

Device Modeling Report

COMPONENTS: CAPACITOR/CERAMIC
PART NUMBER: DE1B3KX681KA5B
MANUFACTURER: MURATA
REMARK: TA=25C



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

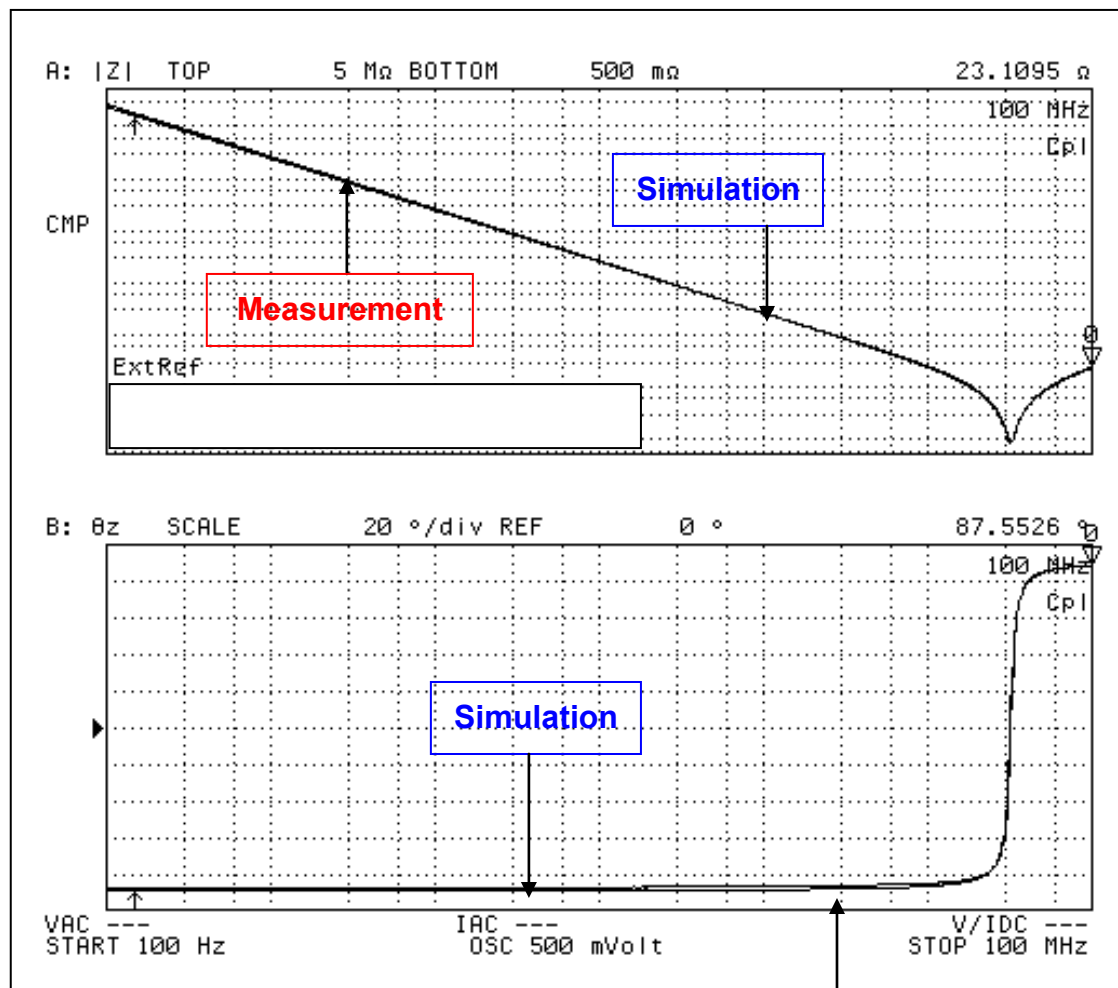
Optimization of Simulation

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

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

Attention)

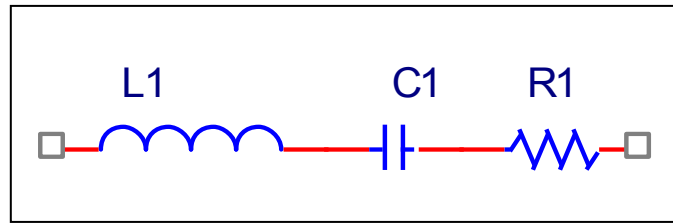
Please use SPICE MODEL within the range from 100Hz to 100M(Hz)



Measurement

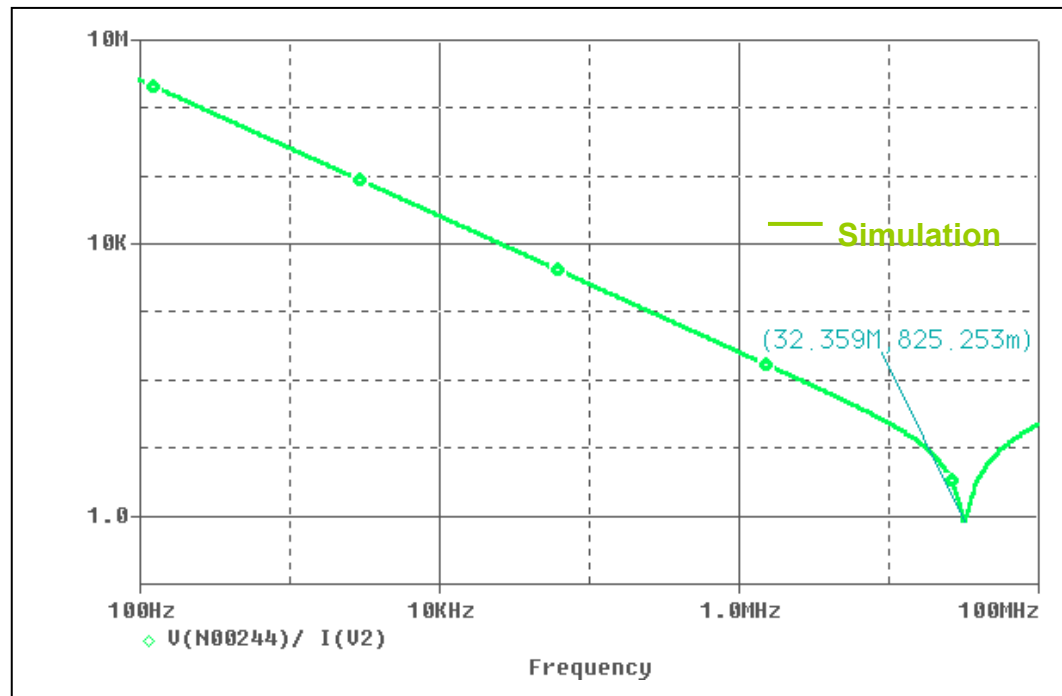
L1	
C1	
R1	

Equivalent circuit

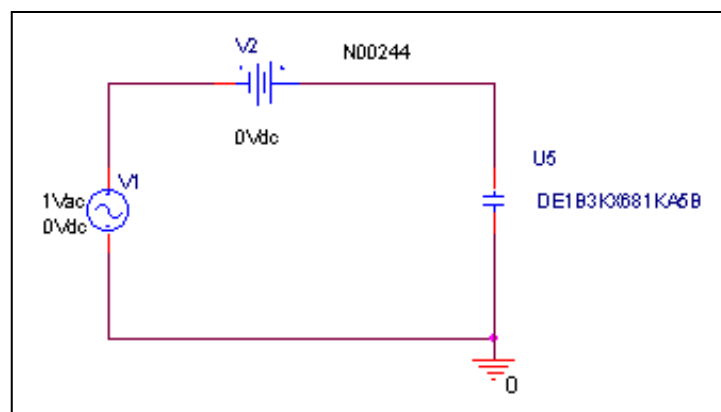


Frequency vs. |Z| Characteristic

Circuit Simulation result



Evaluation Circuit



Simulation result

Frequency (Hz)	IZI (ohm) :Measurement	IZI (ohm) :Simulation	% Error
100	2.27611M	2.5665M	12.7582
1K	232.471K	256.649K	10.4004
10K	23.8399K	25.665K	7.6557
100K	2.45905K	2.5665K	4.3696
1M	256.2	256.404	0.0796
10M	24.5212	23.218	5.3146
100M	23.1095	22.060	4.5414

	Measurement	Simulation	%Error
FSRF(Hz)	32.5461M	32.359M	0.5749
IZI (ohm)	824.275m	825.253m	0.1186