

Device Modeling Report

COMPONENTS: CAPACITOR/CERAMIC
PART NUMBER: ECKATS471MB
MANUFACTURER: PANASONIC
REMARK: TA=60C



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

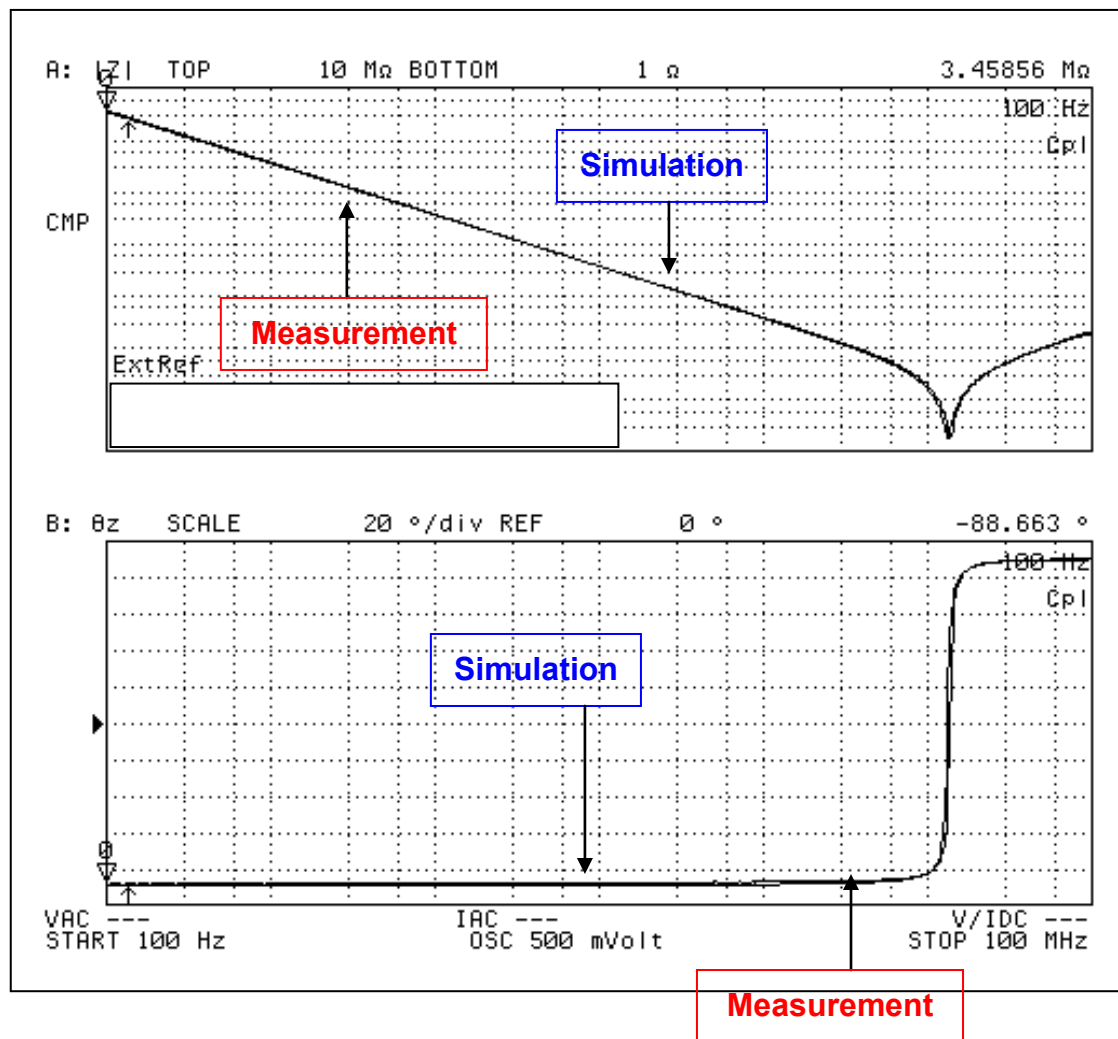
Optimization of Simulation

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

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

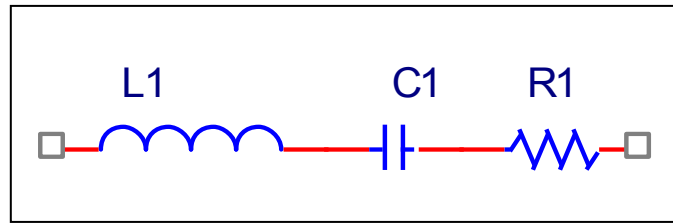
Attention)

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



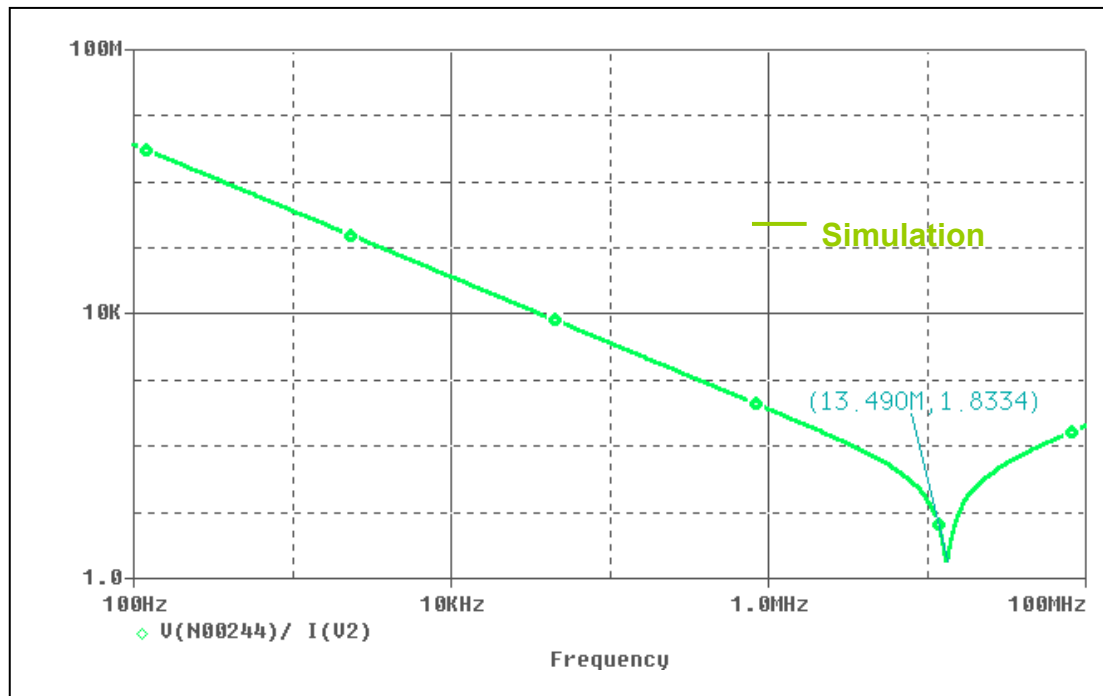
L1	
C1	
R1	

Equivalent circuit

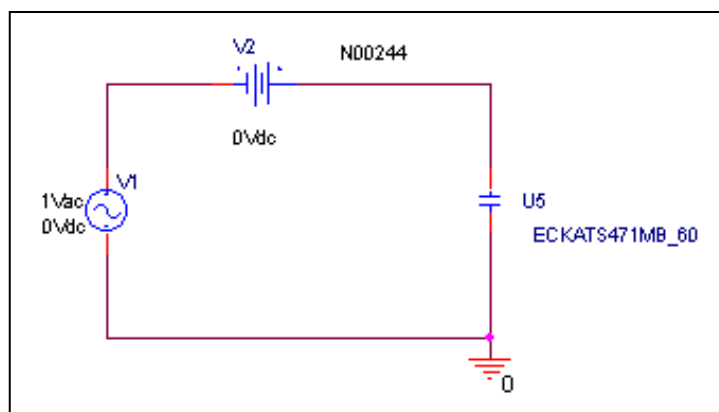


Frequency vs. |Z| Characteristic

Circuit Simulation result



Evaluation Circuit



Simulation result

Frequency (Hz)	IZI (ohm) :Measurement	IZI (ohm) :Simulation	% Error
100	3.50447M	3.6605M	4.4523
1K	350.461K	361.660K	3.1955
10K	35.8013K	36.605K	2.2449
100K	3.67033K	3.6164K	1.4694
1M	377.184	364.002	3.4948
10M	18.9479	15.619	17.5687
100M	182.685	201.180	10.1240

	Measurement	Simulation	%Error
FSRF(Hz)	13.803M	13.490M	2.2676
IZI (ohm)	1.76499	1.8334	3.8759