

# Device Modeling Report

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MANUFACTURER:  
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**Bee Technologies Inc.**

## Theory: Auto Balancing Bridge Method

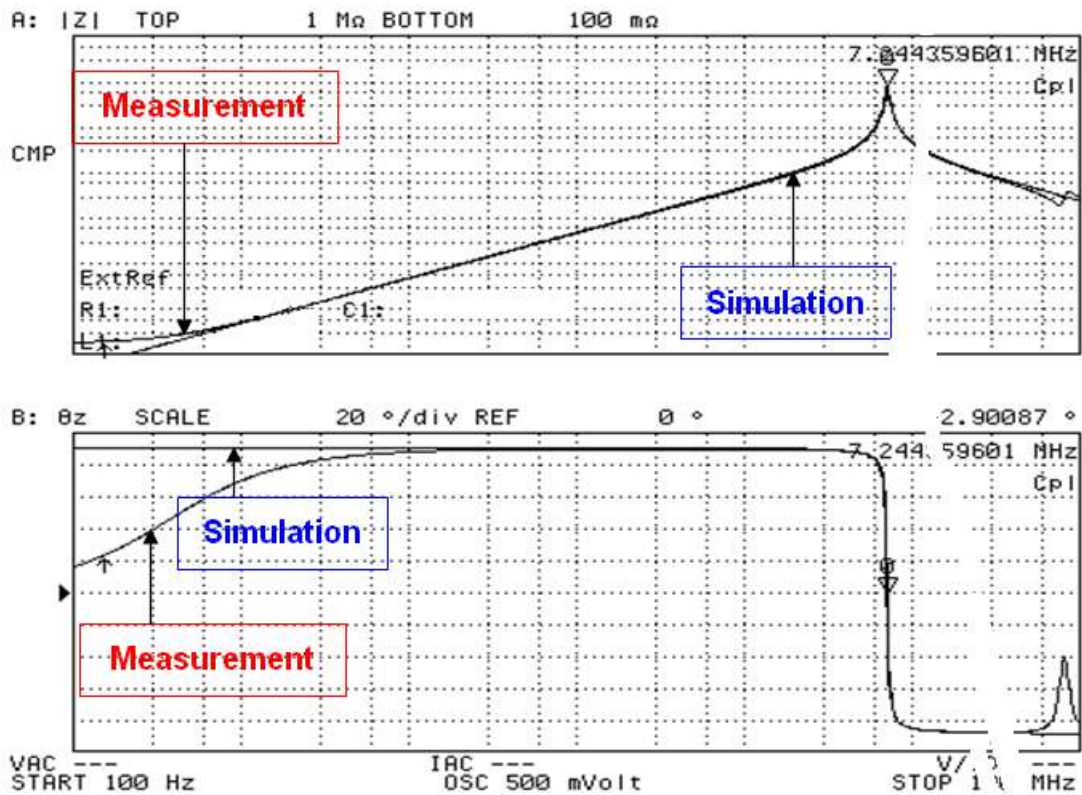
### Optimization of Simulation

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

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

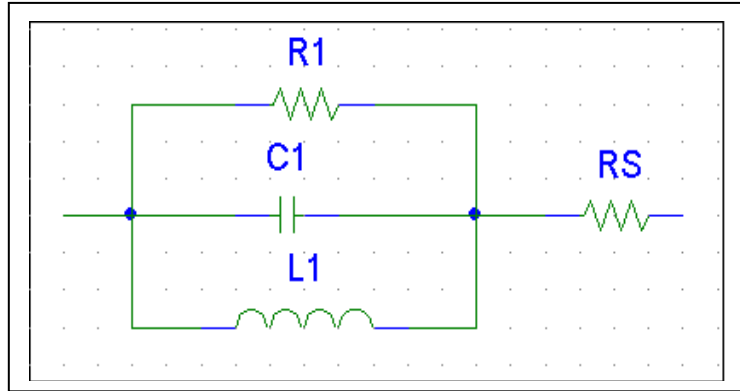
Attention)

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



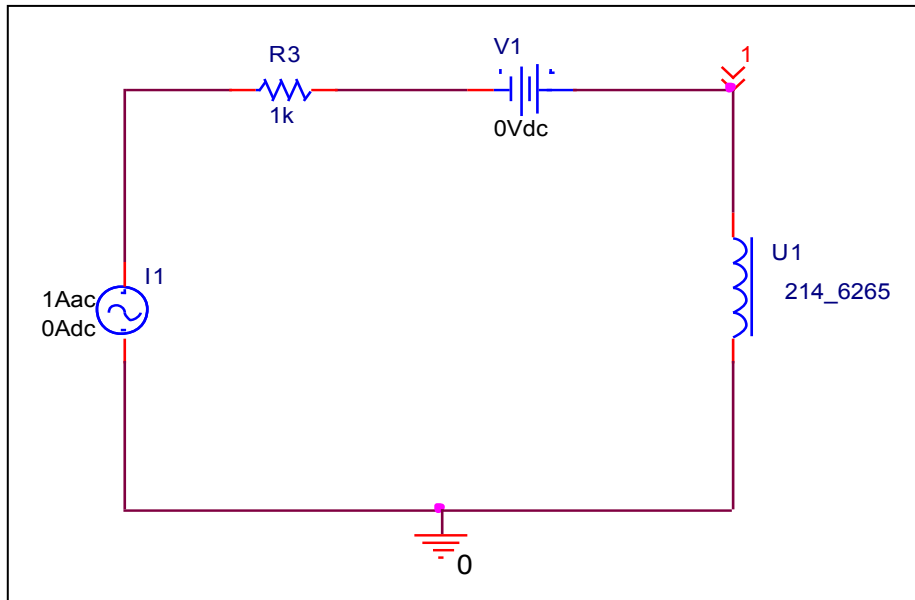
L1	
C1	
R1	

Equivalent circuit

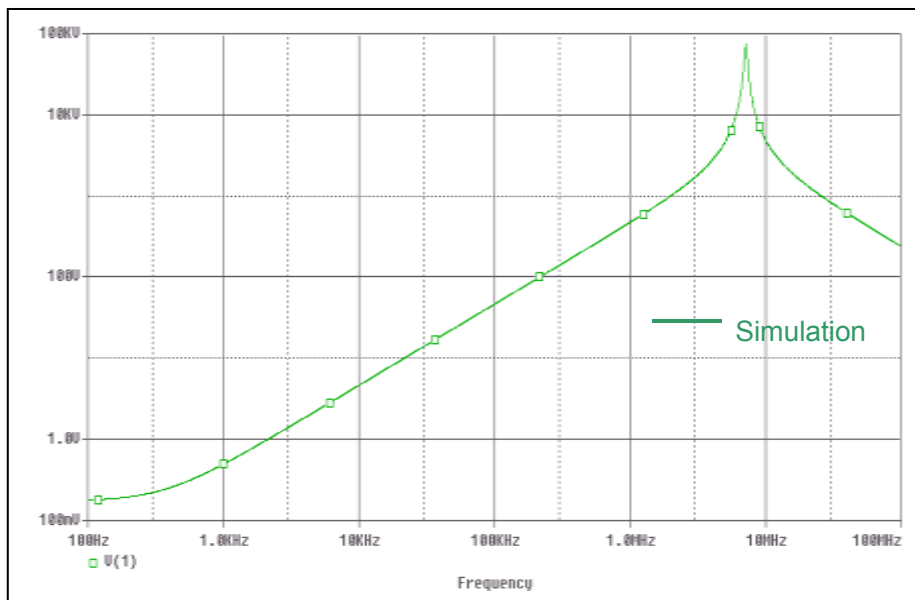


# Frequency vs. |Z| Characteristic

## Evaluation circuit



## Simulation result



Comparison Table

Frequency (Hz)	Z (ohm) : Measurement	Z (ohm) : Simulation	% Error
<b>100</b>	180.103 m	178.547 m	0.864
<b>1K</b>	494.23 m	495.885 m	-0.335
<b>10K</b>	4.54234	4.6528	-2.432
<b>100K</b>	44.7199	46.5058	-3.994
<b>10M</b>	4.67209 k	4.7889 k	-2.500

	Measurement	Simulation	% Error
<b>F<sub>SRF</sub> (Hz)</b>	7.244 M	7.144 M	1.380
<b> Z  (ohm), at F<sub>SRF</sub></b>	74.5934 k	74.978 k	-0.516