

Device Modeling Report

COMPONENTS: CAPACITOR/ CERAMIC
PART NUMBER: DE1E3KX222MA5B
MANUFACTURER: MURATA
REMARK: TA=25C



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

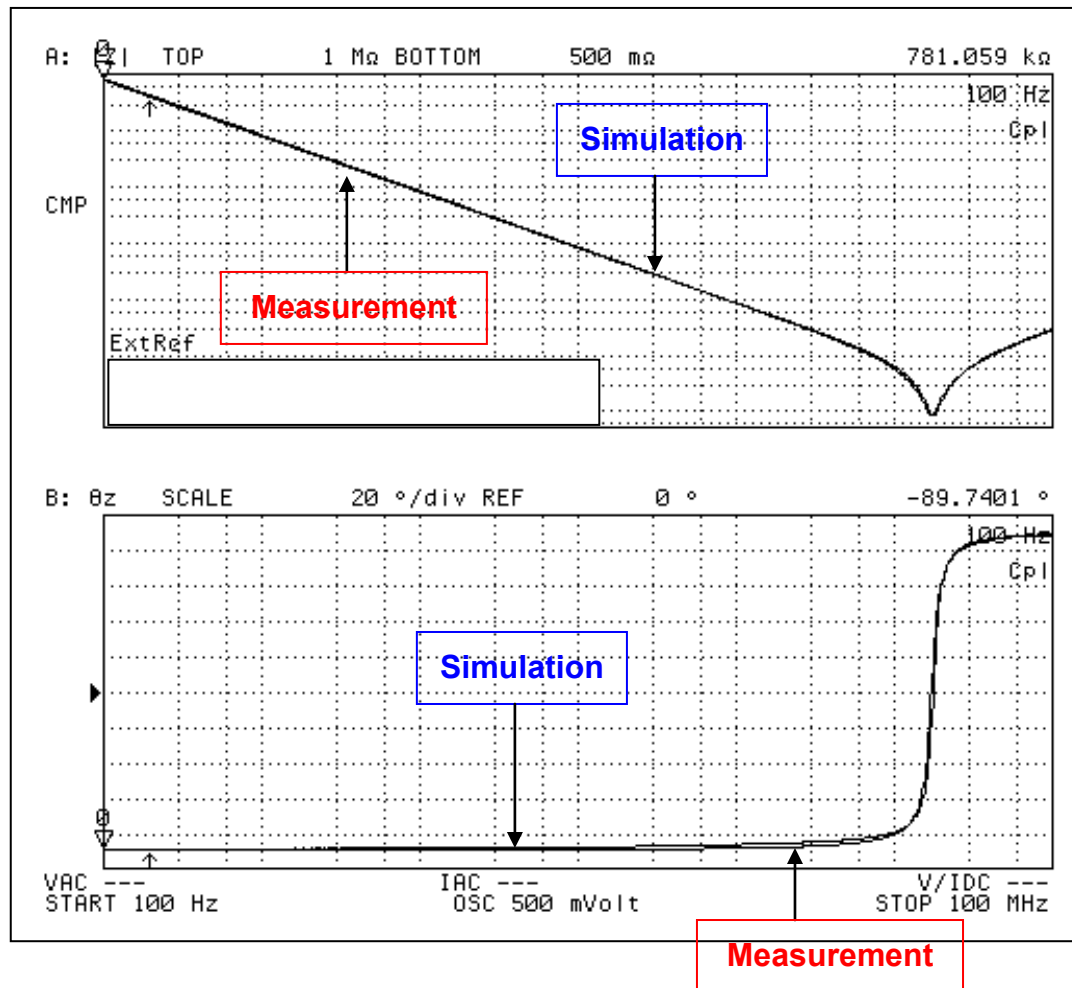
Optimization of Simulation

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)



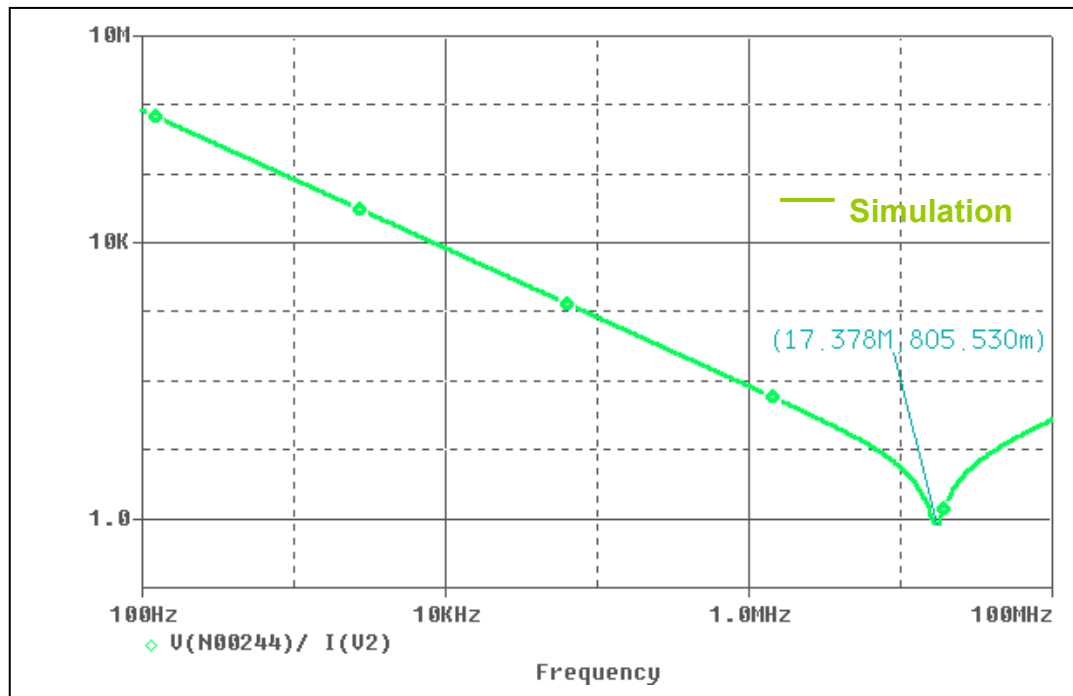
L1	
C1	
R1	

Equivalent circuit

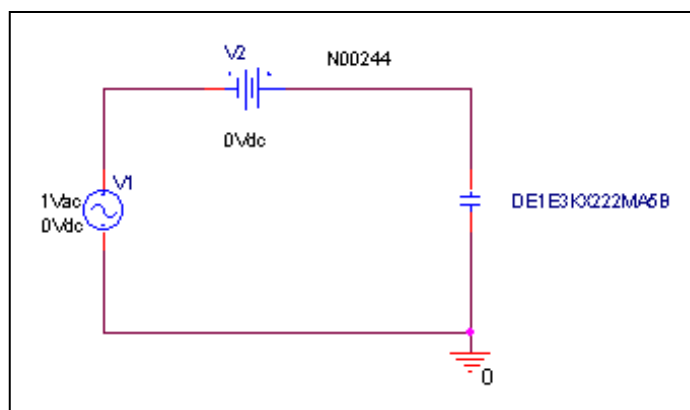


Frequency vs. |Z| Characteristic

Circuit Simulation result



Evaluation Circuit



Simulation result

Frequency (Hz)	IZI (ohm) :Measurement	IZI (ohm) :Simulation	% Error
100	781.766K	831.826K	6.4035
1K	78.5873K	83.183K	5.8479
10K	7.93482K	8.3183K	4.8329
100K	807.566	831.799	3.0007
1M	83.7351	82.911	0.9842
10M	6.27071	5.6175	10.4168
100M	27.7835	26.768	3.6550

	Measurement	Simulation	%Error
FSRF(Hz)	17.7827M	17.3780M	2.2758
IZI (ohm)	803.793m	805.530m	0.2161