

Device Modeling Report

COMPONENTS: CAPACITOR/ CERAMIC
PART NUMBER: ECKATS472ME
MANUFACTURER: PANASONIC
REMARK: TA=40C



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

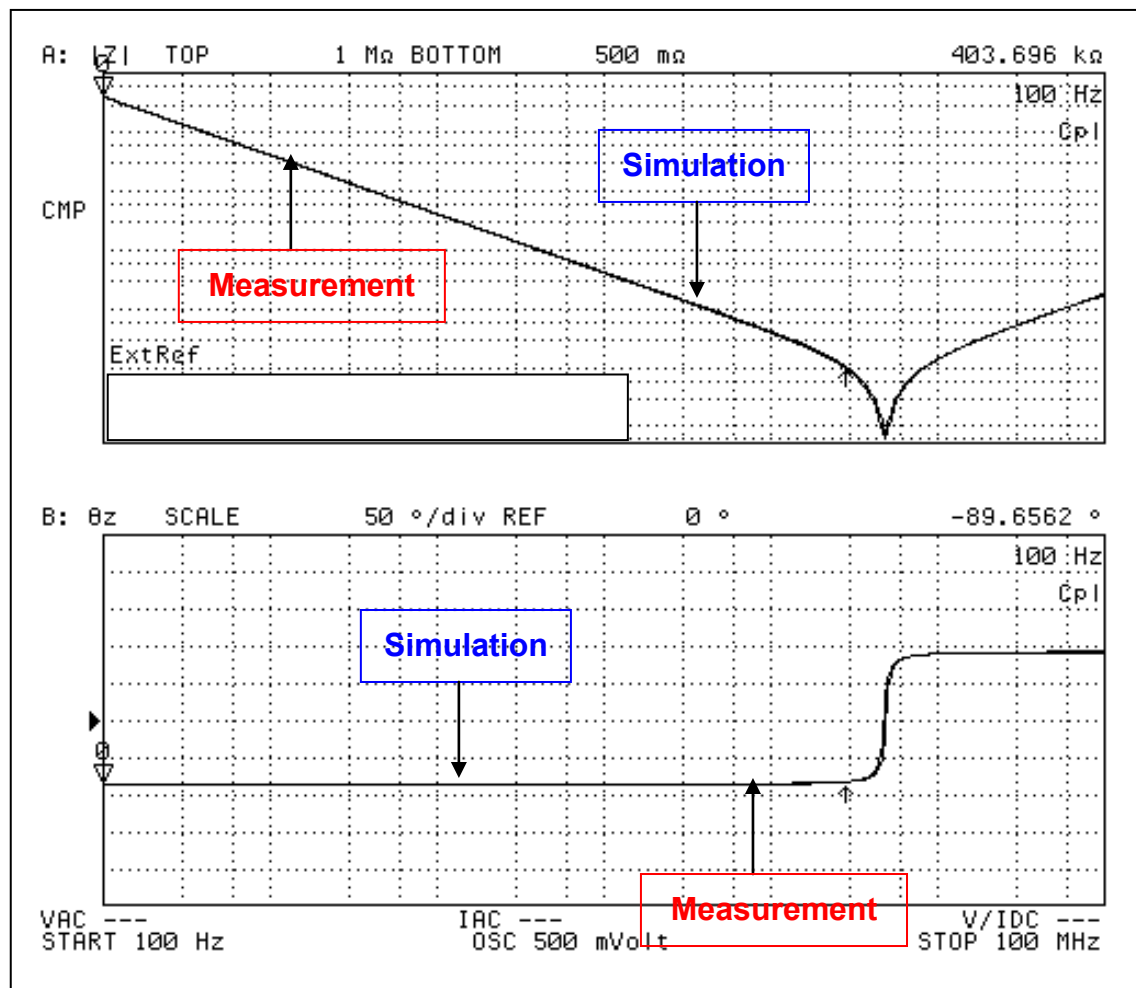
Optimization of Simulation

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)



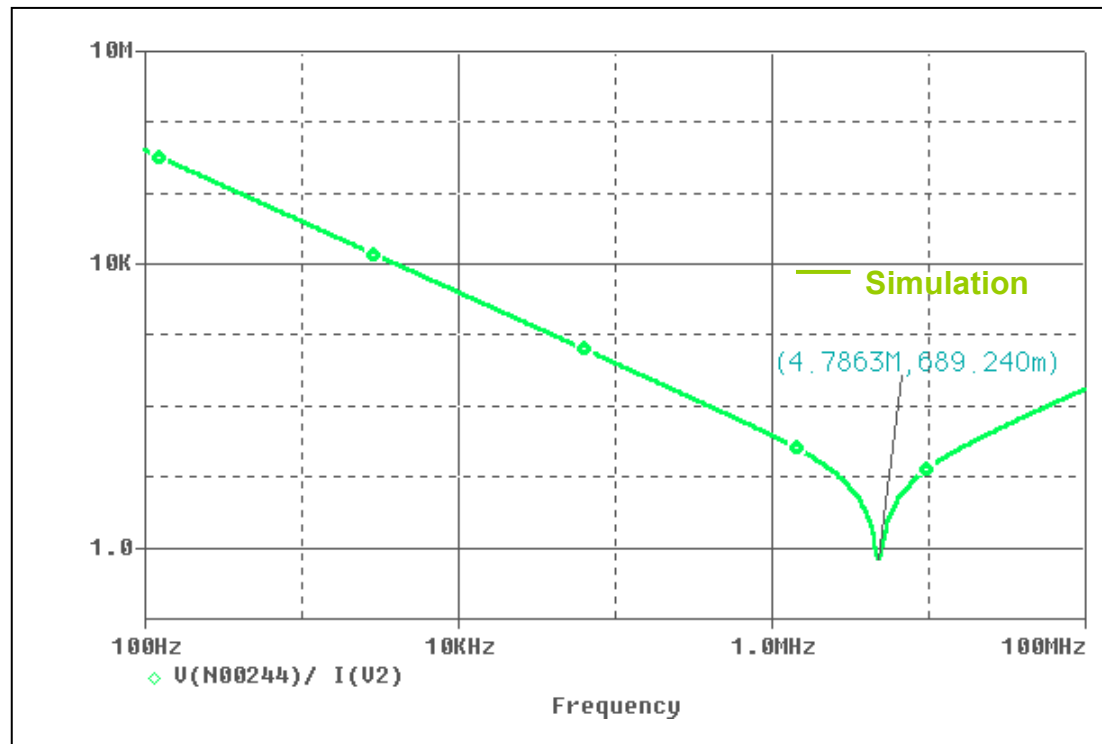
L1	
C1	
R1	

Equivalent circuit

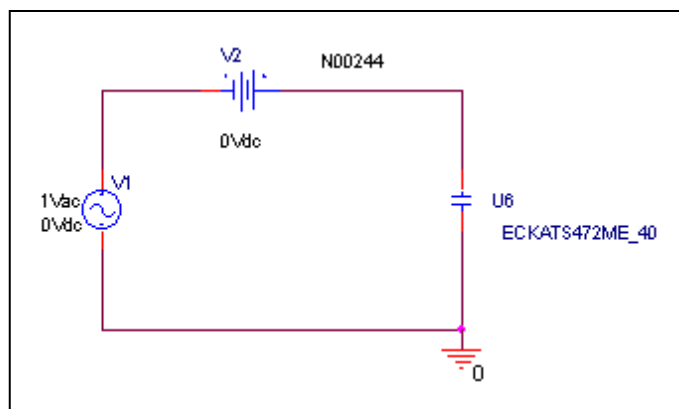


Frequency vs. |Z| Characteristic

Circuit Simulation result



Evaluation Circuit



Simulation result

Frequency (Hz)	IZI (ohm) :Measurement	IZI (ohm) :Simulation	% Error
100	403.465K	399.123K	1.0762
1K	40.7001K	39.912K	1.9364
10K	4.09461K	3.9912K	2.5255
100K	412.675	398.952	3.3254
1M	40.2826	38.206	5.1551
10M	12.9506	13.148	1.5243
100M	162.522	170.821	5.1064

	Measurement	Simulation	%Error
FSRF(Hz)	4.954M	4.7863M	3.3851
IZI (ohm)	672.8m	689.240m	2.4435