

Device Modeling Report

COMPONENTS: CAPACITOR/CERAMIC
PART NUMBER: ECKATS471MB
MANUFACTURER: PANASONIC
REMARK: TA=40C



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

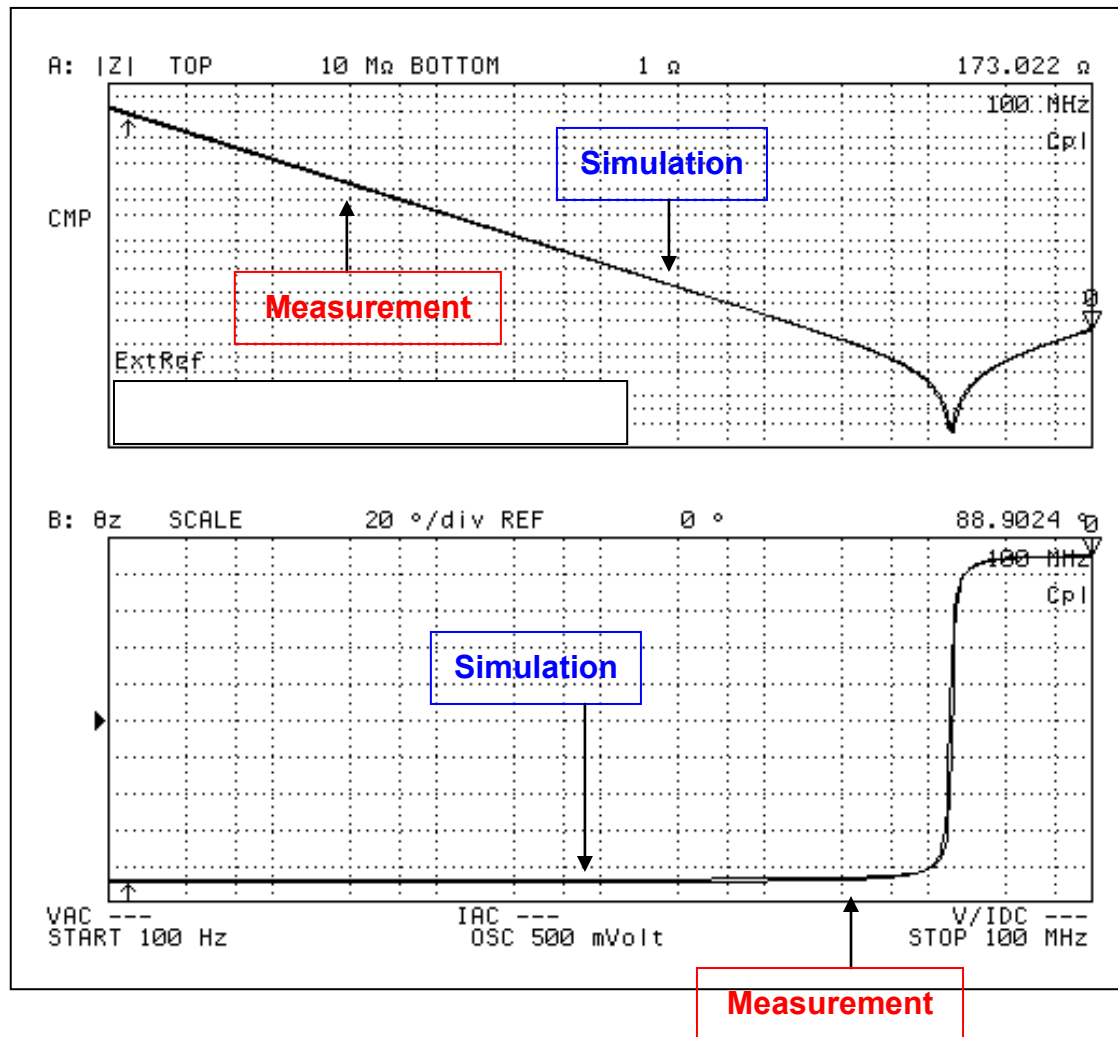
Optimization of Simulation

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

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

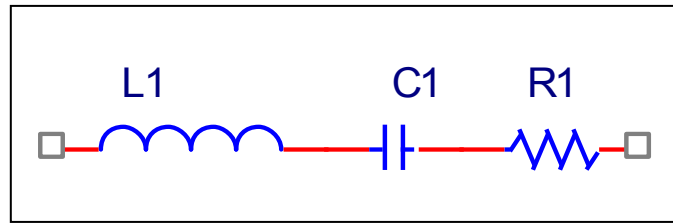
Attention)

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



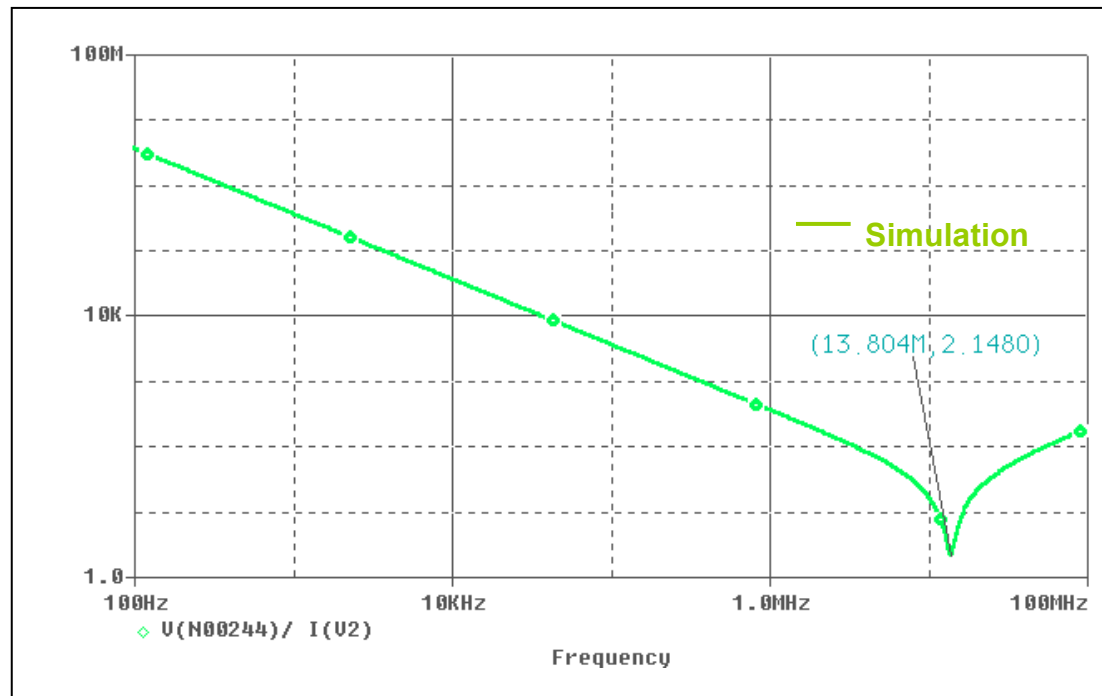
L1	
C1	
R1	

Equivalent circuit

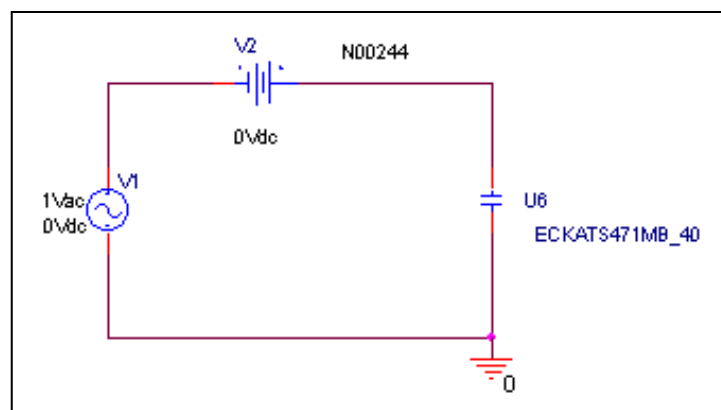


Frequency vs. |Z| Characteristic

Circuit Simulation result



Evaluation Circuit



Simulation result

Frequency (Hz)	IZI (ohm) :Measurement	IZI (ohm) :Simulation	% Error
100	3.39852M	3.6849M	8.4266
1K	342.389K	364.078K	6.3346
10K	34.911K	36.849K	5.5513
100K	3.5777K	3.6406K	1.7581
1M	368.204	366.56	0.4465
10M	19.7333	20.381	3.2823
100M	173.109	190.277	9.9175

	Measurement	Simulation	%Error
FSRF(Hz)	14.060M	13.804M	1.8208
IZI (ohm)	2.14505	2.1480	0.1375