

Device Modeling Report

COMPONENTS: CAPACITOR/CERAMIC
PART NUMBER: ECKTBC472ME
MANUFACTURER: PANASONIC
REMARK: TA=60C



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

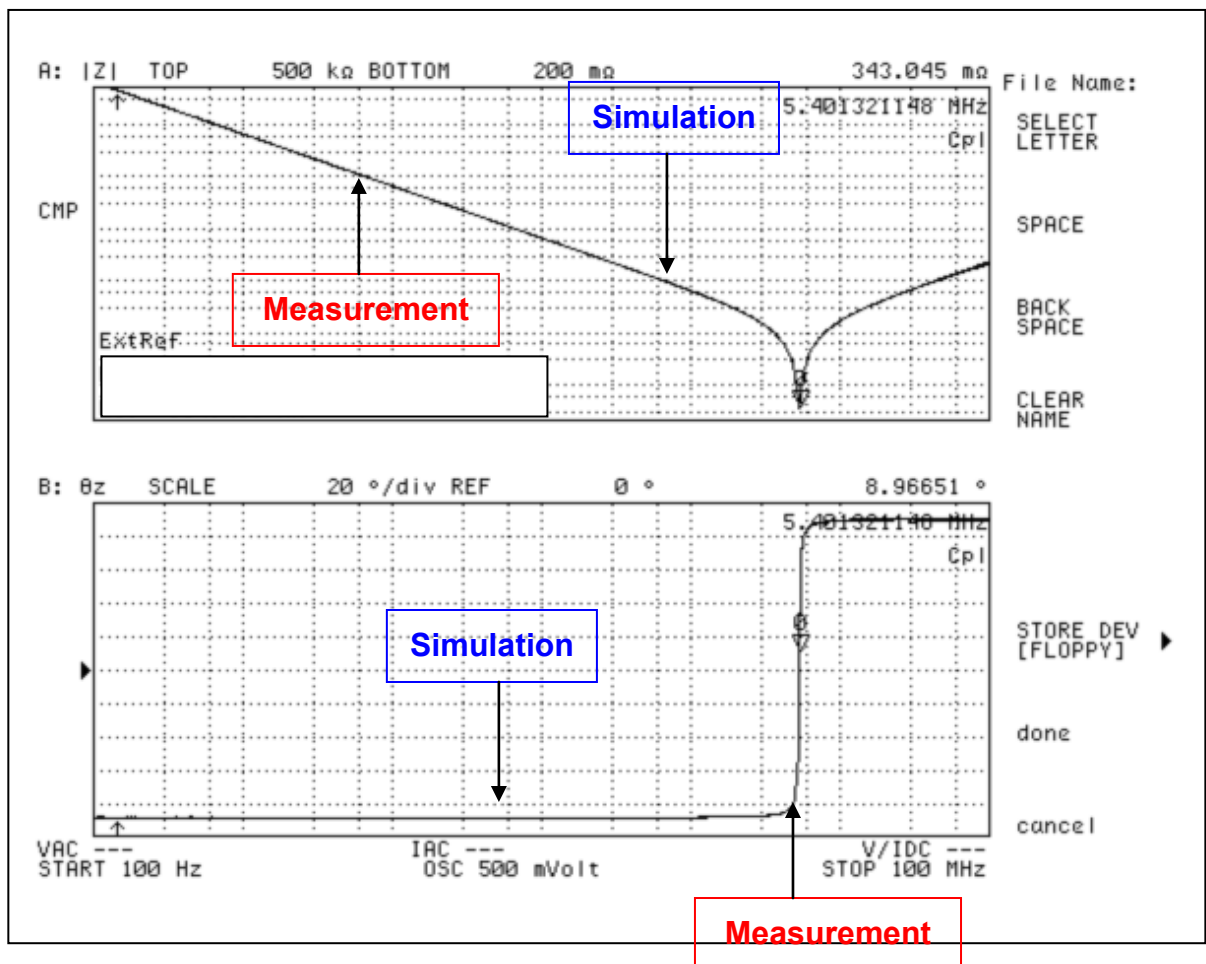
Optimization of Simulation

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)



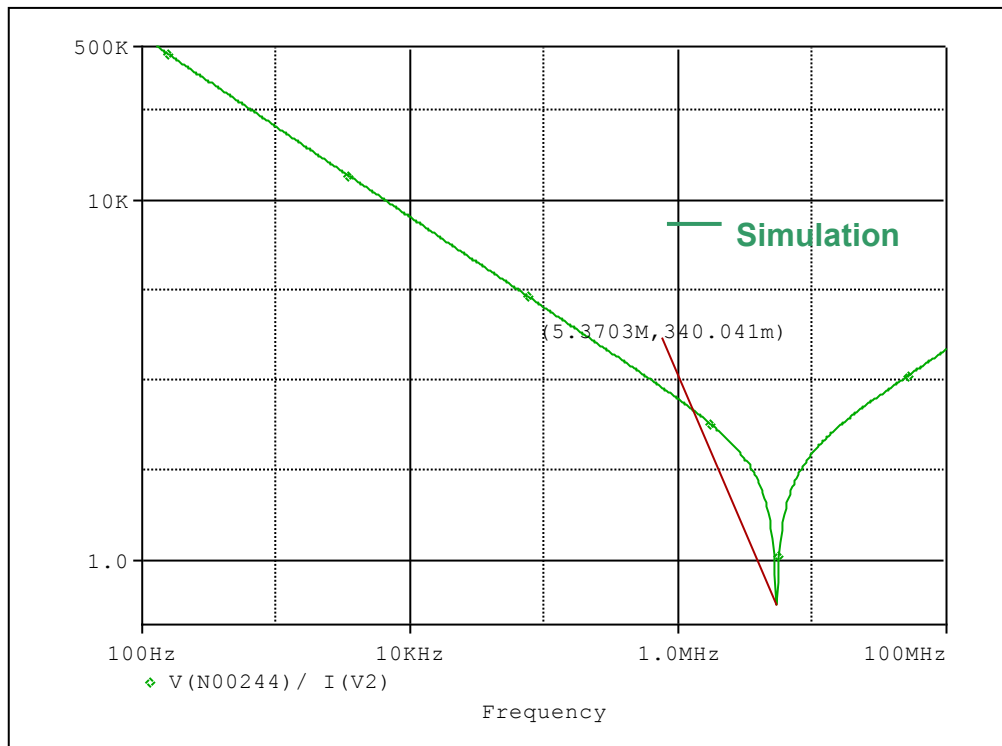
L1	
C1	
R1	

Equivalent circuit

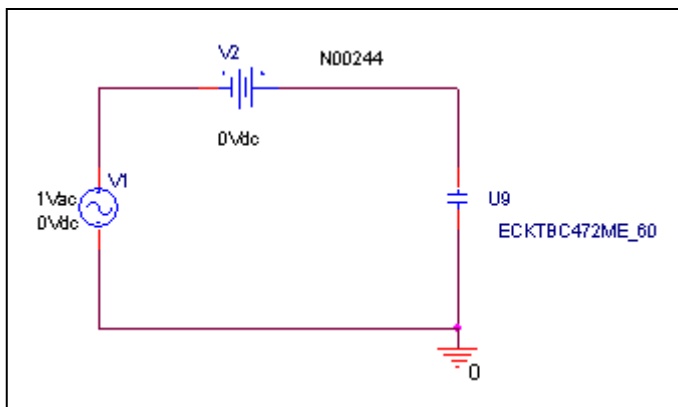


Frequency vs. |Z| Characteristic

Circuit Simulation result



Evaluation Circuit



Simulation result

Frequency (Hz)	IZI (ohm) :Measurement	IZI (ohm) :Simulation	% Error
1K	64.2236k	64.556k	0.5176
10K	6.455664	6.4556k	-0.0009
100K	647.954	645.334	-0.4043
1M	62.7592	62.330	-0.6839
10M	15.709	15.818	0.6939
100M	196.792	222.055	12.8374

	Measurement	Simulation	%Error
FSRF(Hz)	343.045m	340.041m	-0.8757
IZI (ohm)	5.4013M	5.3703M	-0.5739