

Device Modeling Report

COMPONENTS: CAPACITOR/CERAMIC
PART NUMBER: ECKTBC102ME
MANUFACTURER: PANASONIC
REMARK: TA=60C



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

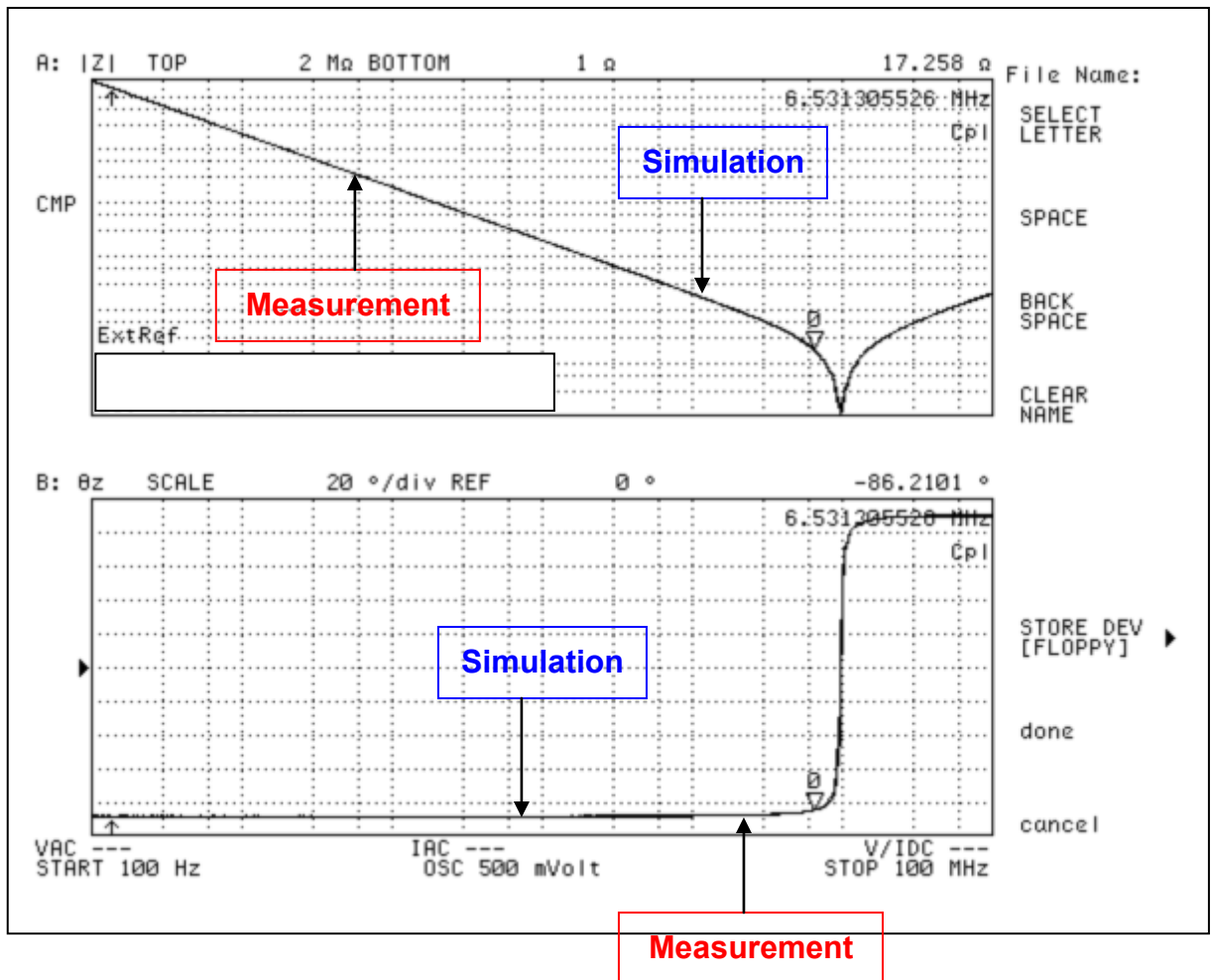
Optimization of Simulation

Range of adjustment Frequency:100 Hz to100M(Hz)

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

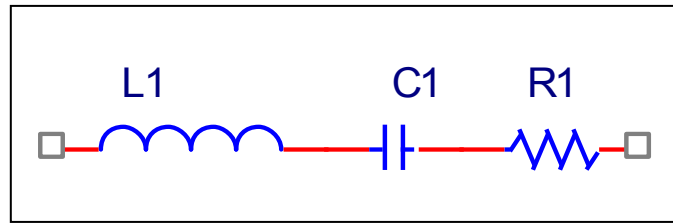
Attention)

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



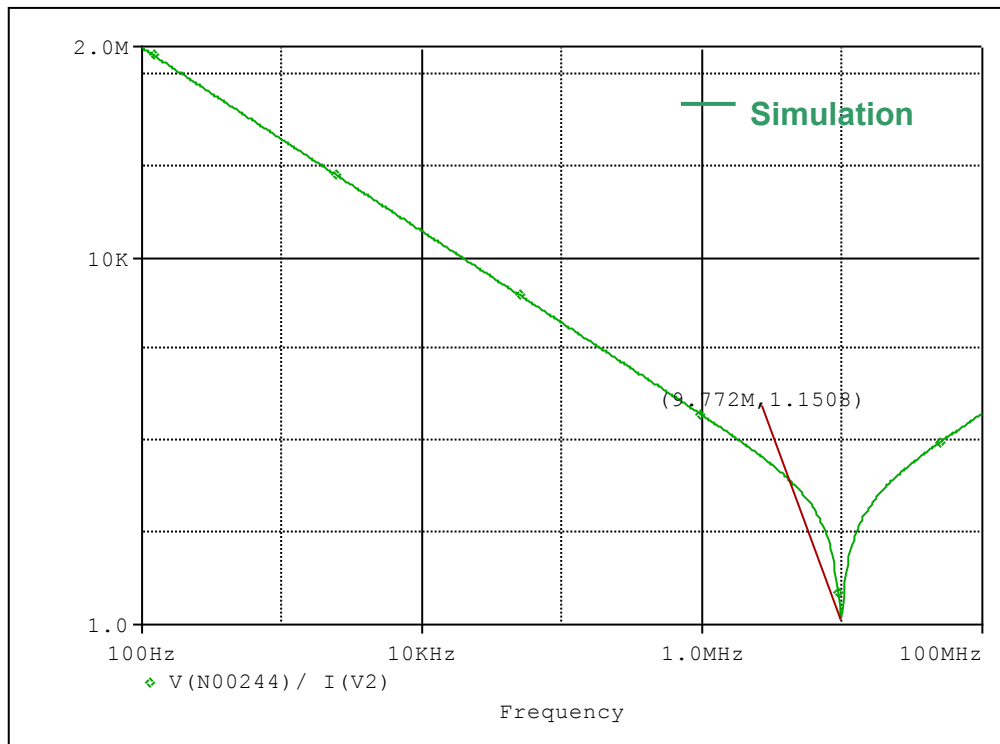
L1	
C1	
R1	

Equivalent circuit

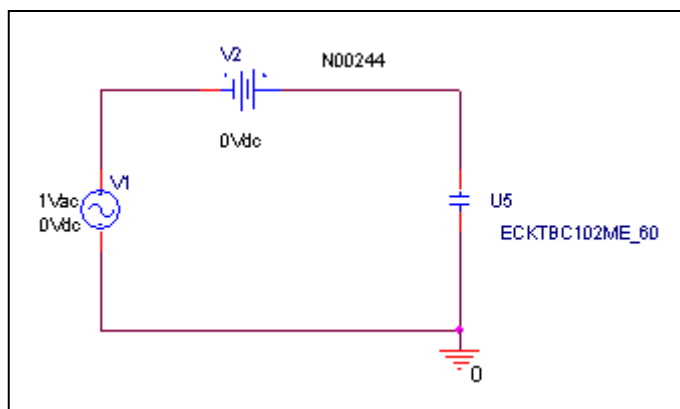


Frequency vs. |Z| Characteristic

Circuit Simulation result



Evaluation Circuit



Simulation result

Frequency (Hz)	IZI (ohm) :Measurement	IZI (ohm) :Simulation	% Error
100	1.91246M	1.9356M	1.2100
1K	192.021k	193.555k	0.7989
10K	19.2976k	19.355k	0.2974
100K	1.93897k	1.9354k	-0.1841
1M	193.59	191.545	-1.0564
10M	1.2469	1.3809	10.7467
100M	187.04	199.372	6.5932

	Measurement	Simulation	%Error
FSRF(Hz)	1.09629	1.1508	4.9722
IZI (ohm)	9.8855M	9.772M	-1.1481