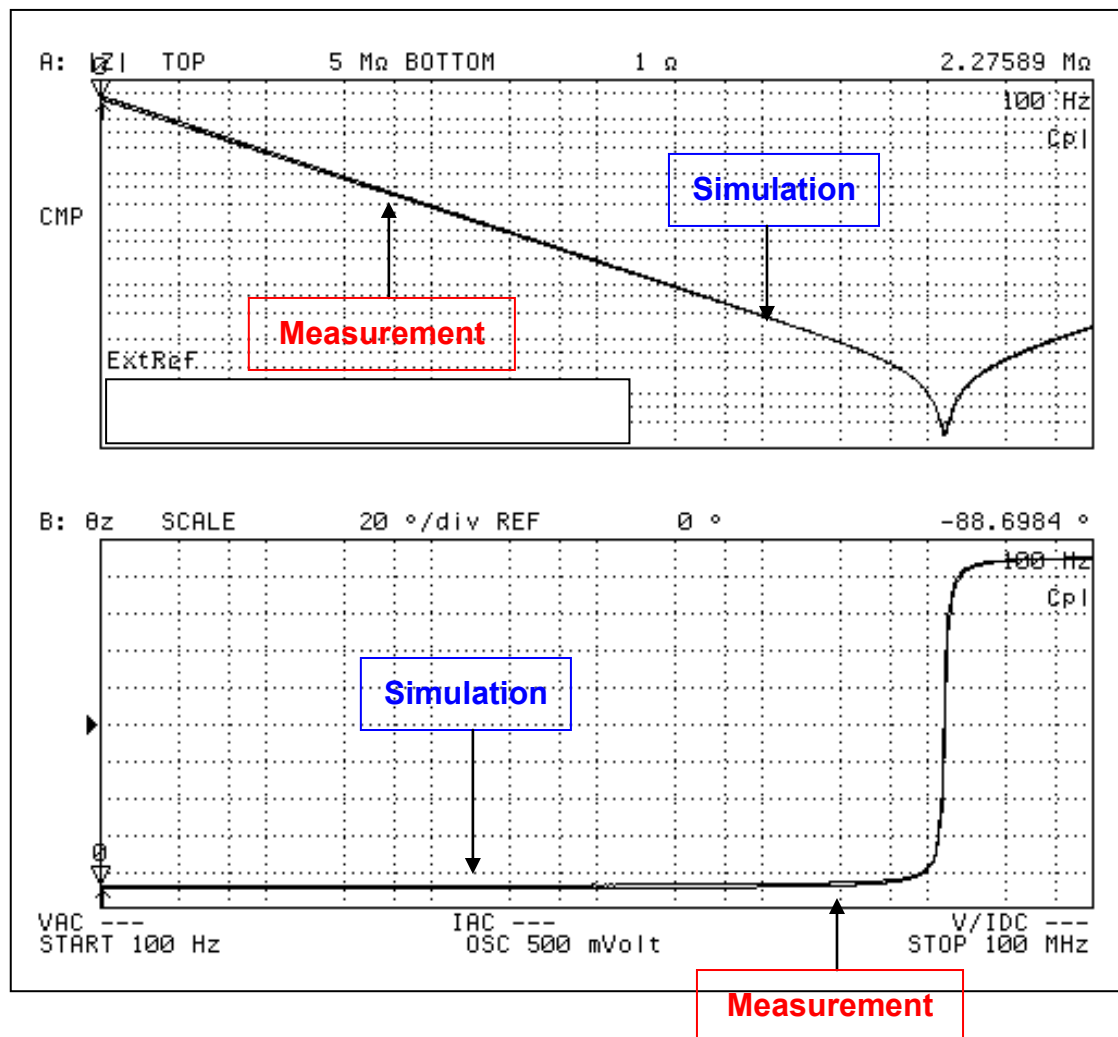
Optimization of Simulation

Range of adjustment Frequency: 100Hz to 100M(Hz)

Frequency vs. $|Z|$ and Frequency vs. θ_z Characteristic

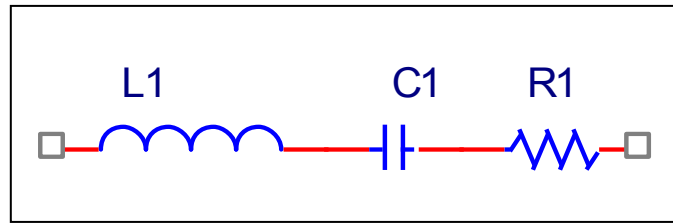
Attention)

Please use SPICE MODEL within the range from 100Hz to 100M(Hz)



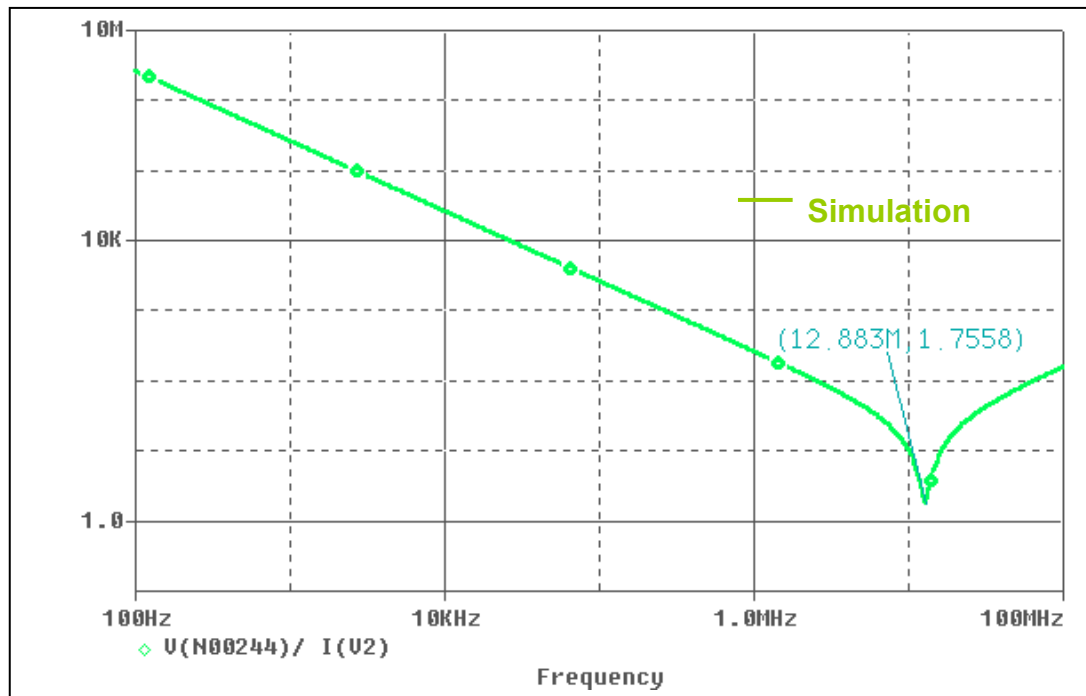
L1	
C1	
R1	

Equivalent circuit

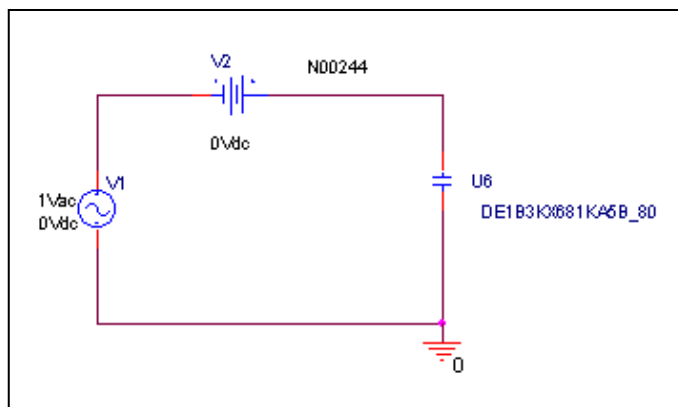


Frequency vs. |Z| Characteristic

Circuit Simulation result



Evaluation Circuit



Simulation result

Frequency (Hz)	IZI (ohm) :Measurement	IZI (ohm) :Simulation	% Error
100	2.27613M	2.6421M	16.0786
1K	235.122K	264.209K	12.3710
10K	24.231K	26.421K	9.0380
100K	2.50051K	2.642K	5.6544
1M	259.22	262.629	1.3151
10M	10.6802	10.708	0.2603
100M	161.176	155.945	3.2455

	Measurement	Simulation	%Error
FSRF(Hz)	12.5892M	12.883M	2.3337
IZI (ohm)	1.77946	1.7558	1.3296