

Device Modeling Report

COMPONENTS: CAPACITOR/ CERAMIC
PART NUMBER: ECKATS472ME
MANUFACTURER: PANASONIC
REMARK: TA=80C



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

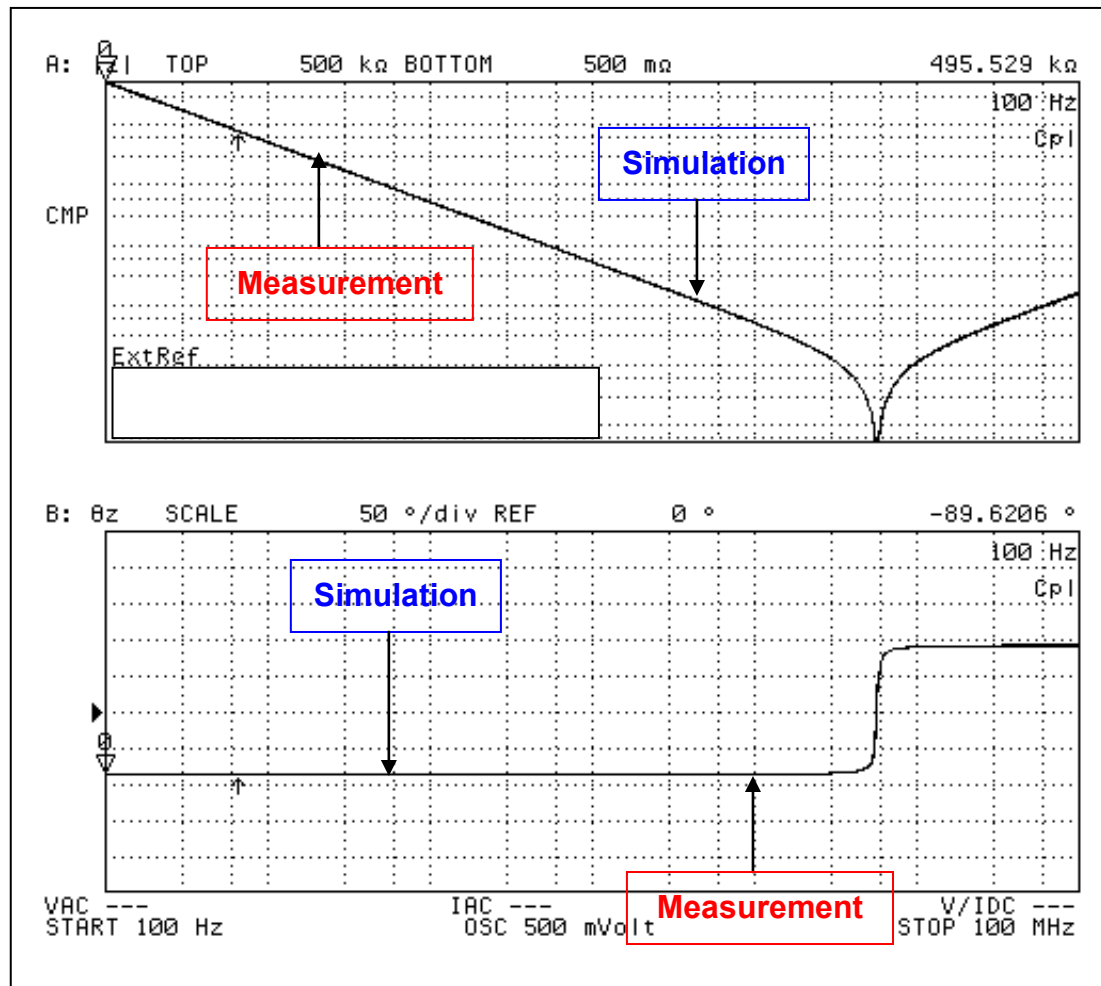
Optimization of Simulation

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

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

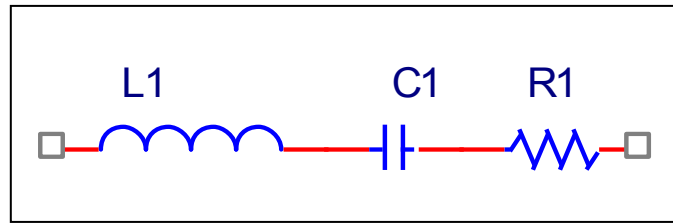
Attention)

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



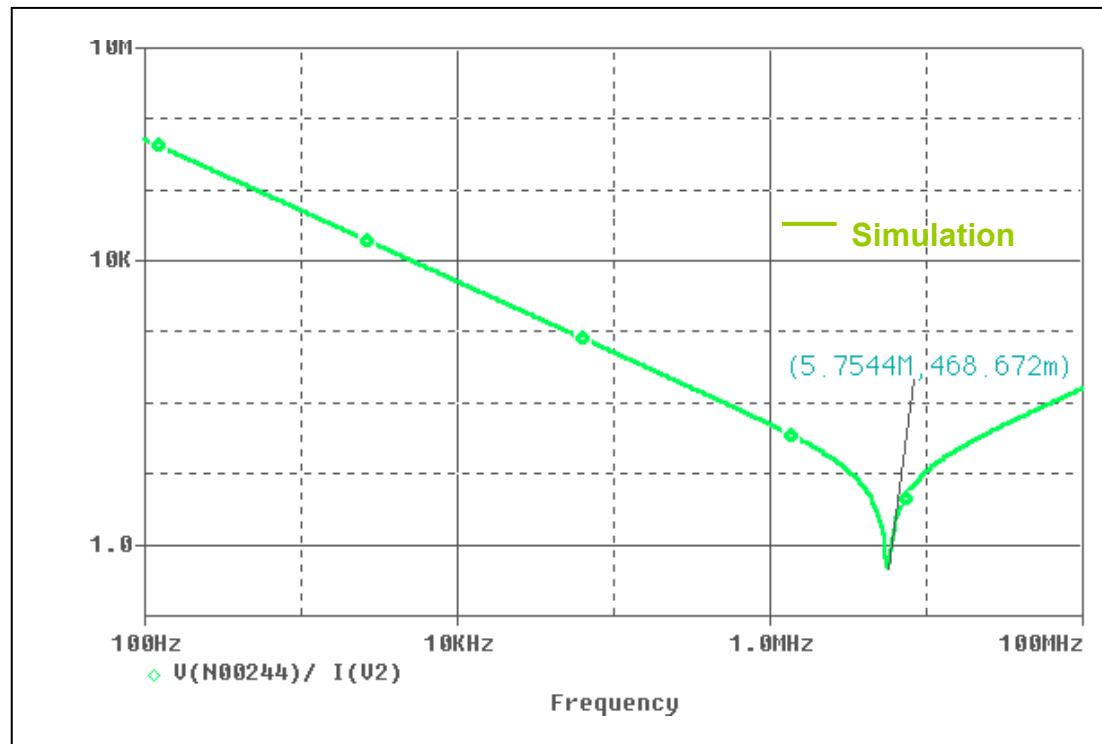
L1	
C1	
R1	

Equivalent circuit

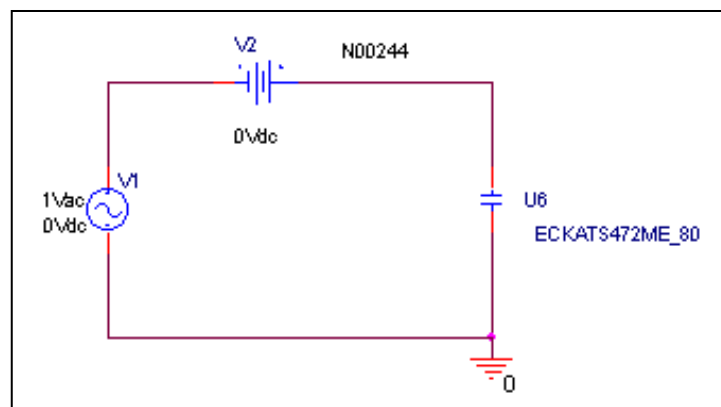


Frequency vs. |Z| Characteristic

Circuit Simulation result



Evaluation Circuit



Simulation result

Frequency (Hz)	IZI (ohm) :Measurement	IZI (ohm) :Simulation	% Error
100	498.74K	511.241K	2.5065
1K	50.3523K	51.124K	1.5326
10K	5.04791K	5.1124K	1.2776
100K	506.313	511.085	0.9425
1M	49.3503	49.562	0.4290
10M	10.0025	10.539	5.3637
100M	143.681	155.904	8.5070

	Measurement	Simulation	%Error
FSRF(Hz)	5.6652M	5.7544M	1.5745
IZI (ohm)	453.974m	468.672m	3.2376