

# Device Modeling Report

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**Bee Technologies Inc.**

# Theory: Auto Balancing Bridge Method

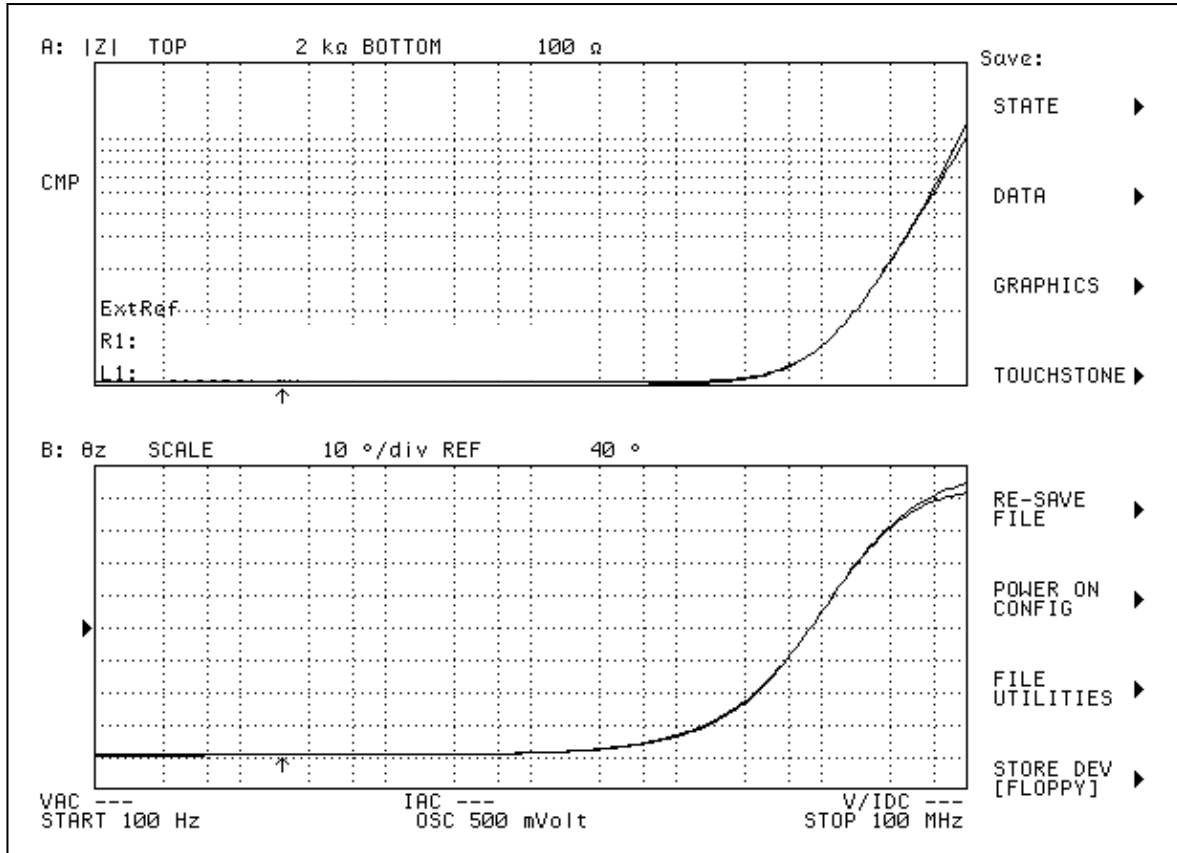
## Optimization of Simulation

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

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

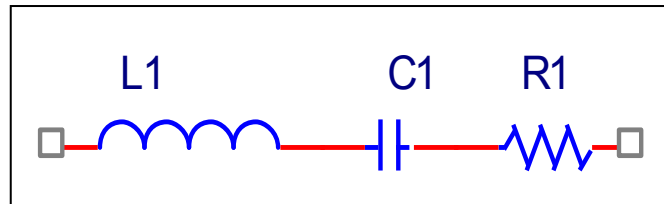
Attention

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



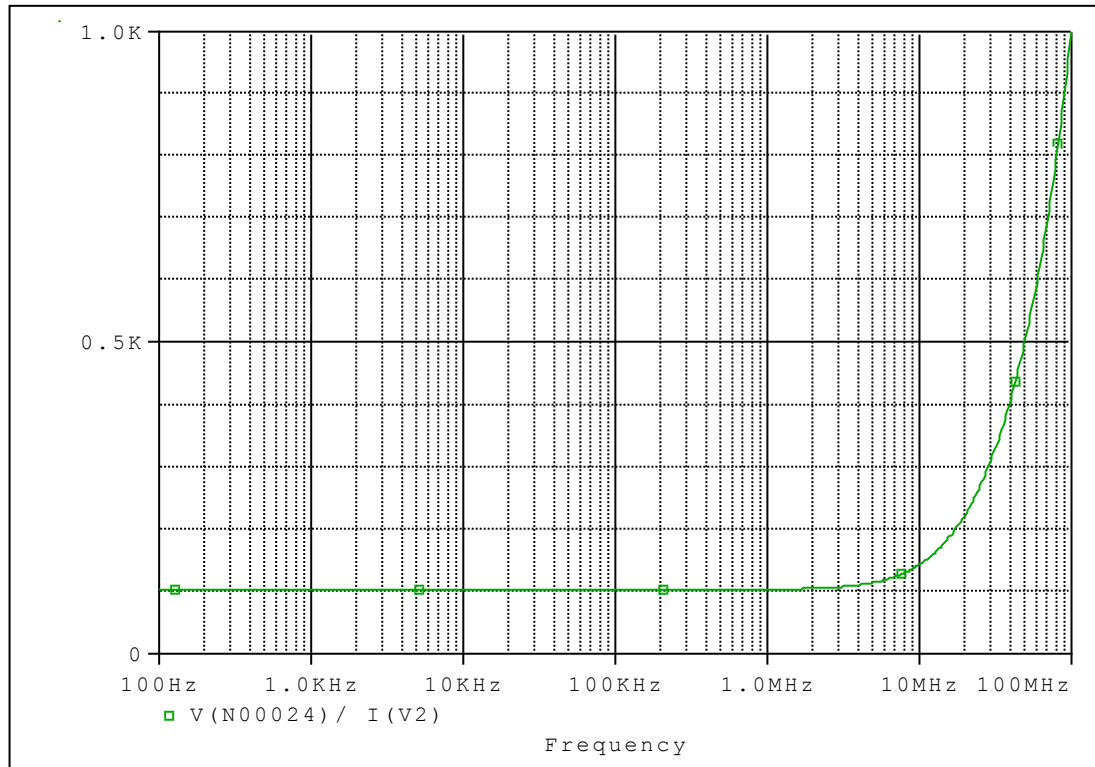
Measurement		
R1		
L1		
C1		

Equivalent circuit

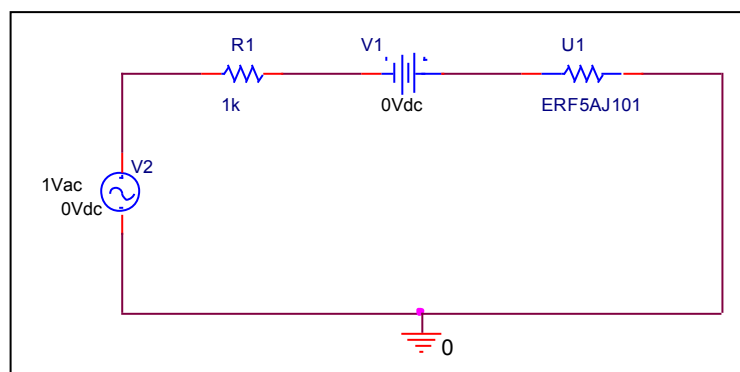


# Frequency vs. |Z| Characteristic

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>100.394</b>	<b>103.08</b>	<b>2.675</b>
<b>1K</b>	<b>100.378</b>	<b>103.076</b>	<b>2.688</b>
<b>10K</b>	<b>100.361</b>	<b>103.076</b>	<b>2.705</b>
<b>100K</b>	<b>100.423</b>	<b>103.081</b>	<b>2.647</b>
<b>1M</b>	<b>101.295</b>	<b>103.553</b>	<b>2.229</b>
<b>10M</b>	<b>143.228</b>	<b>143.138</b>	<b>0.063</b>