

Device Modeling Report

COMPONENTS: CAPACITOR/ CERAMIC
PART NUMBER: ECKATS221MB
MANUFACTURER: PANASONIC
REMARK: TA=60C



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

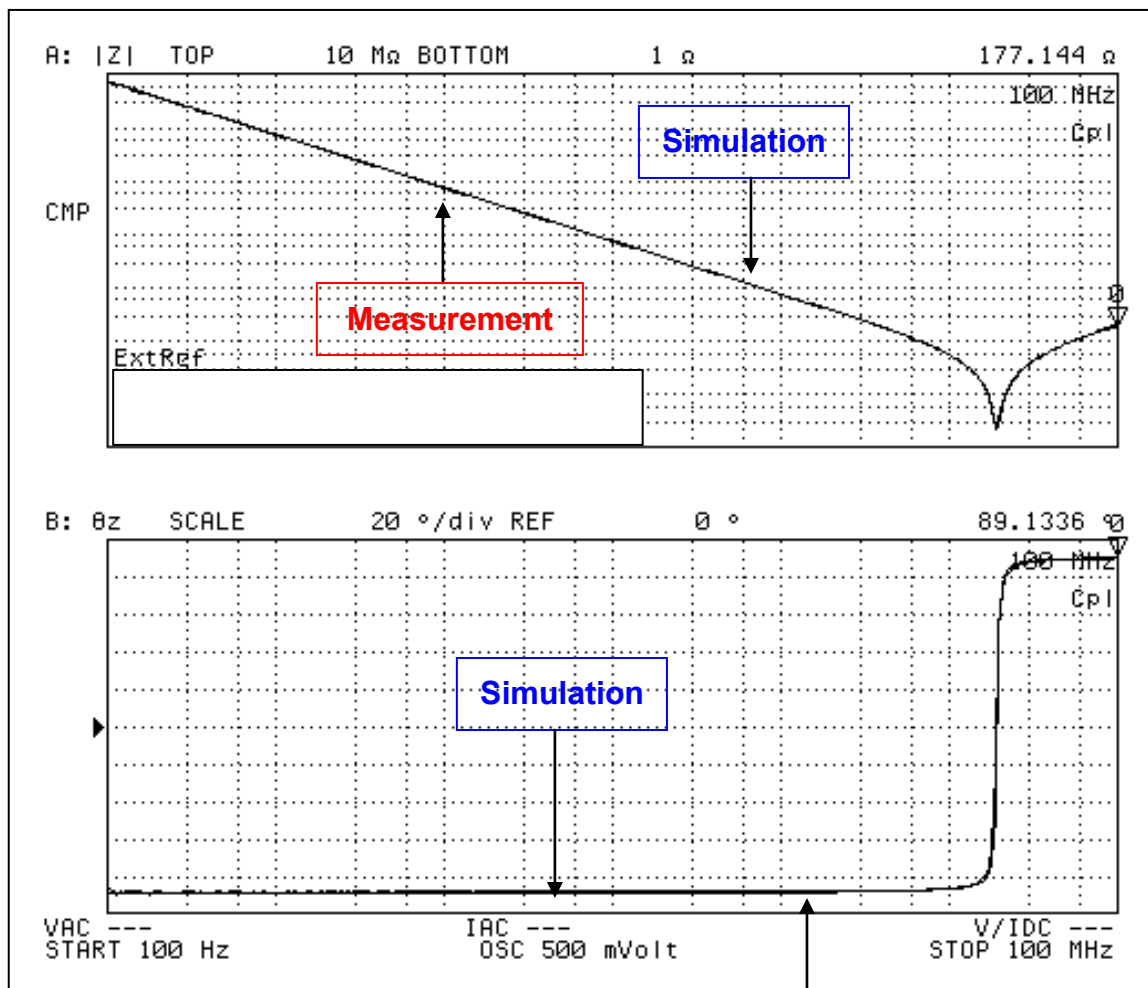
Optimization of Simulation

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

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

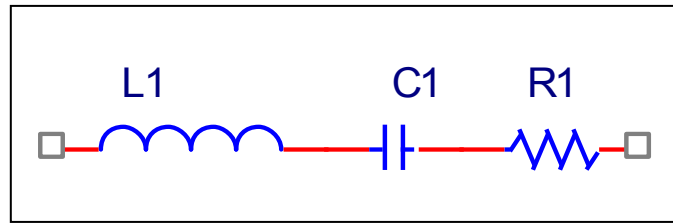
Attention)

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



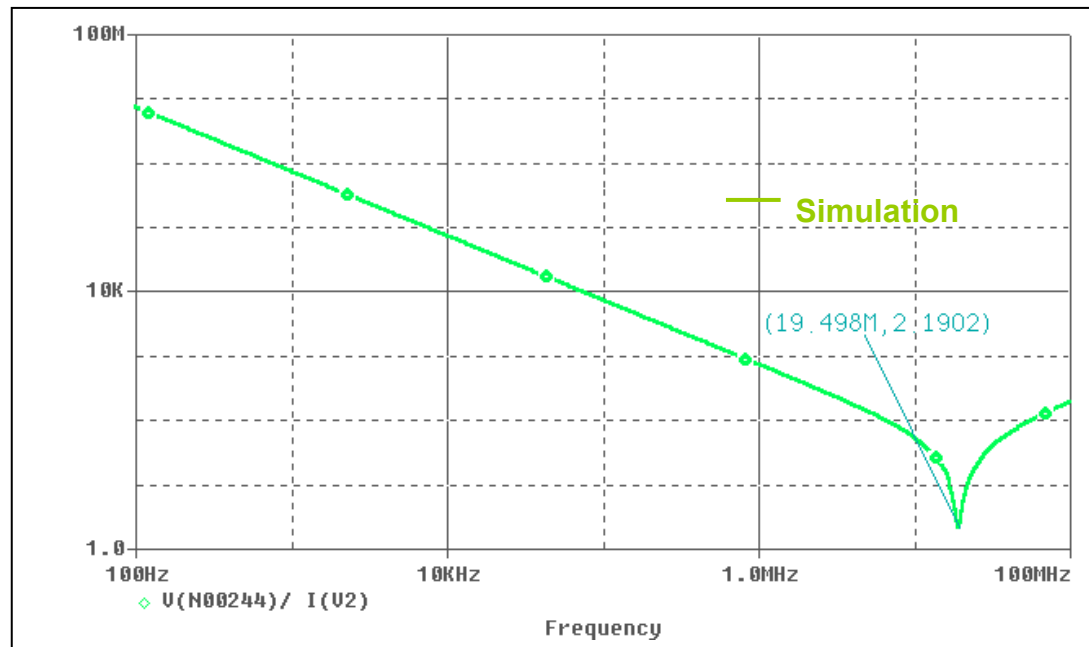
L1	
C1	
R1	

Equivalent circuit

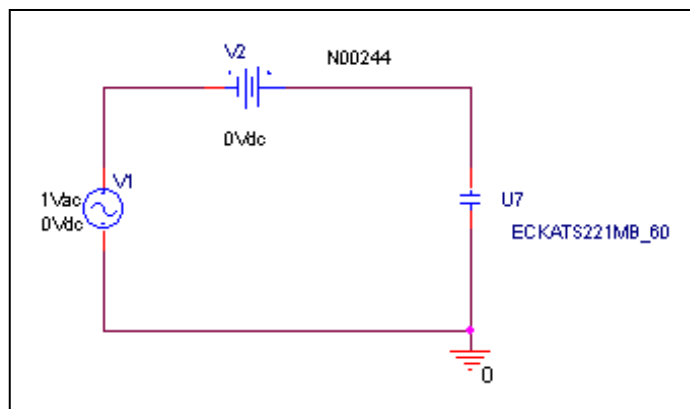


Frequency vs. |Z| Characteristic

Circuit Simulation result



Evaluation Circuit



Simulation result

Frequency (Hz)	IZI (ohm) :Measurement	IZI (ohm) :Simulation	% Error
100	7.10688M	7.4723M	5.1418
1K	717.742K	735.642K	2.4939
10K	72.2122K	74.723K	3.4770
100K	7.31671K	7.3826K	0.9005
1M	742.436	745.227	0.3759
10M	55.9287	53.508	4.3282
100M	177.28	193.559	9.1826

	Measurement	Simulation	%Error
FSRF(Hz)	19.0546M	19.498M	2.3270
IZI (ohm)	2.05151	2.1902	6.7604