

Device Modeling Report

COMPONENTS: CAPACITOR/CERAMIC
PART NUMBER: ECKTBC222ME
MANUFACTURER: PANASONIC
REMARK: TA=80C



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

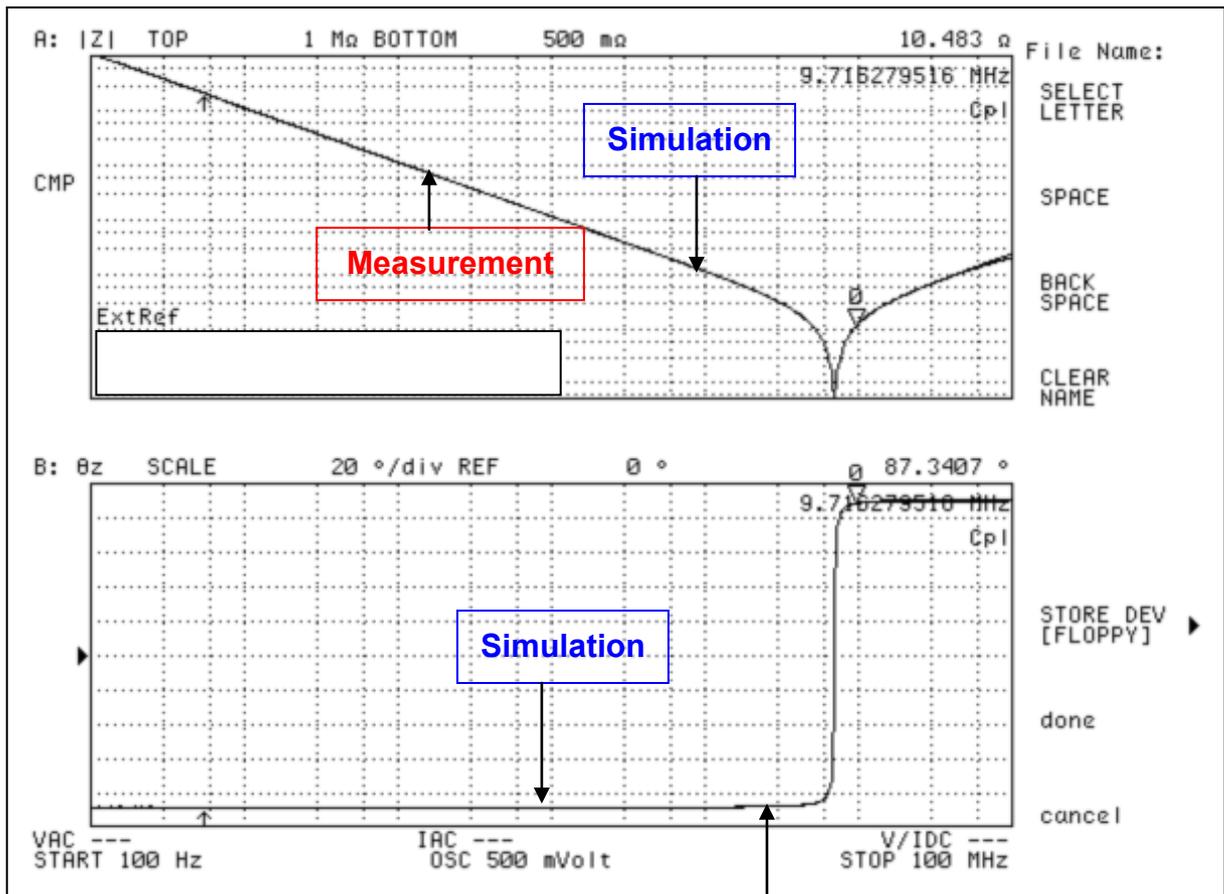
Optimization of Simulation

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

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

Attention)

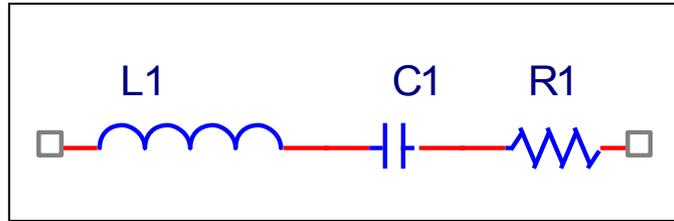
Please use SPICE MODEL within the range from 100Hz to 100M(Hz)



Measurement

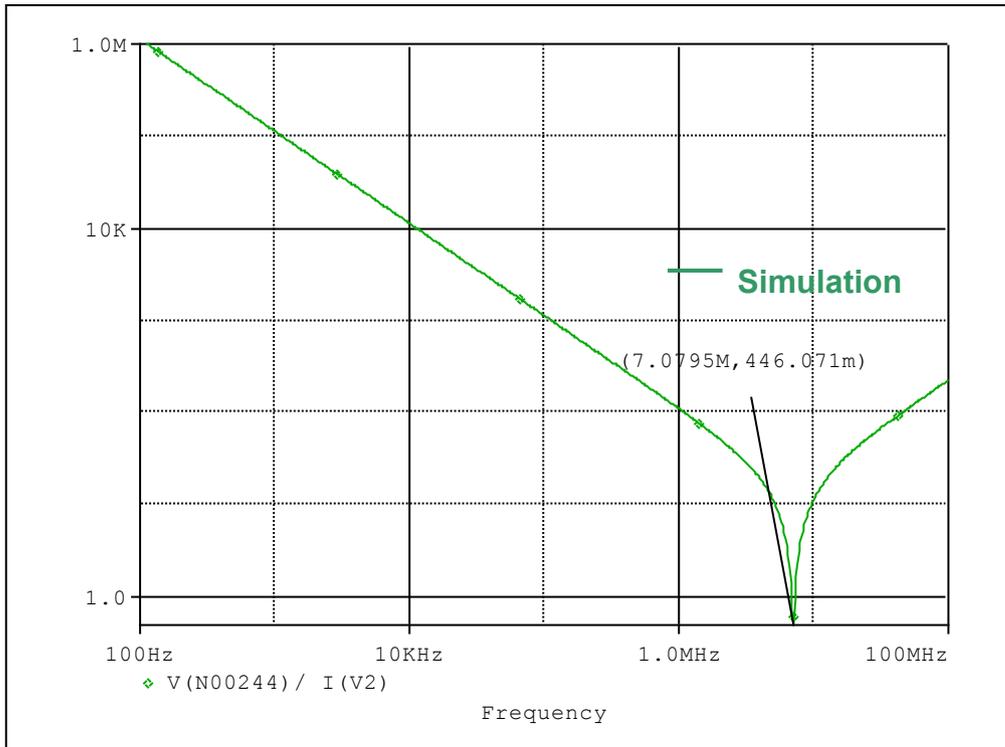
L1	
C1	
R1	

Equivalent circuit

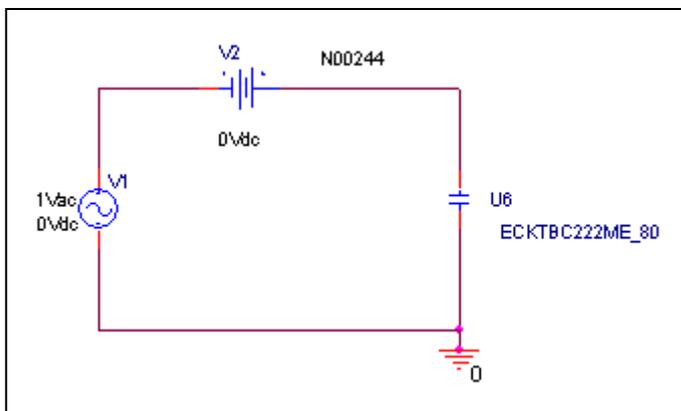


Frequency vs. IZI Characteristic

Circuit Simulation result



Evaluation Circuit



Simulation result

Frequency (Hz)	IZI (ohm) :Measurement	IZI (ohm) :Simulation	% Error
1K	111.025k	113.267k	2.0194
10K	11.2082k	11.327k	1.0599
100K	1.12686k	1.1324k	0.4916
1M	110.992	110.989	-0.0027
10M	11.4573	11.352	-0.9191
100M	194.517	226.774	16.5831

	Measurement	Simulation	%Error
FSRF(Hz)	6.9984M	7.0795M	1.1588
IZI (ohm)	485.722m	446.071m	-8.1633