

# Device Modeling Report

COMPONENTS: CAPACITOR/ ELECTROLYTIC  
PART NUMBER: ECEA0JKG101  
MANUFACTURER: Panasonic  
THERMAL: Ta= 60C (degree)



**Bee Technologies Inc.**

## Theory: Auto Balancing Bridge Method

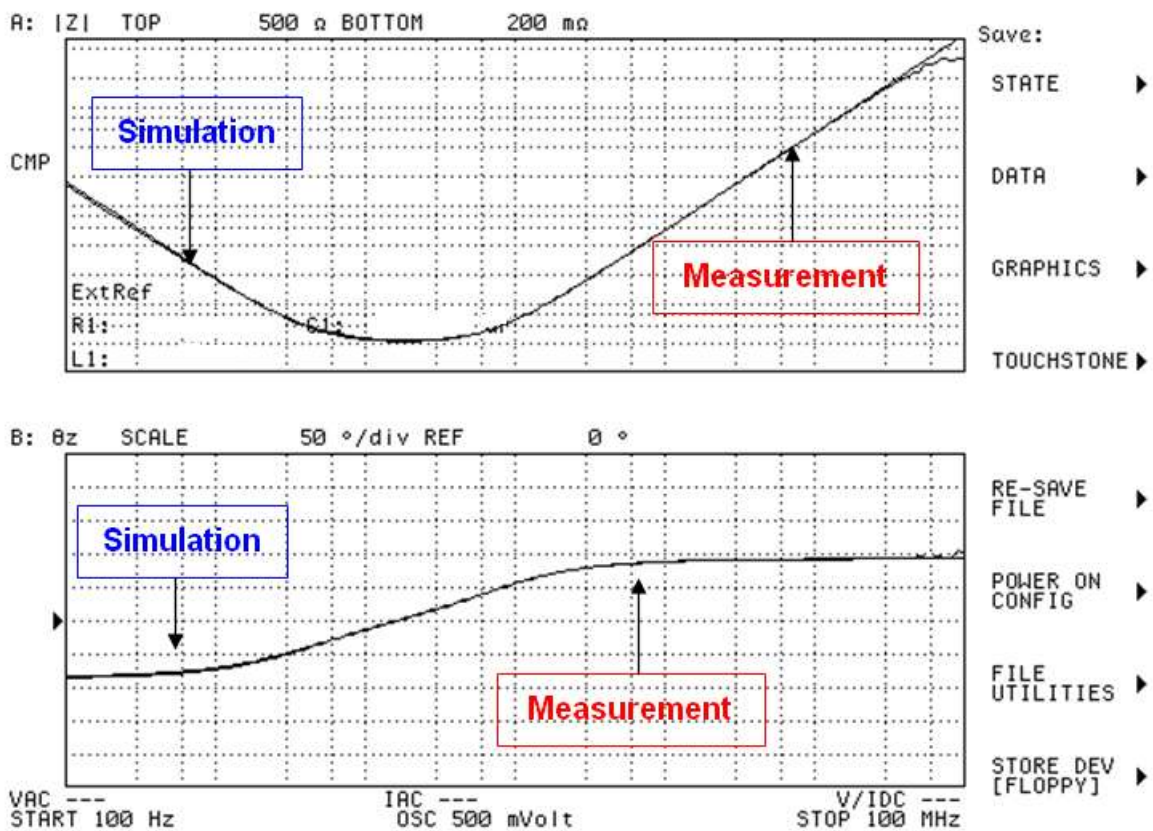
### Optimization of Simulation

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

Frequency vs.  $|Z|$  and Frequency vs.  $\theta z$  Characteristic

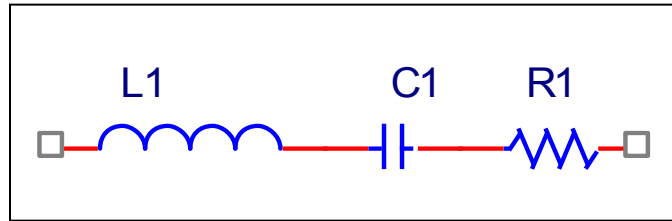
Attention)

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



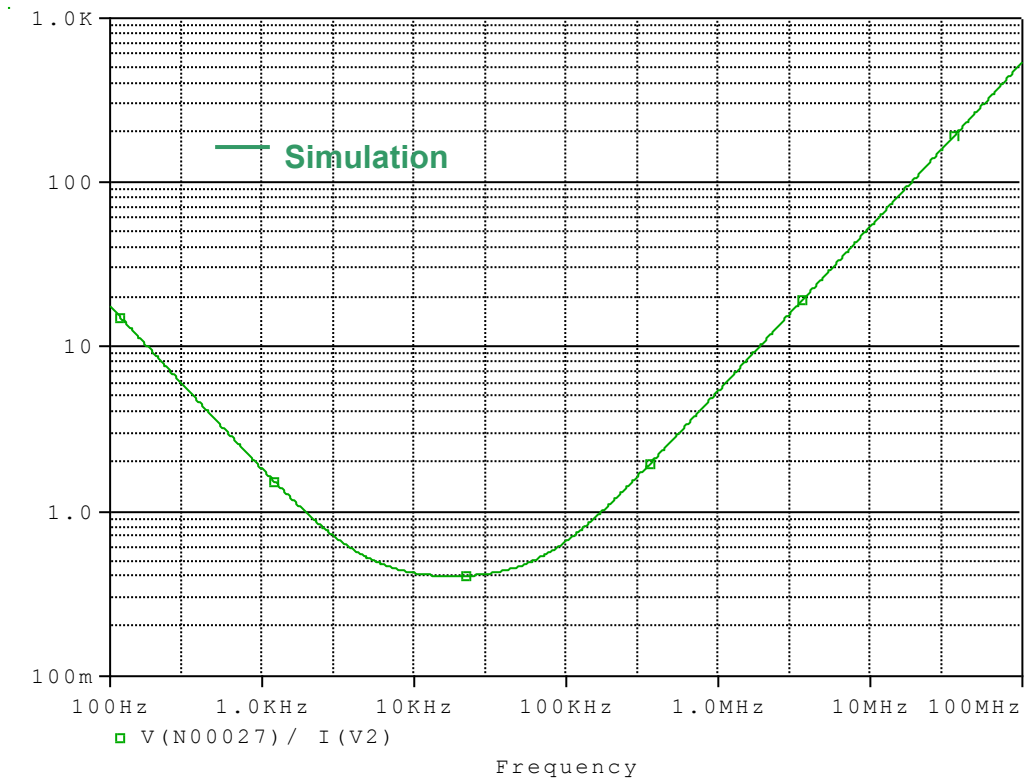
	Measurement	
R1		
C1		
L1		

Equivalent circuit

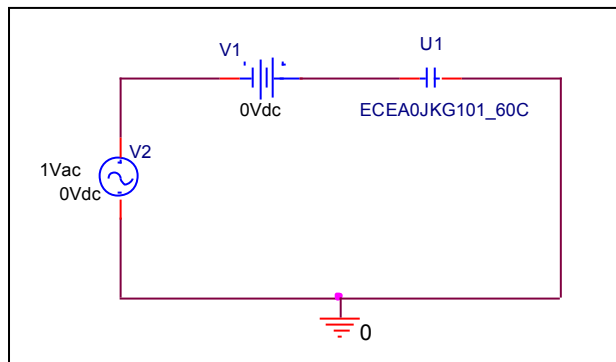


# Frequency vs. IZI Characteristic

## Circuit Simulation result



## Evaluation Circuit



Simulation result

Frequency (Hz)	Z  ( $\Omega$ )		% Error
	Measurement	Simulation	
100	16.327	17.785	8.932
1K	1.704	1.818	6.731
10K	449.716m	424.131m	- 5.689
100K	665.016m	662.135m	- 0.433
1M	5.713	5.424	- 5.060
10M	54.575	54.109	- 0.853