

# Device Modeling Report

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**Bee Technologies Inc.**

# Theory: Auto Balancing Bridge Method

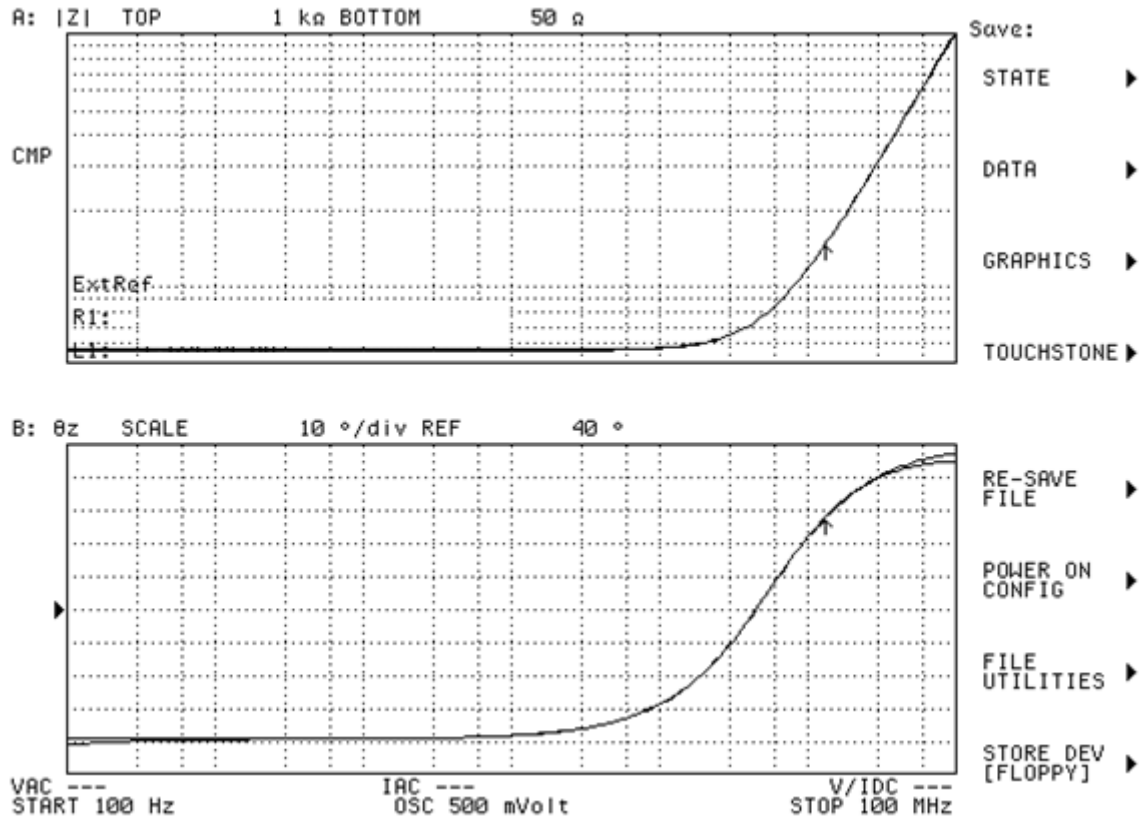
## Optimization of Simulation

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

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

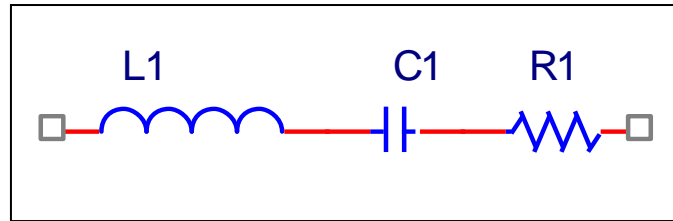
Attention

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



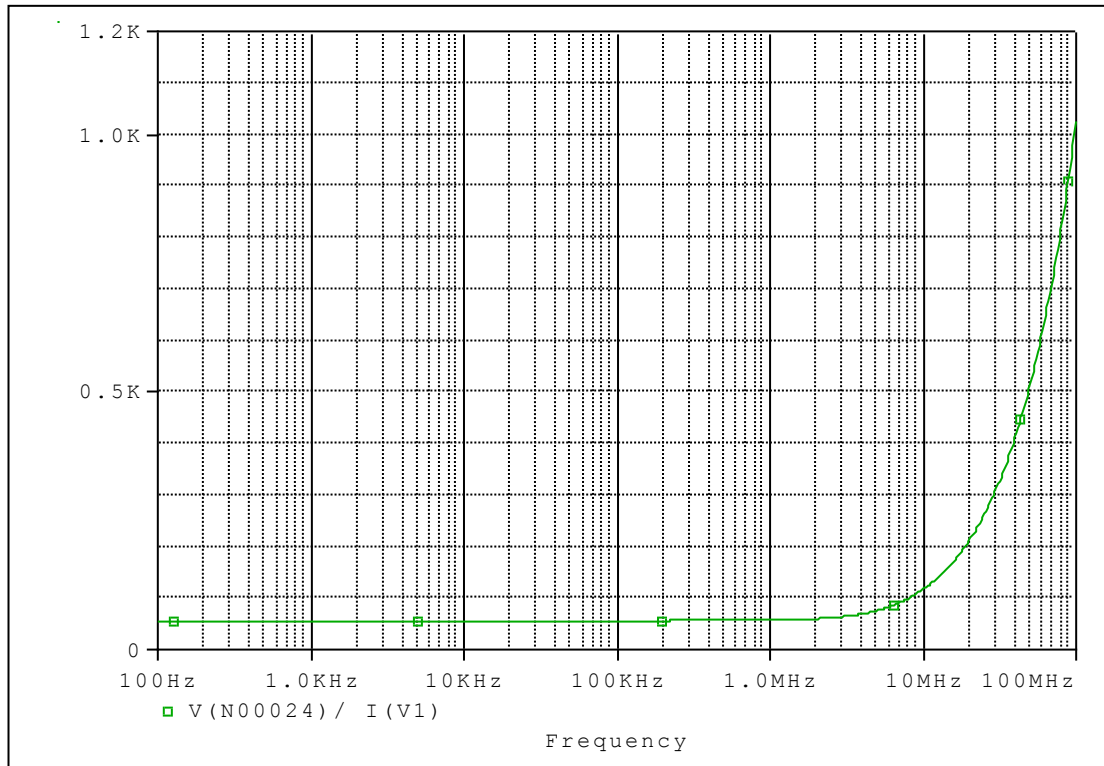
Measurement		
R1		
L1		
C1		

Equivalent circuit

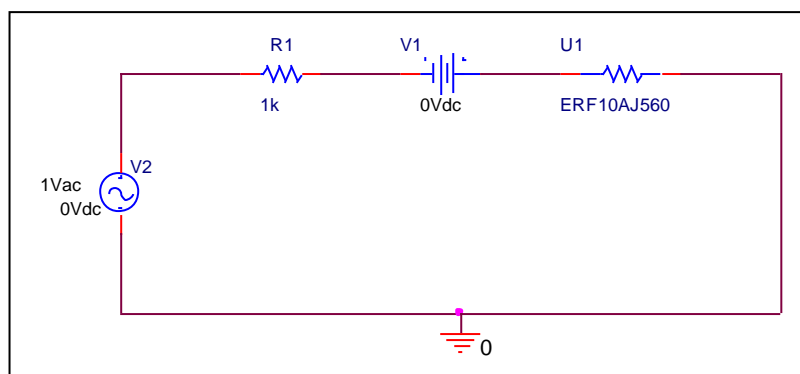


# Frequency vs. |Z| Characteristic

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>55.827</b>	<b>56.293</b>	<b>0.835</b>
<b>1K</b>	<b>55.839</b>	<b>56.226</b>	<b>0.693</b>
<b>10K</b>	<b>55.84</b>	<b>56.265</b>	<b>0.761</b>
<b>100K</b>	<b>55.834</b>	<b>56.274</b>	<b>0.788</b>
<b>1M</b>	<b>56.856</b>	<b>57.186</b>	<b>0.580</b>
<b>10M</b>	<b>116.678</b>	<b>116.652</b>	<b>0.022</b>
<b>100M</b>	<b>983.511</b>	<b>1023</b>	<b>4.015</b>