

# Device Modeling Report

COMPONENTS: CHOKE COIL  
PART NUMBER: 214-6237  
MANUFACTURER:  
WURTH ELEKTRONIK GmbH & CO.KG



**Bee Technologies Inc.**

## Theory: Auto Balancing Bridge Method

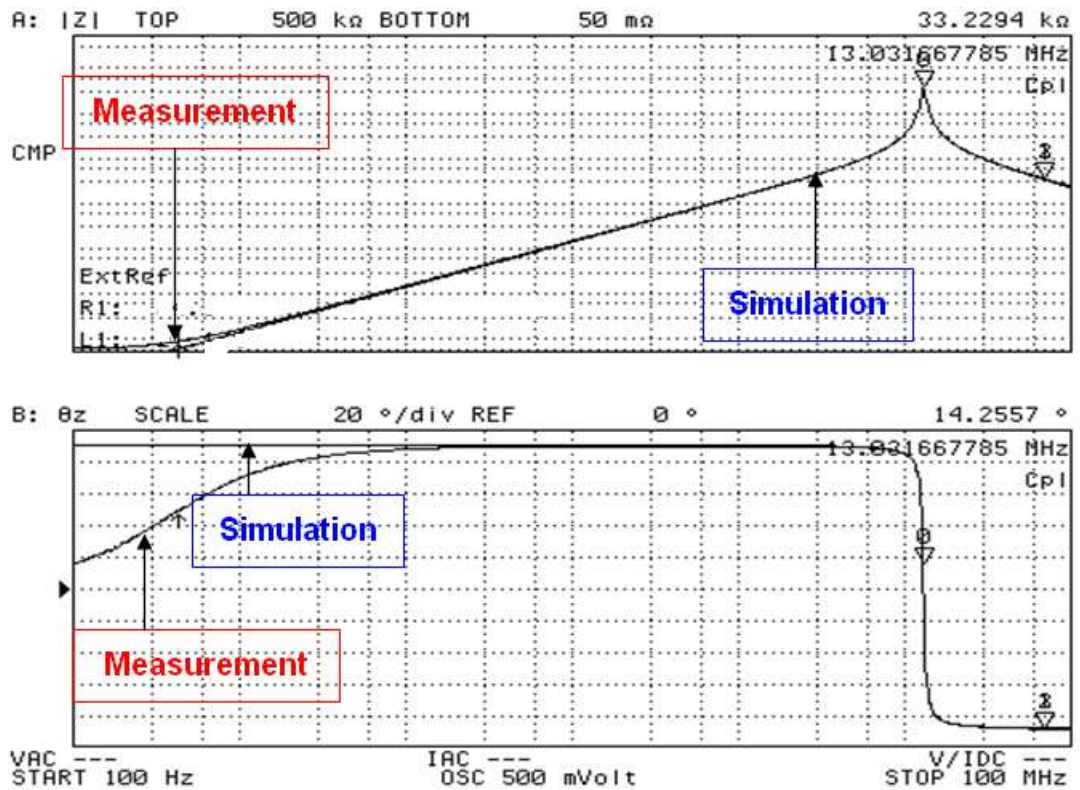
### Optimization of Simulation

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

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

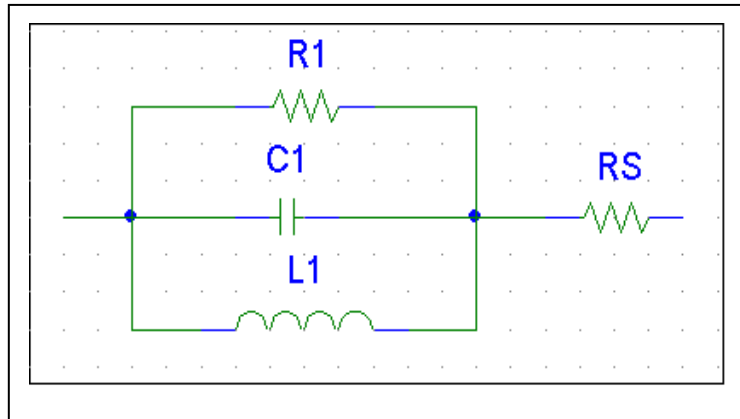
Attention)

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



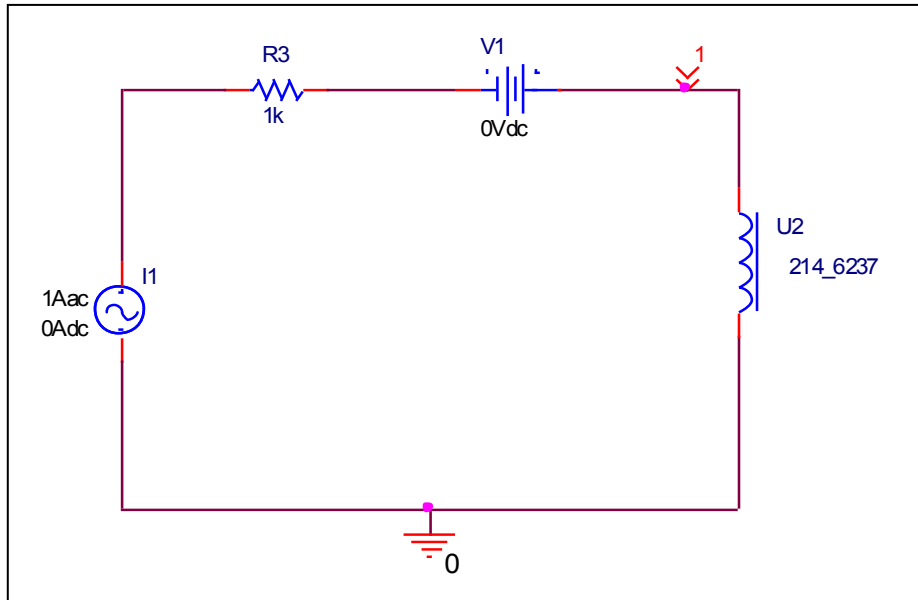
L1	
C1	
R1	

Equivalent circuit

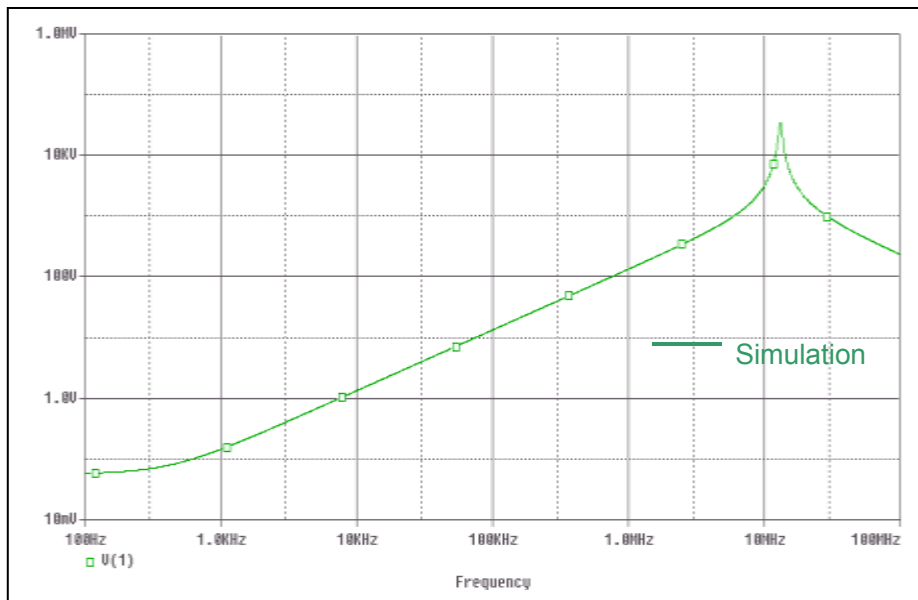


## Frequency vs. |Z| Characteristic

### Evaluation circuit



### Simulation result



Comparison Table

Frequency (Hz)	Z (ohm) : Measurement	Z (ohm) : Simulation	% Error
<b>100</b>	57.6326	58.222	-1.023
<b>100K</b>	14.017	13.308	5.058
<b>1M</b>	135.414	133.847	1.157
<b>10M</b>	3.16786 k	3.1636 k	0.134

	Measurement	Simulation	% Error
<b>F<sub>SRF</sub> (Hz)</b>	13.032 M	13.103 M	-0.545
<b> Z  (ohm), at F<sub>SRF</sub></b>	33.2124 k	34.111 k	-2.706