

Device Modeling Report

COMPONENTS: CAPACITOR/CERAMIC
PART NUMBER: ECKATS103ME
MANUFACTURER: PANASONIC
REMARK: TA=80C



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

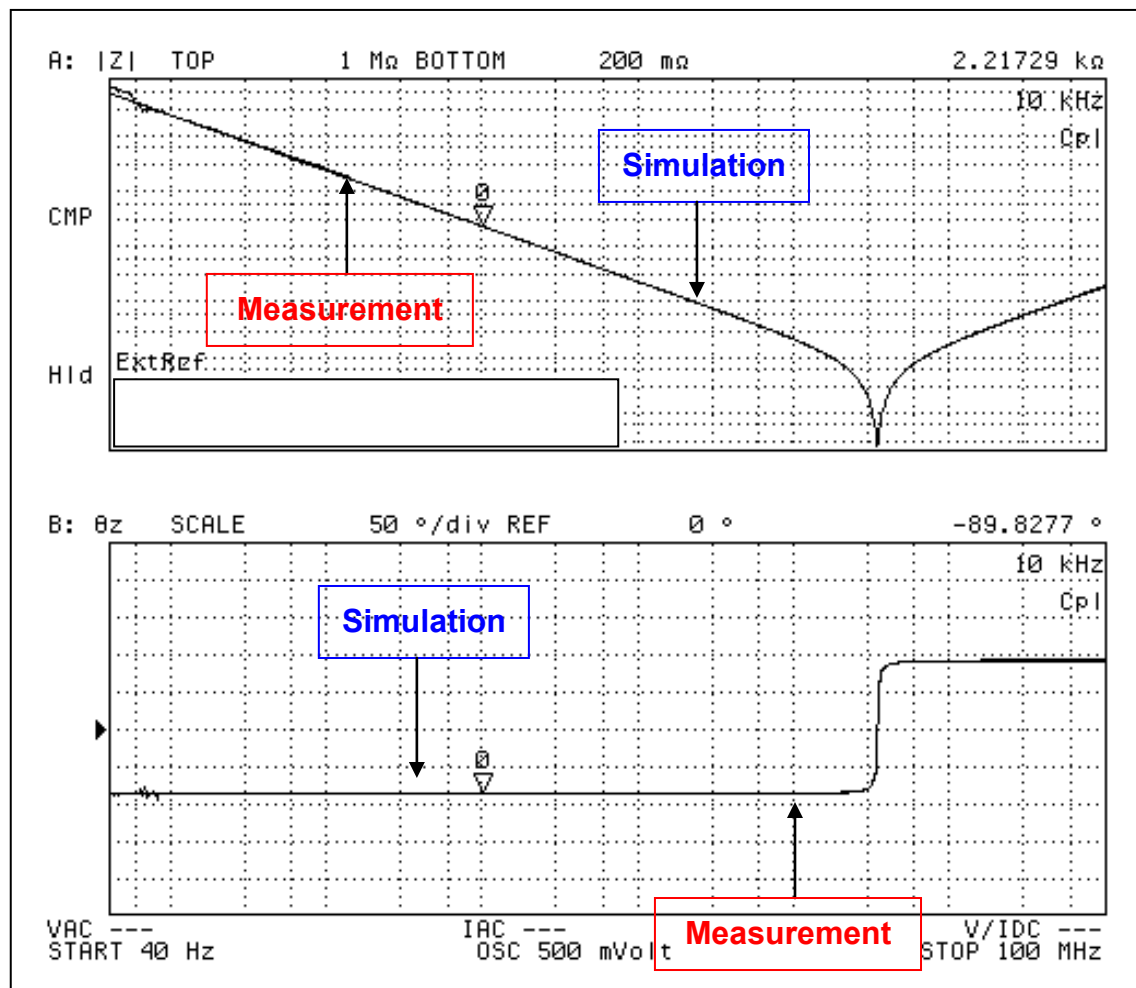
Optimization of Simulation

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

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

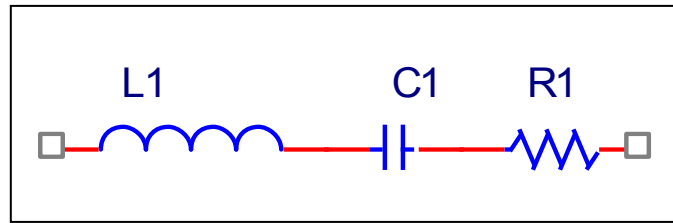
Attention)

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



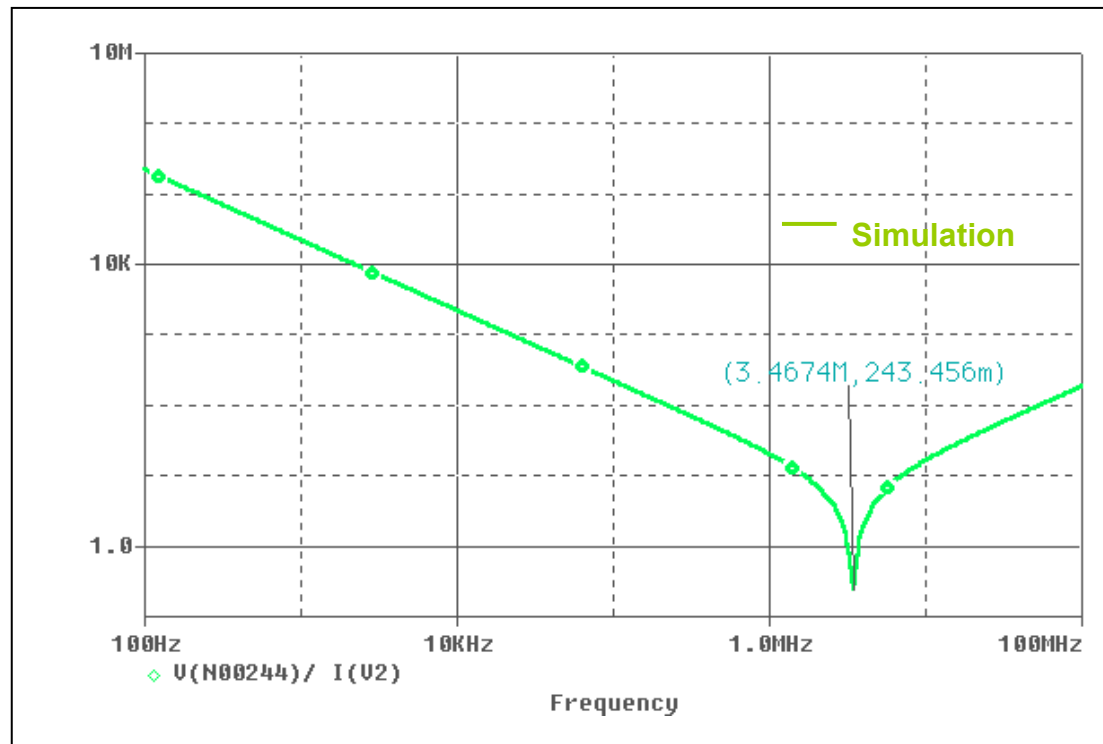
L1	
C1	
R1	

Equivalent circuit

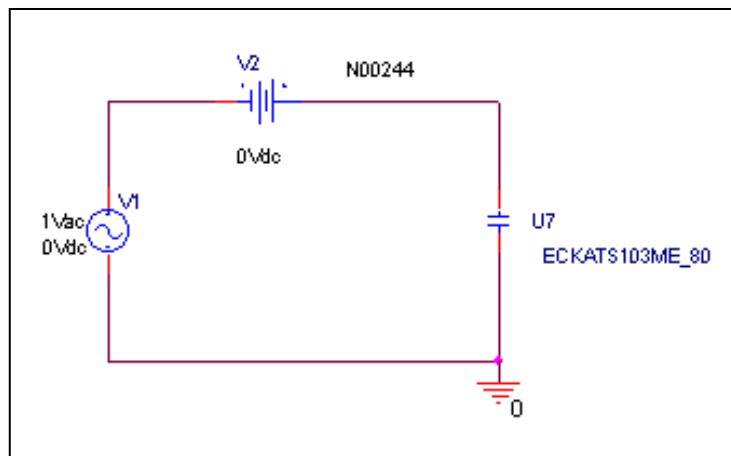


Frequency vs. |Z| Characteristic

Circuit Simulation result



Evaluation Circuit



Simulation result

Frequency (Hz)	IZI (ohm) :Measurement	IZI (ohm) :Simulation	% Error
100	219.429K	222.083K	1.2095
1K	23.7101K	22.208K	6.3353
10K	2.21729K	2.2208K	0.1583
100K	222.11	221.898	0.0954
1M	20.3985	20.362	0.1789
10M	16.1479	16.258	0.6818
100M	174.346	184.549	5.8522

	Measurement	Simulation	%Error
FSRF(Hz)	3.4393M	3.4674M	0.8170
IZI (ohm)	242.45m	243.456m	0.4149