

Device Modeling Report

COMPONENTS: CAPACITOR/CERAMIC
PART NUMBER: ECKATS103ME
MANUFACTURER: PANASONIC
REMARK: TA=60C



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

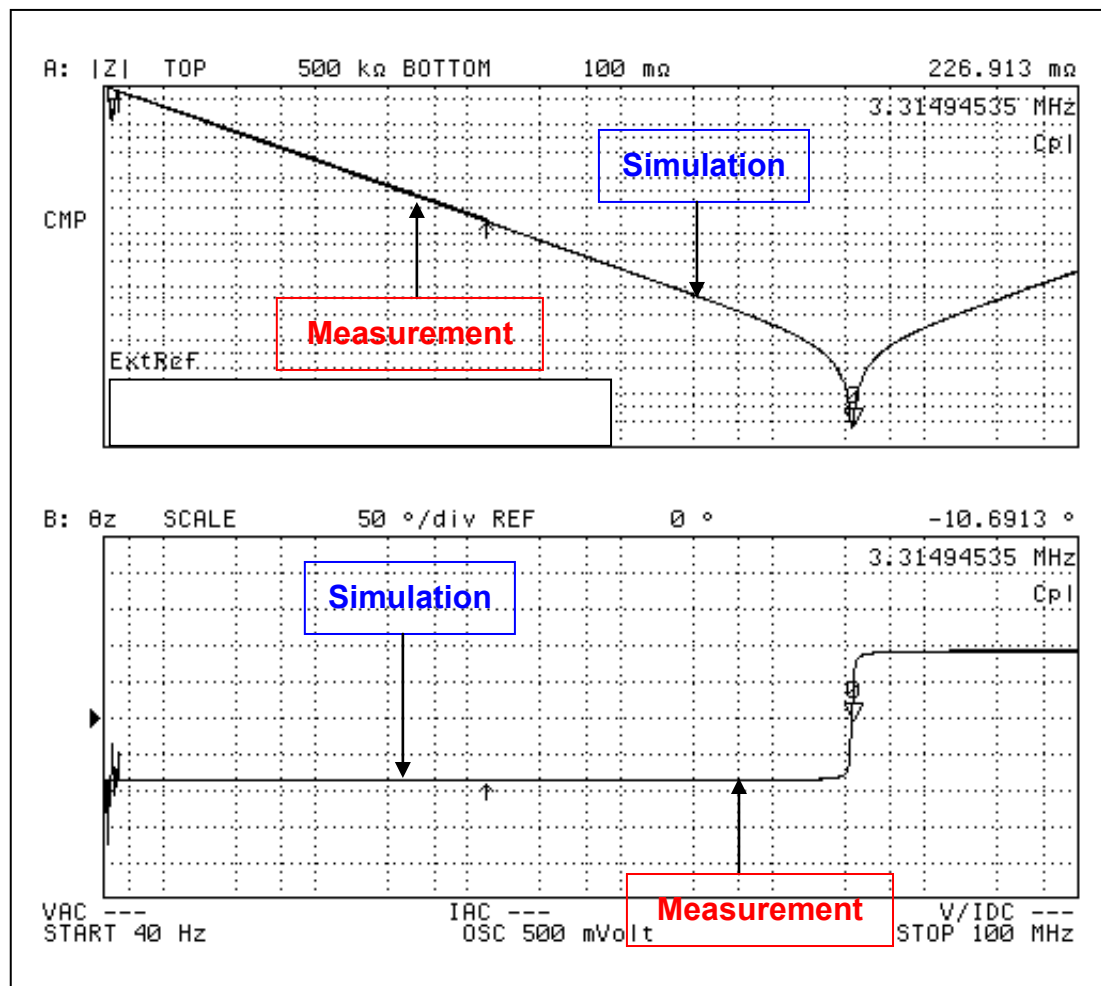
Optimization of Simulation

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)



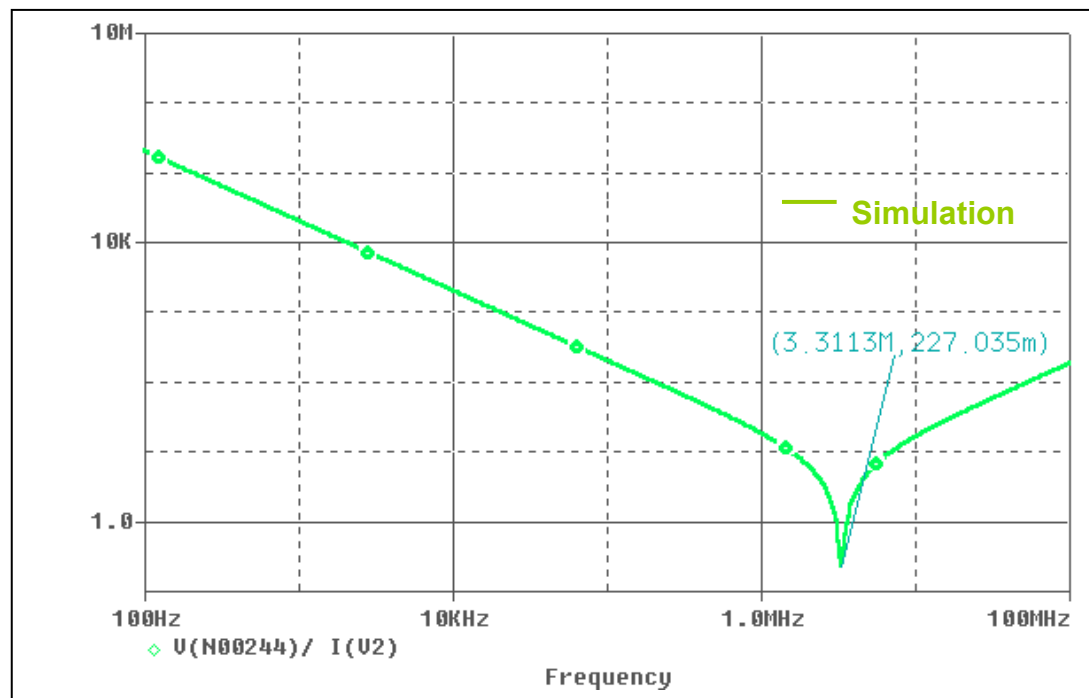
L1	
C1	
R1	

Equivalent circuit

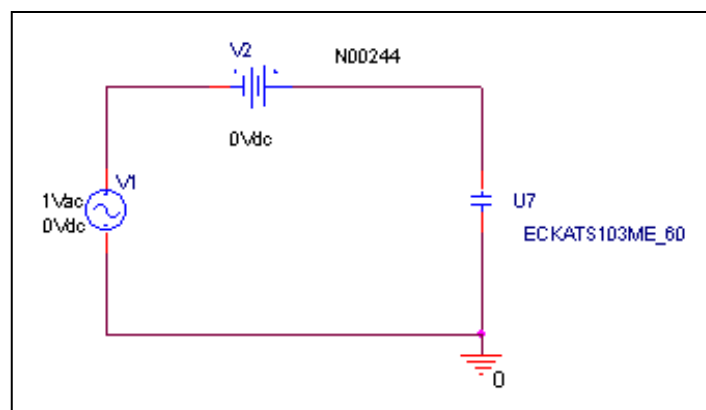


Frequency vs. |Z| Characteristic

Circuit Simulation result



Evaluation Circuit



Simulation result

Frequency (Hz)	IZI (ohm) :Measurement	IZI (ohm) :Simulation	% Error
100	214.475K	204.766K	4.5269
1K	22.336K	20.477K	8.3229
10K	2.25523K	2.048K	9.2066
100K	226.8	204.5810	9.7967
1M	20.8351	18.627	10.5980
10M	17.1885	16.465	4.2092
100M	181.057	184.909	2.1275

	Measurement	Simulation	%Error
FSRF(Hz)	3.3149M	3.3113M	0.1086
IZI (ohm)	226.913m	227.035m	0.0538