

Device Modeling Report

COMPONENTS: CAPACITOR/ CERAMIC
PART NUMBER: ECKATS101MB
MANUFACTURER: PANASONIC
REMARK: TA=40C



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

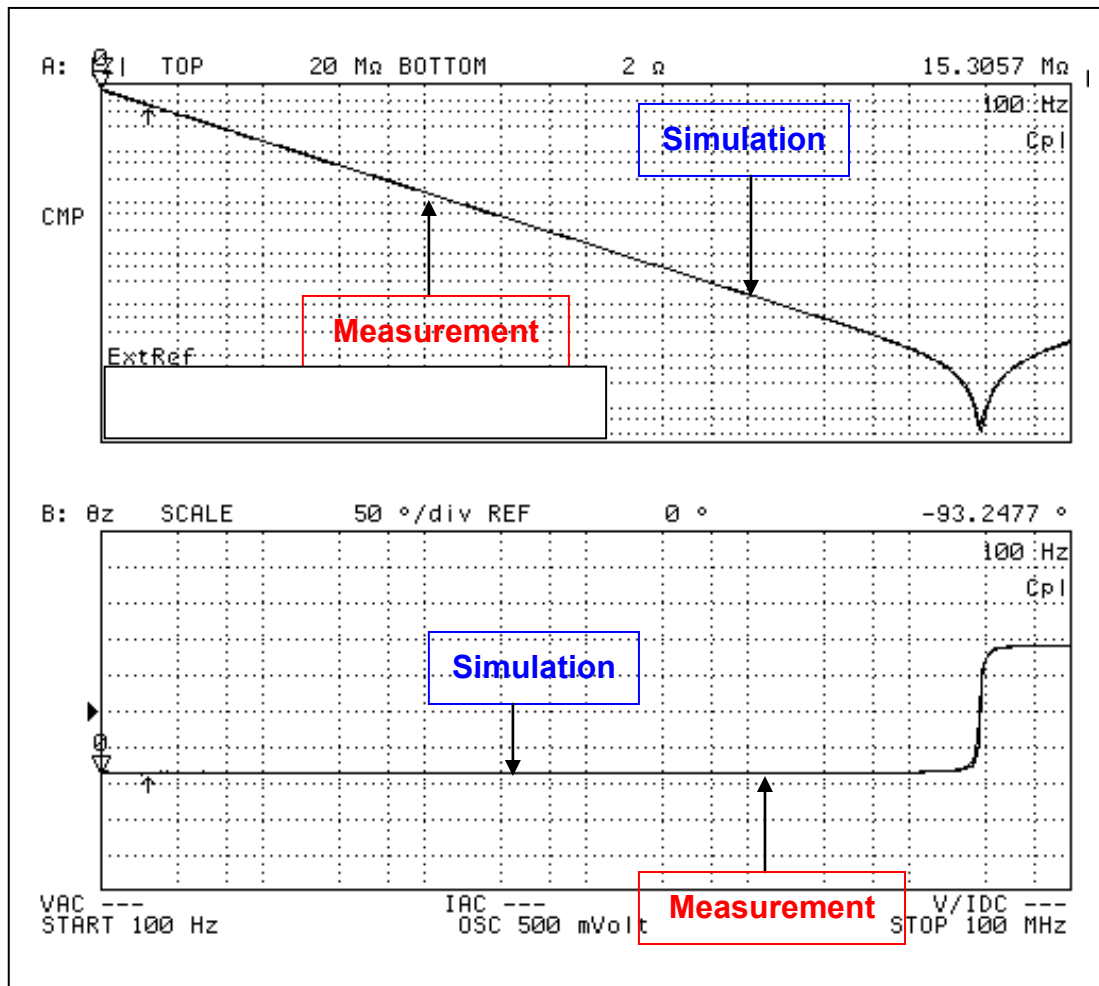
Optimization of Simulation

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

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

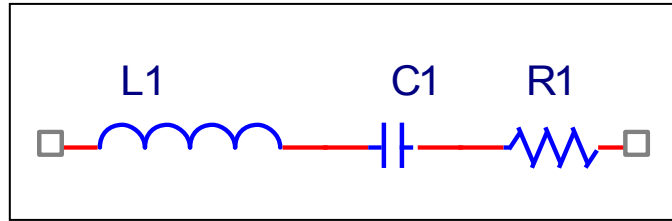
Attention)

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



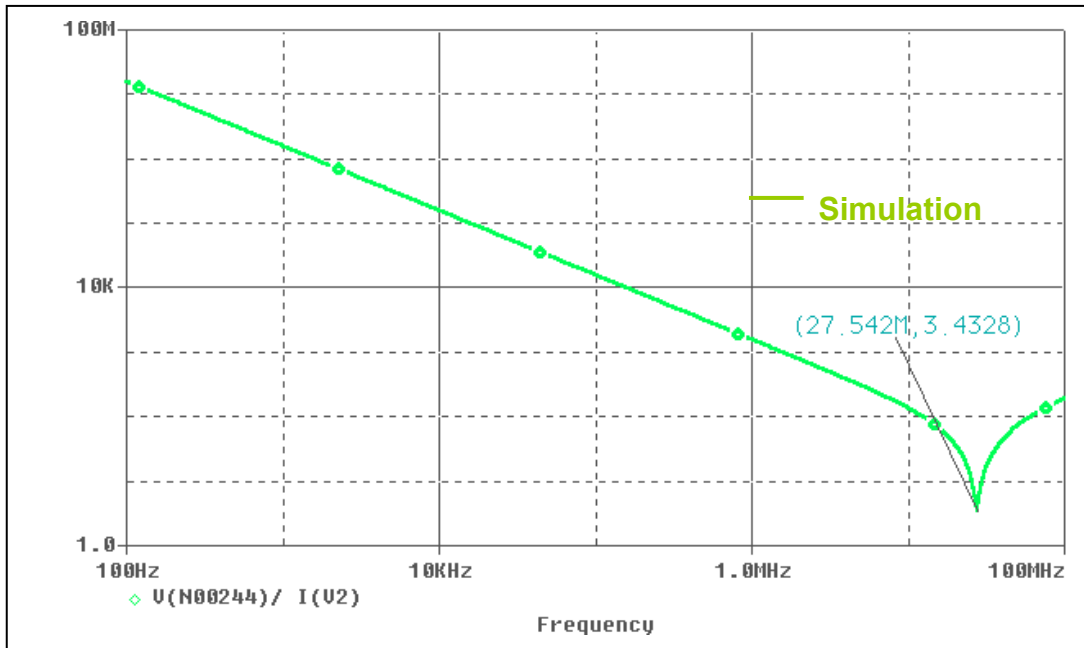
L1	
C1	
R1	

Equivalent circuit

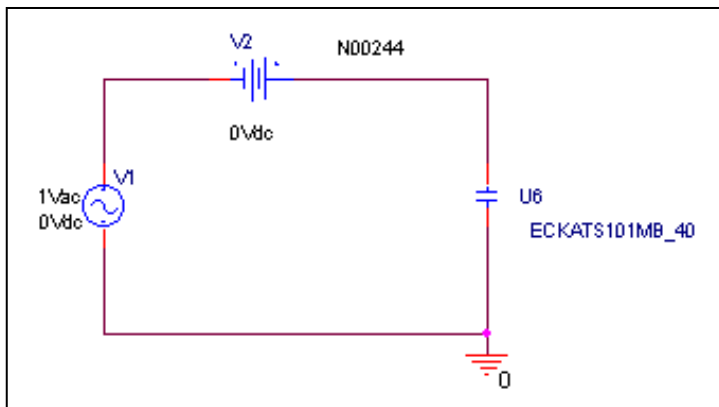


Frequency vs. IZI Characteristic

Circuit Simulation result



Evaluation Circuit



Simulation result

Frequency (Hz)	IZI (ohm) :Measurement	IZI (ohm) :Simulation	% Error
100	16.1256M	15.844M	1.7463
1K	1.53205M	1.565M	2.1768
10K	155.332K	158.437K	1.9989
100K	15.7502K	15.654K	0.6108
1M	1.60529K	1.5823K	1.4321
10M	144.31	146.530	1.5384
100M	174.429	190.430	9.1734

	Measurement	Simulation	%Error
FSRF(Hz)	28.8403M	27.542M	4.5017
IZI (ohm)	3.35857	3.4328	2.2102