

Device Modeling Report

COMPONENTS: CAPACITOR/ CERAMIC
PART NUMBER: ECKATS102ME
MANUFACTURER: PANASONIC
REMARK: TA=80C



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

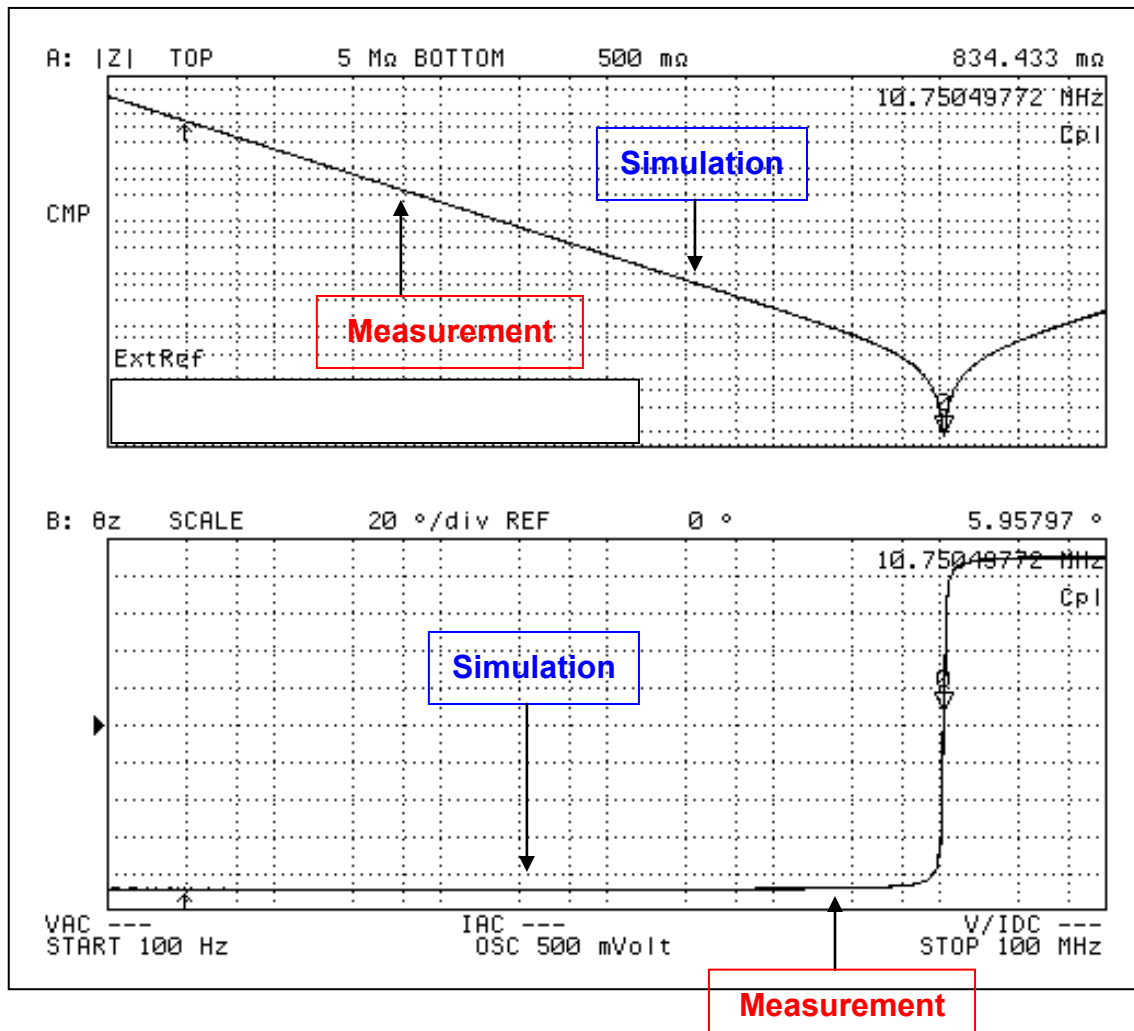
Optimization of Simulation

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

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

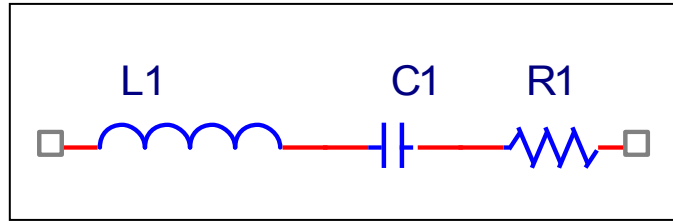
Attention)

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



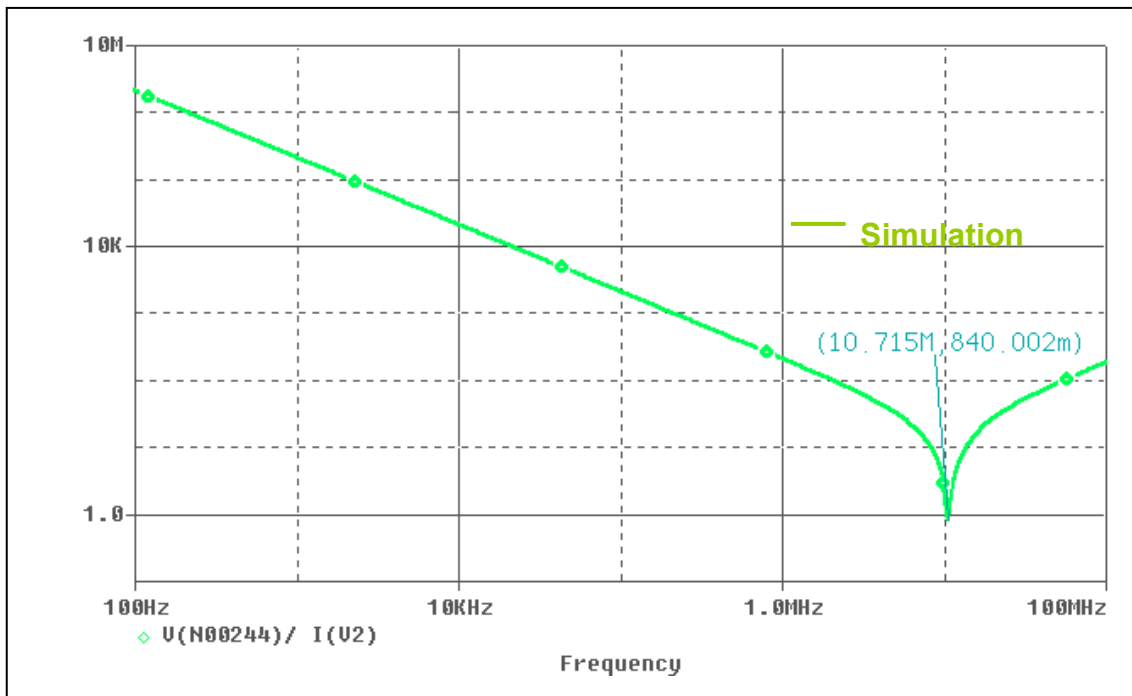
L1	
C1	
R1	

Equivalent circuit

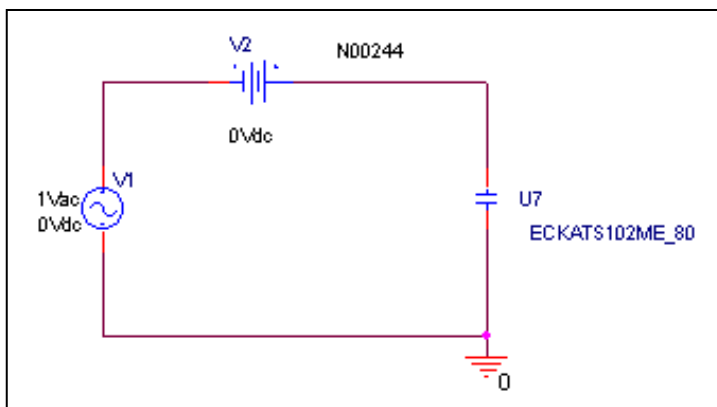


Frequency vs. IZI Characteristic

Circuit Simulation result



Evaluation Circuit



Simulation result

Frequency (Hz)	IZI (ohm) :Measurement	IZI (ohm) :Simulation	% Error
100	2.12011M	2.1370M	0.7967
1K	211.384K	211.141K	0.1150
10K	21.1719K	21.370K	0.9357
100K	2.11722K	2.1112K	0.2843
1M	210.774	211.826	0.4991
10M	2.74239	2.6438	3.5950
100M	173.478	185.649	7.0159

	Measurement	Simulation	%Error
FSRF(Hz)	10.7504M	10.7150M	0.3293
IZI (ohm)	820.464m	840.002m	2.3813