

Device Modeling Report

COMPONENTS: CAPACITOR/CERAMIC
PART NUMBER: ECKTBC102ME
MANUFACTURER: PANASONIC
REMARK: TA=40C



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

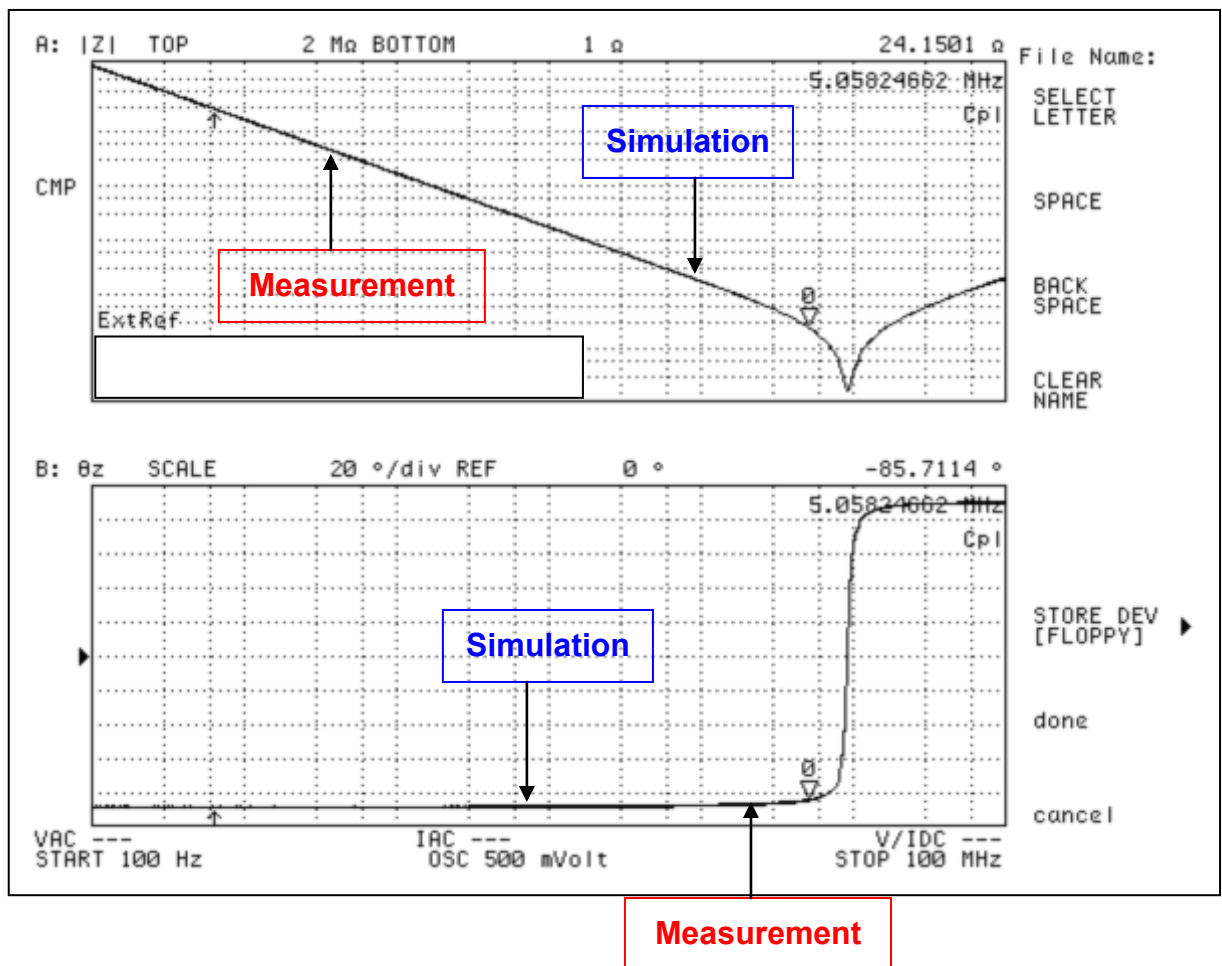
Optimization of Simulation

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

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

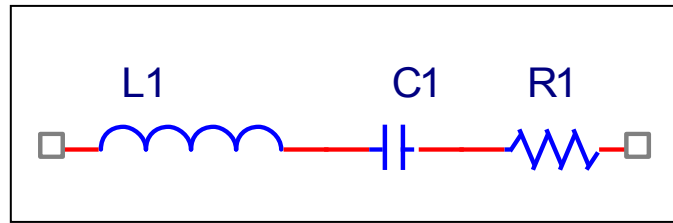
Attention)

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



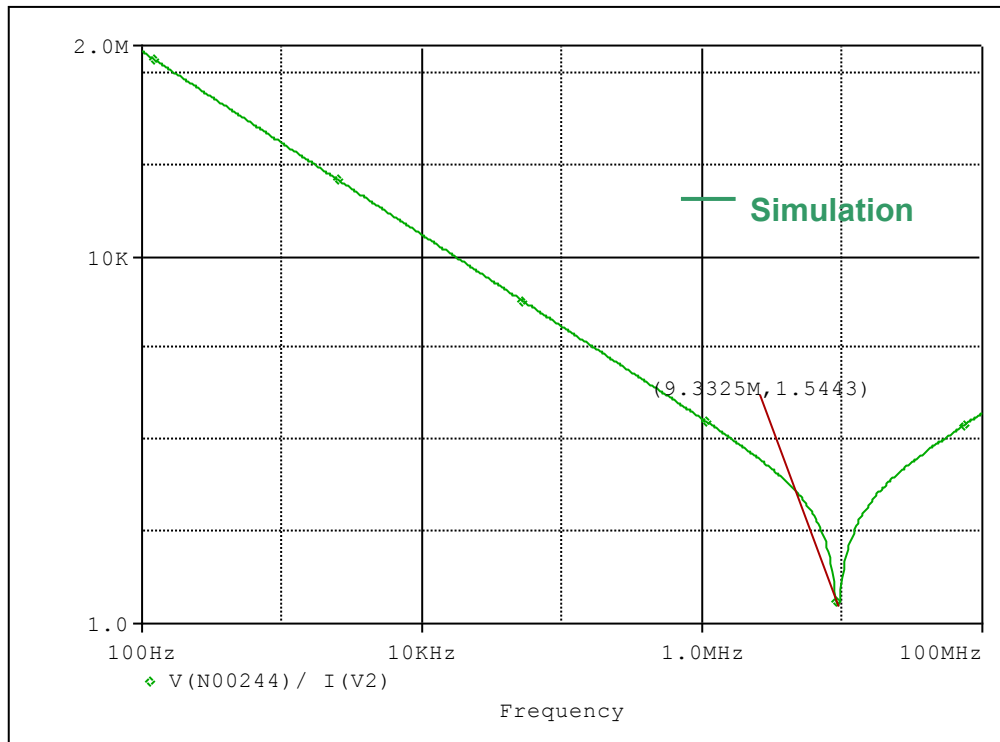
L1	
C1	
R1	

Equivalent circuit

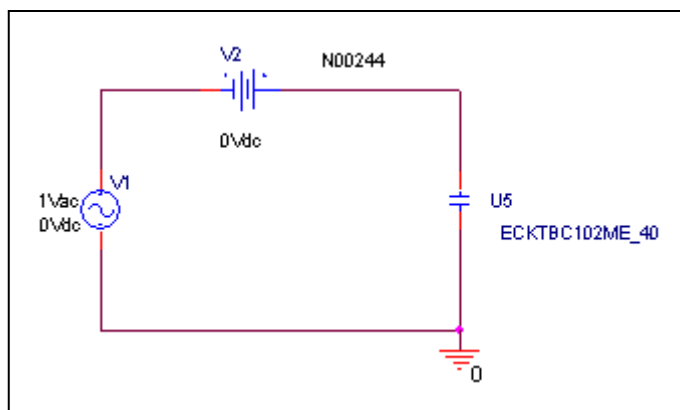


Frequency vs. IZI Characteristic

Circuit Simulation result



Evaluation Circuit



Simulation result

Frequency (Hz)	IZI (ohm) :Measurement	IZI (ohm) :Simulation	% Error
100	1.66935M	1.7231M	3.2198
1K	166.423k	172.308k	3.5362
10K	16.756k	17.231k	2.8348
100K	1.68916k	1.7229k	1.9974
1M	169.625	170.323	0.4115
10M	2.94859	3.1126	5.5623
100M	182.105	197.481	8.4435

	Measurement	Simulation	%Error
FSRF(Hz)	10.2802M	9.3325M	-9.2187
IZI (ohm)	1.59305	1.5443	-3.0602