

Device Modeling Report

COMPONENTS: CAPACITOR/CERAMIC
PART NUMBER: ECKTBC102ME
MANUFACTURER: PANASONIC
REMARK: TA=25C



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

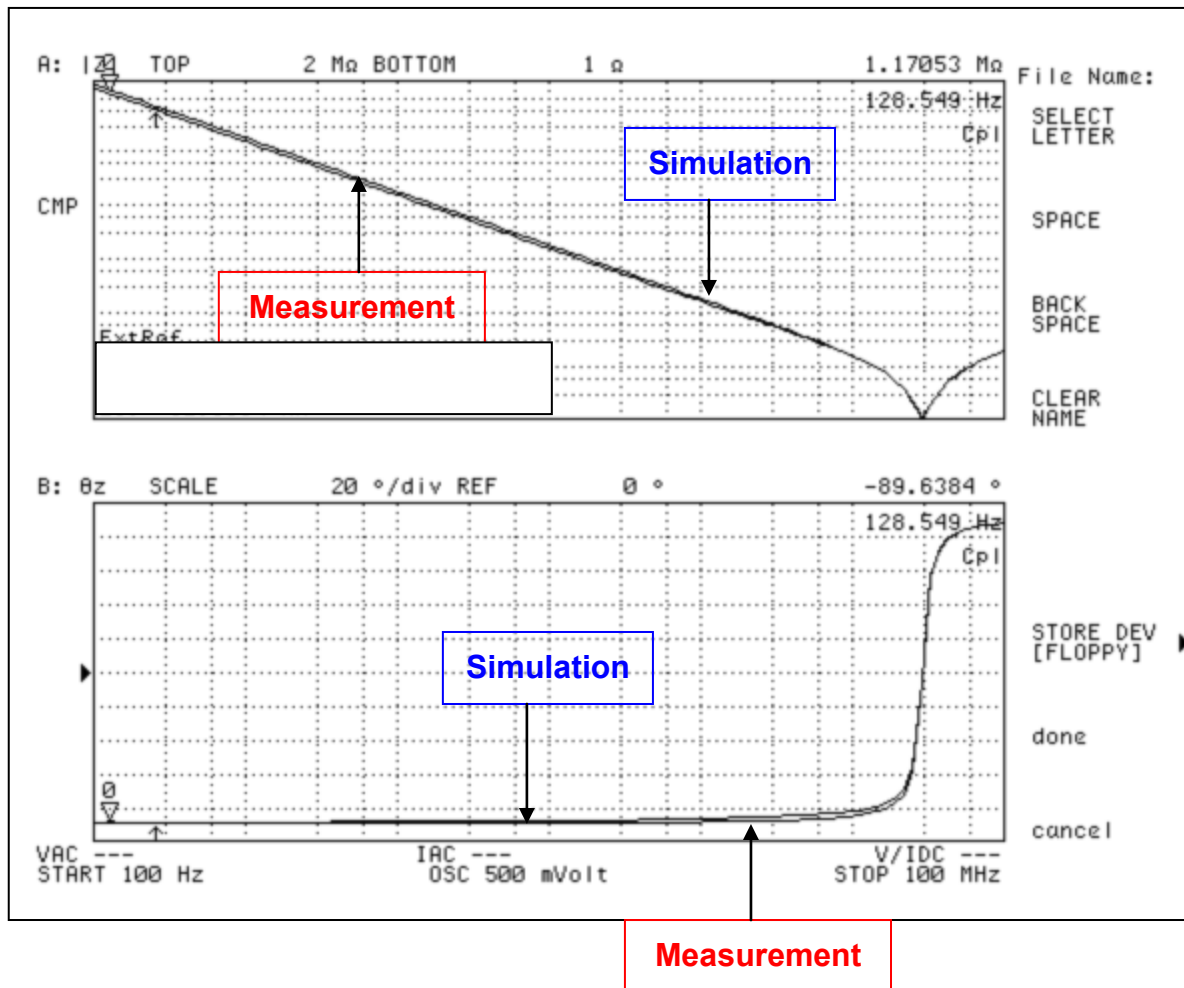
Optimization of Simulation

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

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

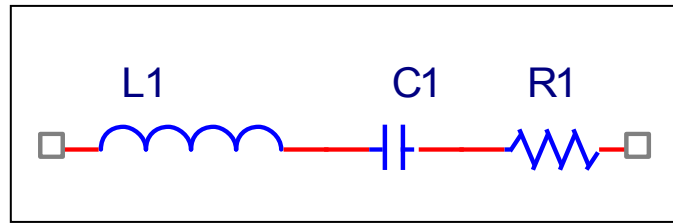
Attention)

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



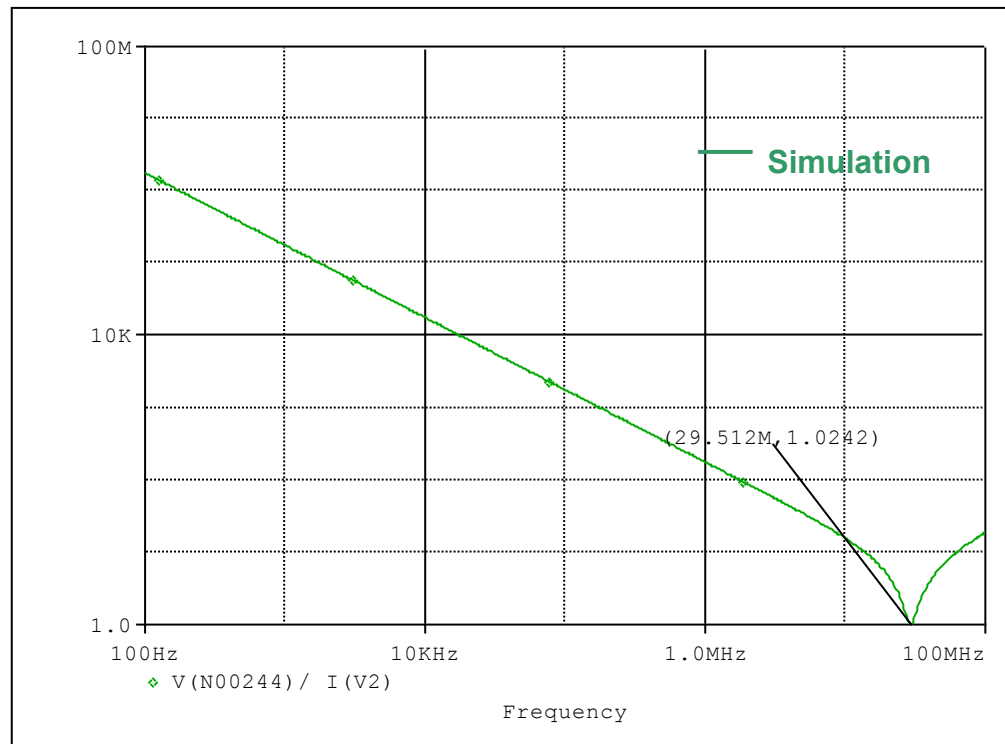
L1	
C1	
R1	

Equivalent circuit

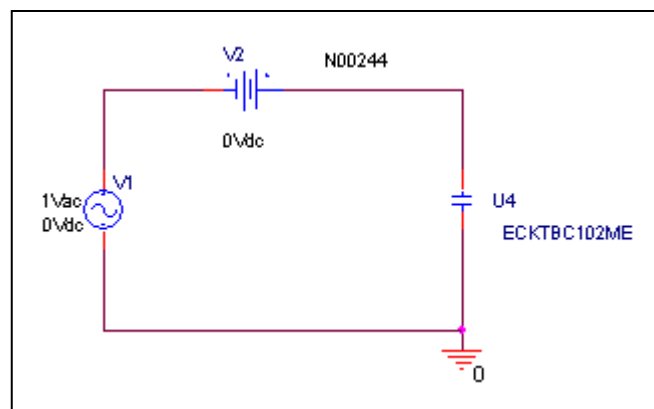


Frequency vs. |Z| Characteristic

Circuit Simulation result



Evaluation Circuit



Simulation result

Frequency (Hz)	IZI (ohm) :Measurement	IZI (ohm) :Simulation	% Error
100	1.4877M	1.7776M	19.4865
1K	149.999k	177.758k	18.5061
10K	15.1423k	17.776k	17.3930
100K	1.53778k	1.7776k	15.5952
1M	159.11	177.556	11.5932
10M	15.27	15.760	3.2089
100M	18.6388	18.741	0.5483

	Measurement	Simulation	%Error
FSRF(Hz)	29.19755M	29.512M	1.0769
IZI (ohm)	1.13766	1.0242	-9.9731