

Device Modeling Report

COMPONENTS: CAPACITOR/CERAMIC
PART NUMBER: ECKTBC102ME
MANUFACTURER: PANASONIC
REMARK: TA=80C



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

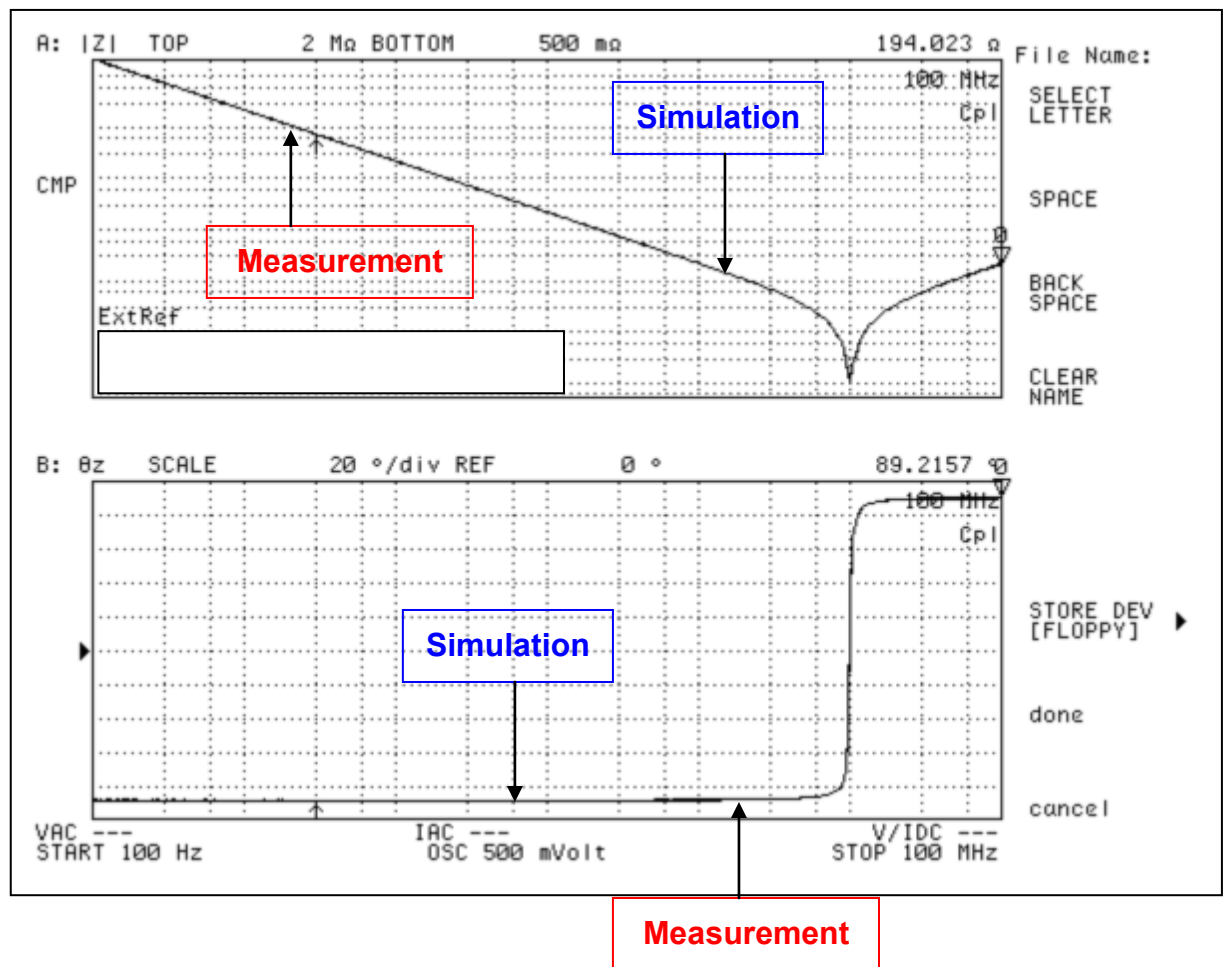
Optimization of Simulation

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

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

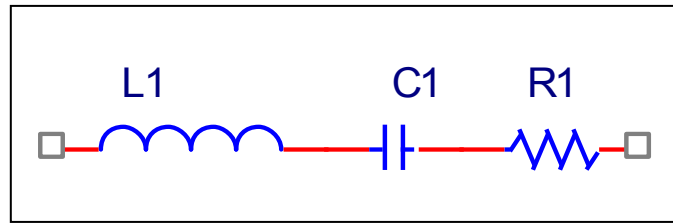
Attention)

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



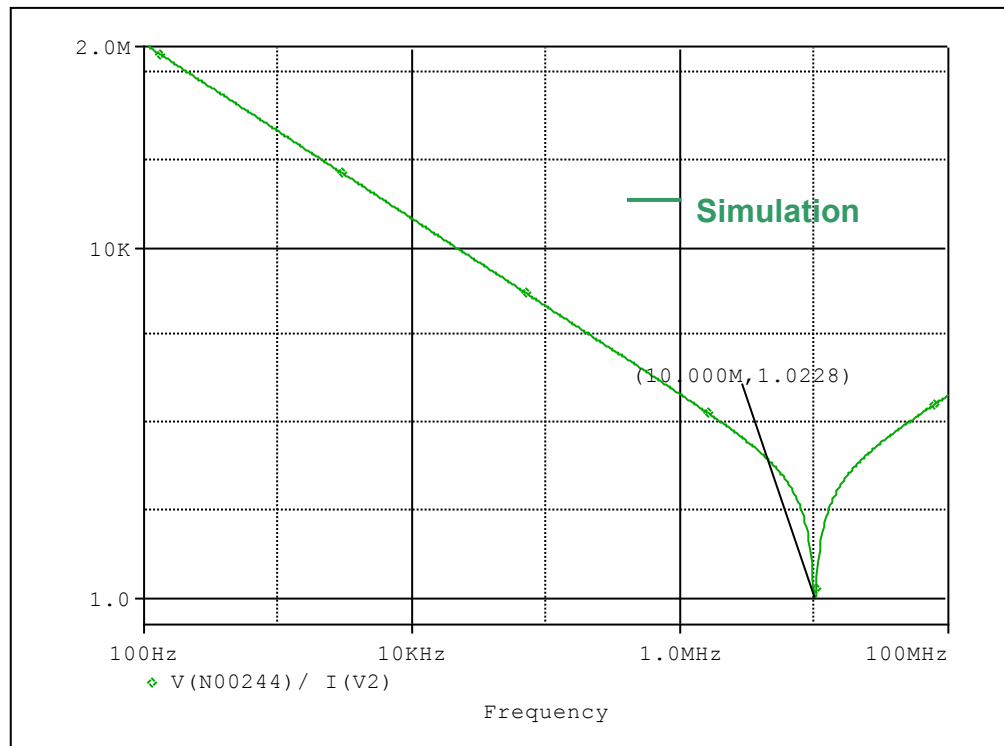
L1	
C1	
R1	

Equivalent circuit

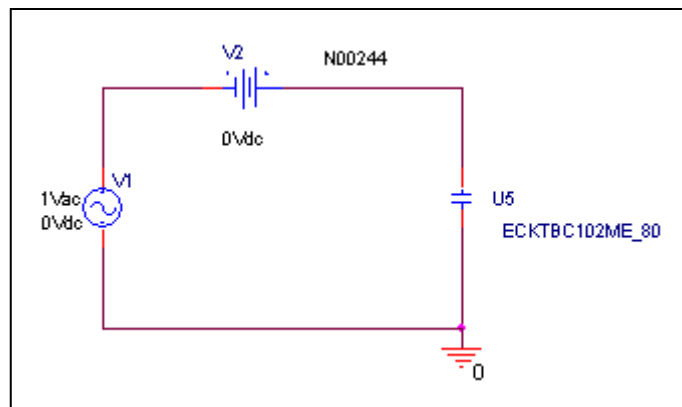


Frequency vs. |Z| Characteristic

Circuit Simulation result



Evaluation Circuit



Simulation result

Frequency (Hz)	IZI (ohm) :Measurement	IZI (ohm) :Simulation	% Error
100	2.14711M	2.1568M	0.4513
1K	212.591k	215.675k	1.4507
10K	21.3286k	21.1568k	-0.8055
100K	2.1414k	2.1565k	0.7051
1M	213.408	213.568	0.0750
10M	1.27128	1.0228	-19.5457
100M	194.023	208.777	7.6043

	Measurement	Simulation	%Error
FSRF(Hz)	10.2329M	10.000M	-2.2760
IZI (ohm)	0.975977	1.0228	4.7976