

Device Modeling Report

COMPONENTS: CAPACITOR/CERAMIC
PART NUMBER: ECKATS101MB
MANUFACTURER: PANASONIC
REMARK: TA=60C



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

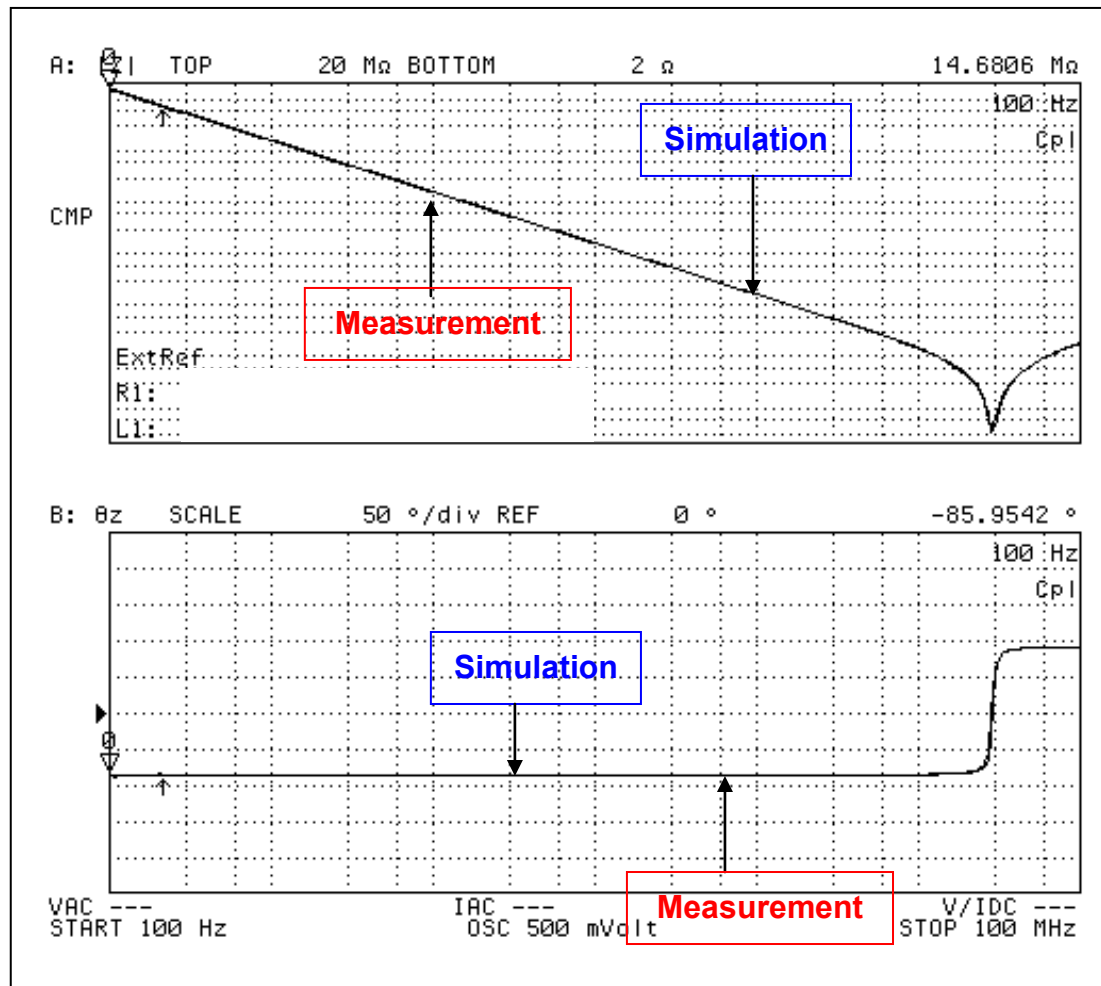
Optimization of Simulation

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)



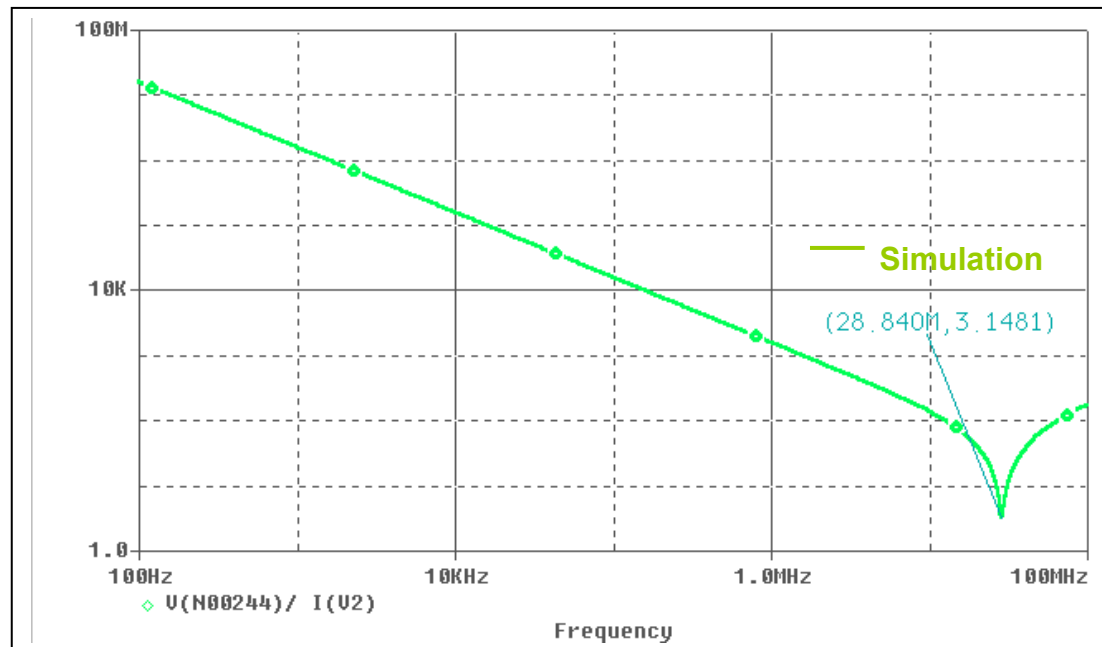
L1	
C1	
R1	

Equivalent circuit

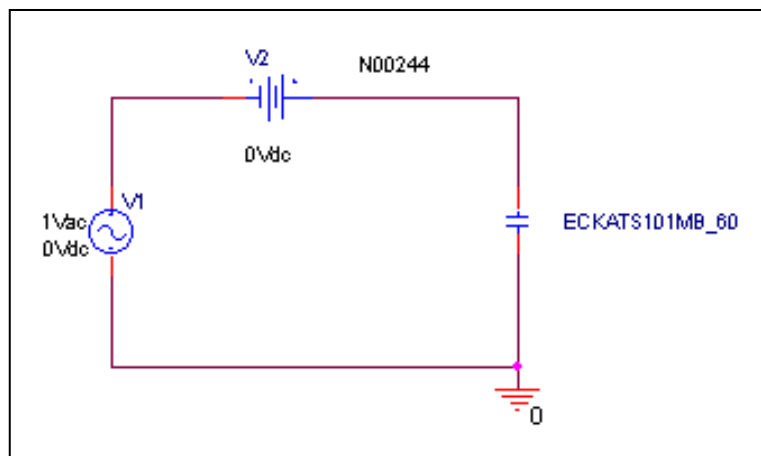


Frequency vs. |Z| Characteristic

Circuit Simulation result



Evaluation Circuit



Simulation result

Frequency (Hz)	IZI (ohm) :Measurement	IZI (ohm) :Simulation	% Error
100	14.691M	15.942M	8.5154
1K	1.52422M	1.5751M	3.3381
10K	154.65K	159.421K	3.0850
100K	15.6906K	15.751K	0.3849
1M	1.59883K	1.5923K	0.4084
10M	145.146	138.135	4.8303
100M	163.505	175.819	7.5313

	Measurement	Simulation	%Error
FSRF(Hz)	28.8403M	28.840M	0.0010
IZI (ohm)	3.14572	3.1481	0.0757