

# Device Modeling Report

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**Bee Technologies Inc.**

# Theory: Auto Balancing Bridge Method

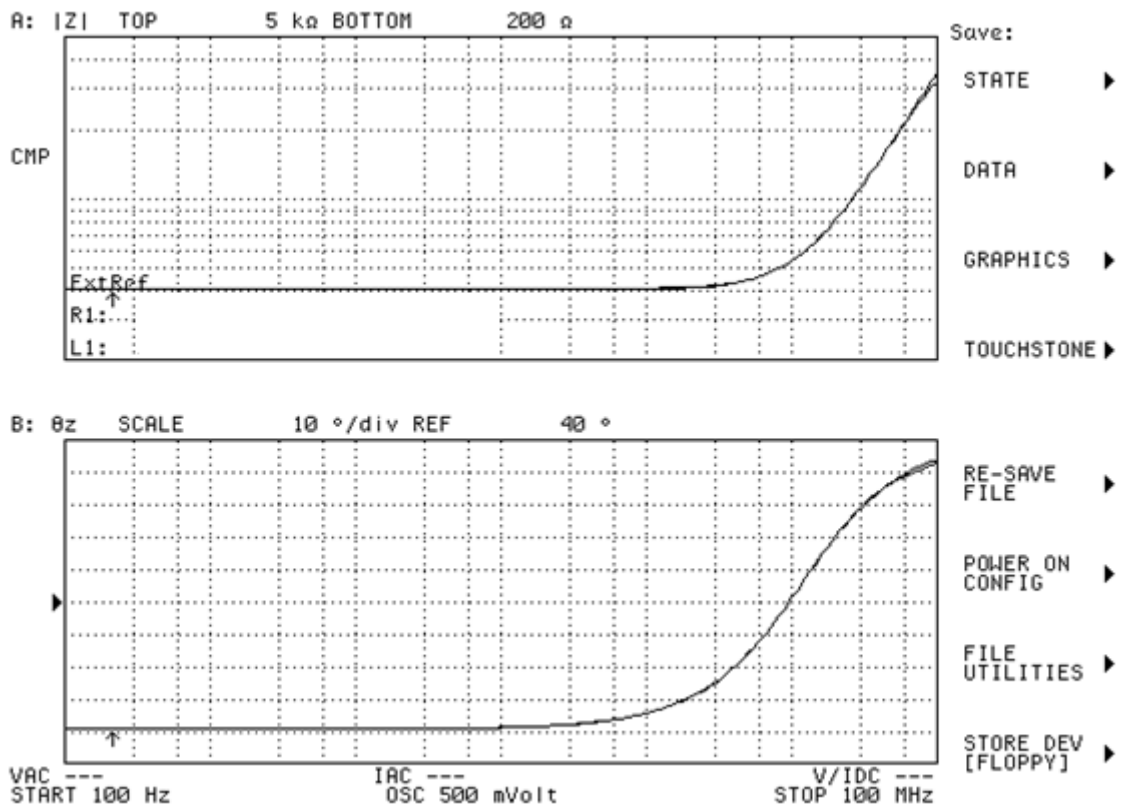
## Optimization of Simulation

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

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

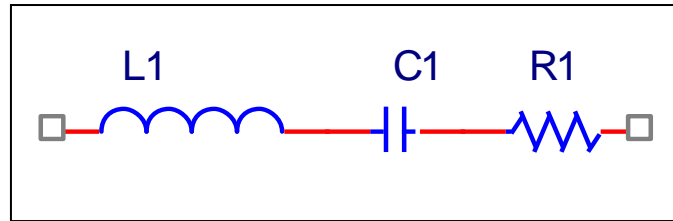
Attention

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



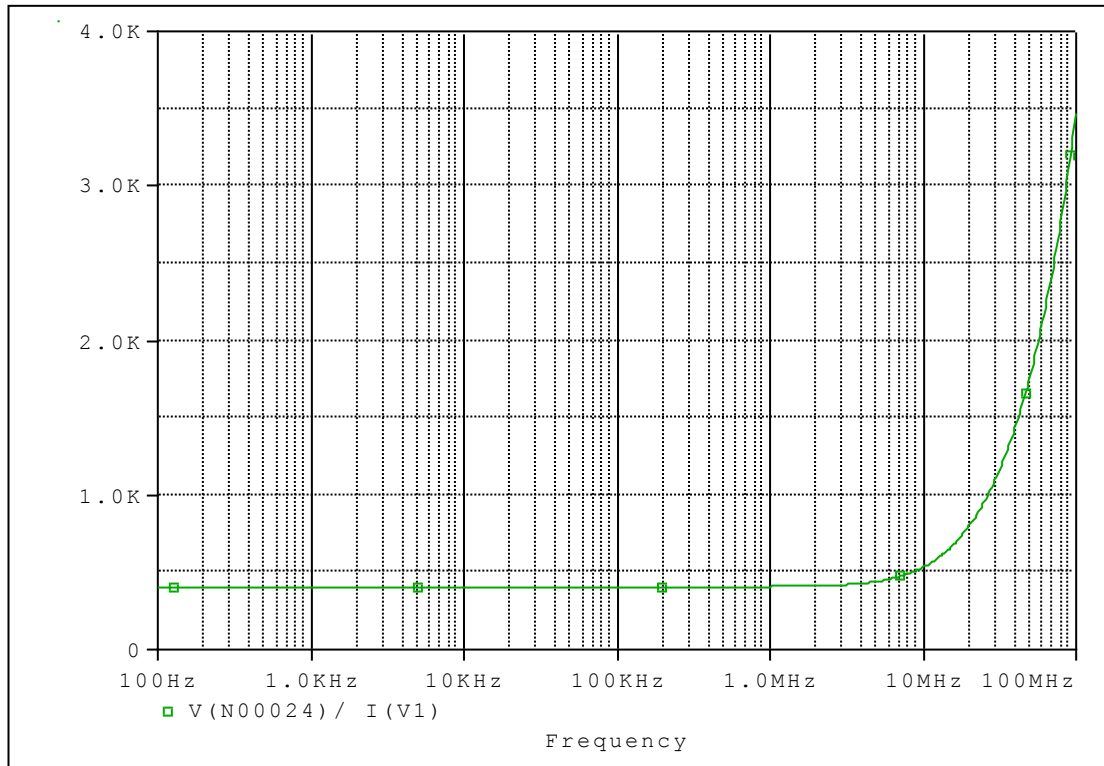
Measurement		
R1		
L1		
C1		

Equivalent circuit

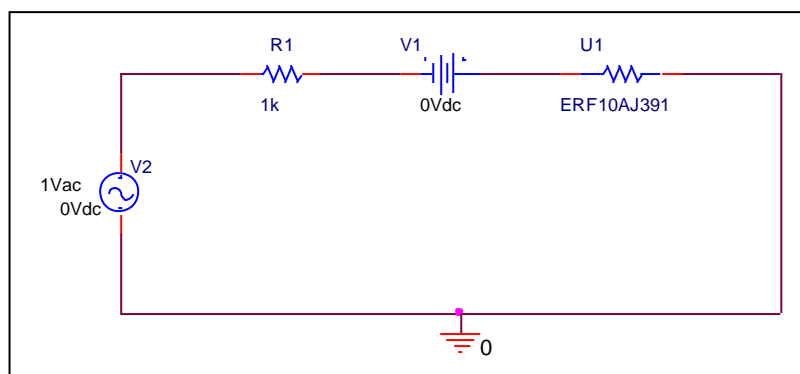


# Frequency vs. |Z| Characteristic

Circuit simulation result



Evaluation Circuit



Simulation Result

<b>Frequency(HZ)</b>	<b> Z (ohm) Measurement</b>	<b> Z (ohm) Circuit Simulation</b>	<b>%Error</b>
<b>100</b>	<b>402.457</b>	<b>406.252</b>	<b>0.943</b>
<b>1K</b>	<b>402.631</b>	<b>406.252</b>	<b>0.899</b>
<b>10K</b>	<b>402.482</b>	<b>406.252</b>	<b>0.937</b>
<b>100K</b>	<b>402.652</b>	<b>406.267</b>	<b>0.898</b>
<b>1M</b>	<b>404.303</b>	<b>407.714</b>	<b>0.844</b>
<b>10M</b>	<b>532.859</b>	<b>532.943</b>	<b>0.016</b>
<b>100M</b>	<b>3.1685</b>	<b>3.4733</b>	<b>9.620</b>