

# Device Modeling Report

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MANUFACTURER:  
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**Bee Technologies Inc.**

## Theory: Auto Balancing Bridge Method

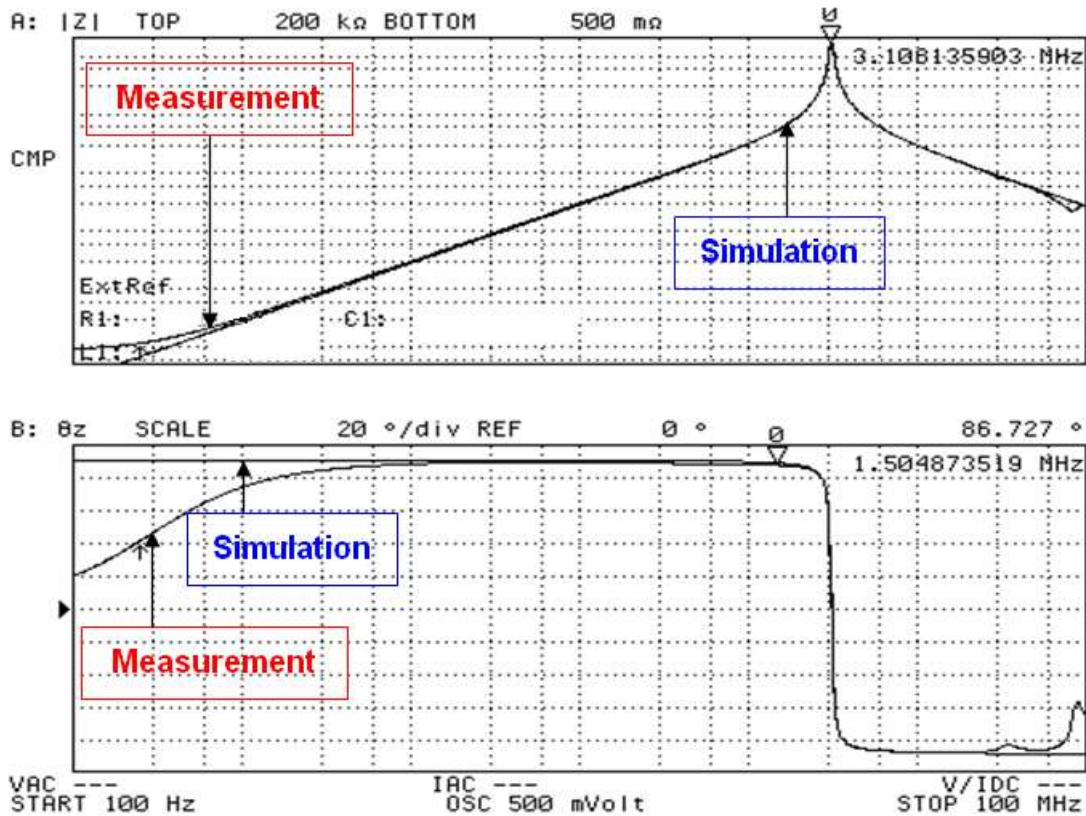
### Optimization of Simulation

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

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

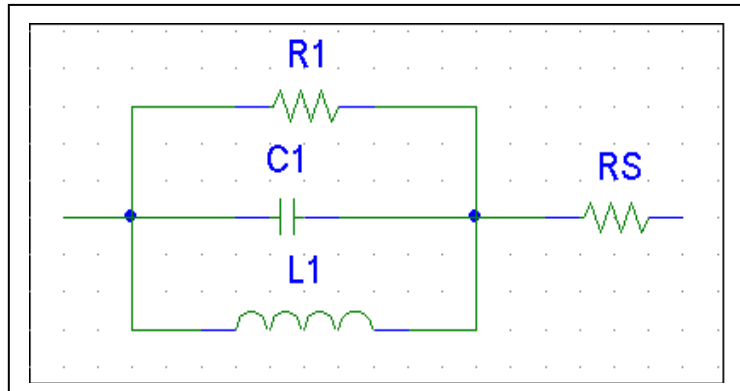
Attention)

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



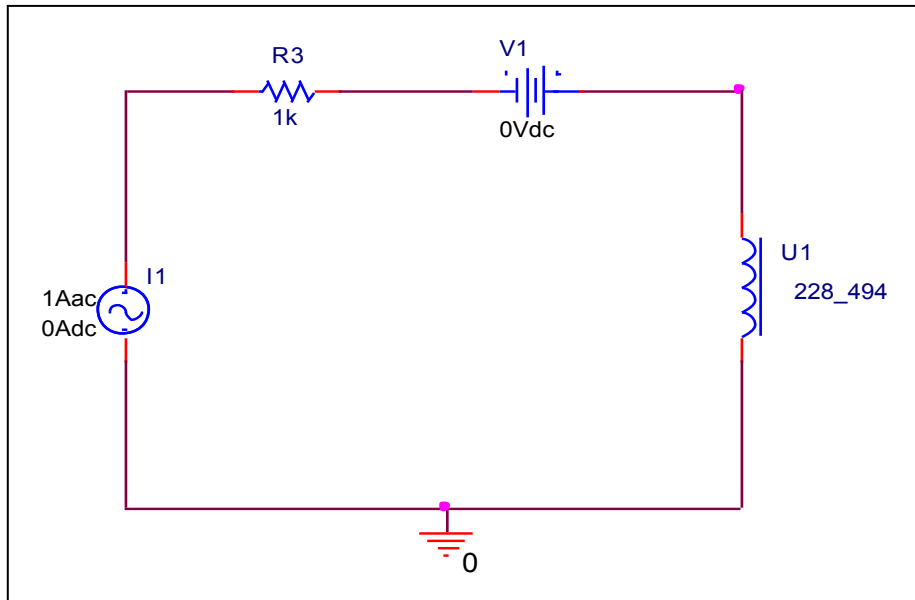
L1	
C1	
R1	

Equivalent circuit

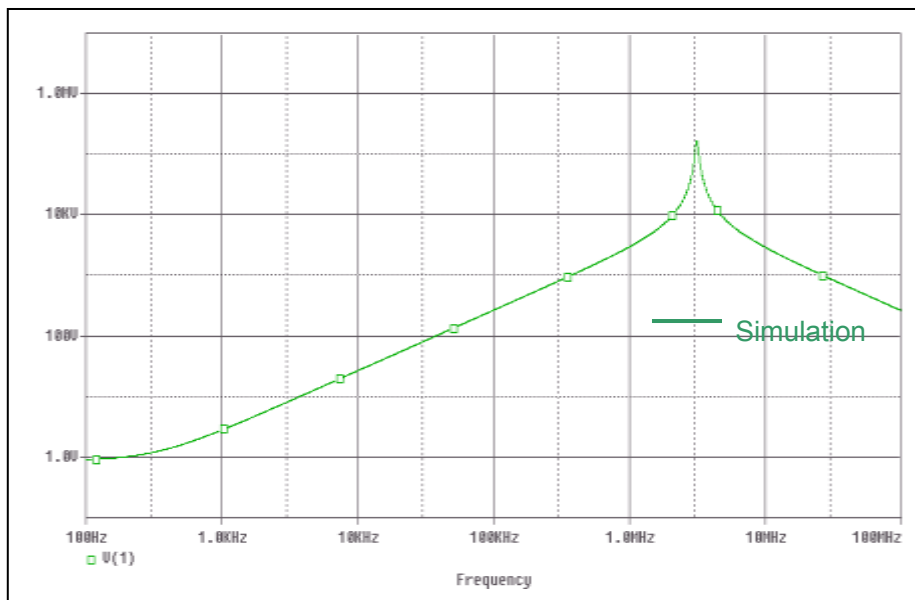


# Frequency vs. |Z| Characteristic

## Evaluation circuit



## Simulation result



Comparison Table

Frequency (Hz)	Z (ohm) : Measurement	Z (ohm) : Simulation	% Error
<b>100</b>	912.273 m	902.509 m	1.070
<b>1M</b>	2.98406 k	2.9589 k	0.843
<b>10M</b>	2.89351 k	2.8916 k	0.066
<b>100M</b>	257.249	261.082	-1.490

	Measurement	Simulation	% Error
<b>F<sub>SRF</sub> (Hz)</b>	3.162 M	3.1606 M	0.044
<b> Z  (ohm), at F<sub>SRF</sub></b>	166.192 k	164.539 k	0.995