

# **Device Modeling Report**

COMPONENTS : CHOKE COIL  
PART NUMBER : 8RHB  
VALUE : 10 uH  
CURRENT MAX : 2.3 A  
MANUFACTURER : TOKO



**Bee Technologies Inc.**

## Theory: Auto Balancing Bridge Method

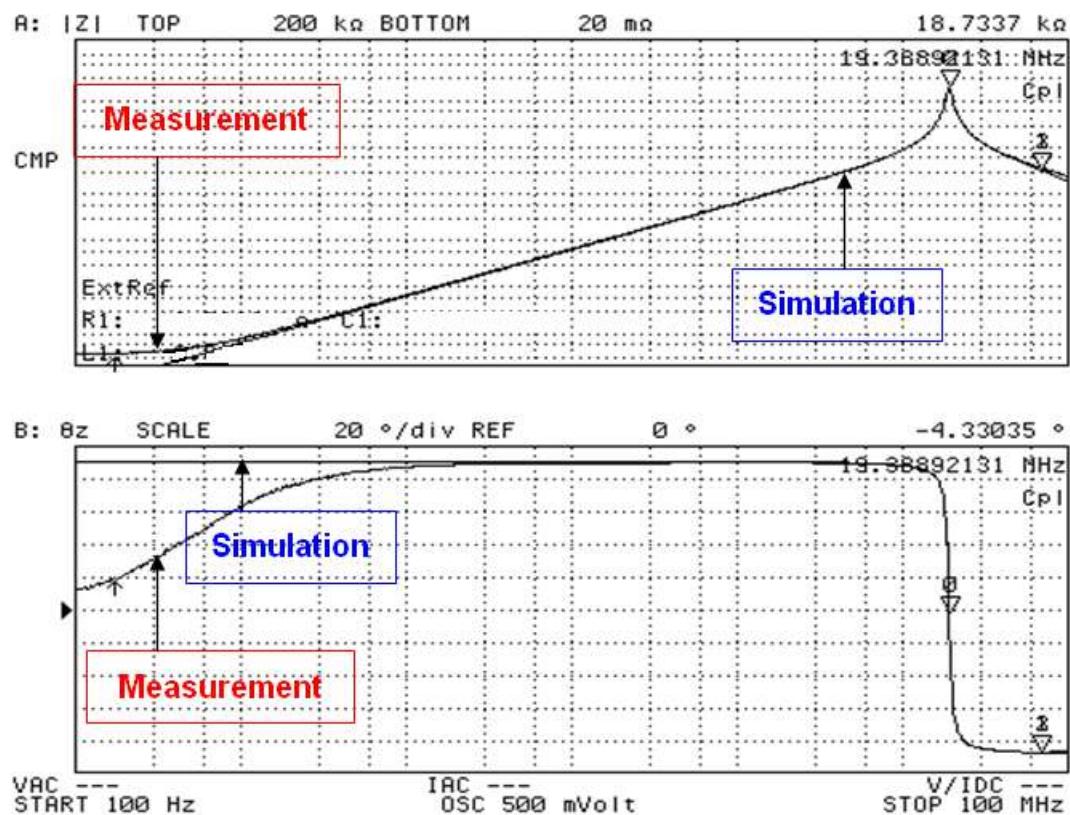
### Optimization of Simulation

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

Frequency vs. |Z| and Frequency vs.  $\theta_z$  Characteristic

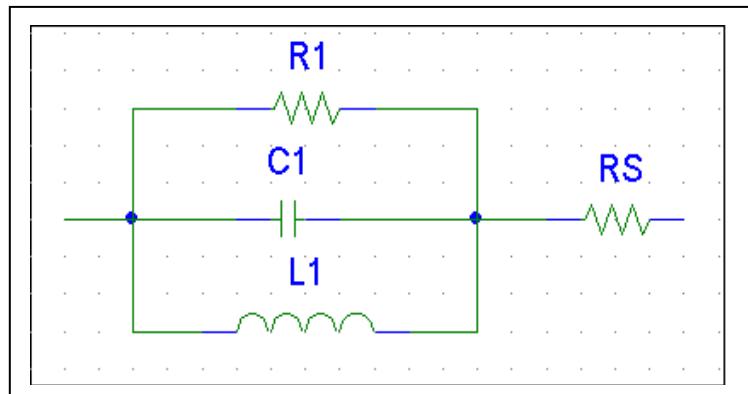
Attention)

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



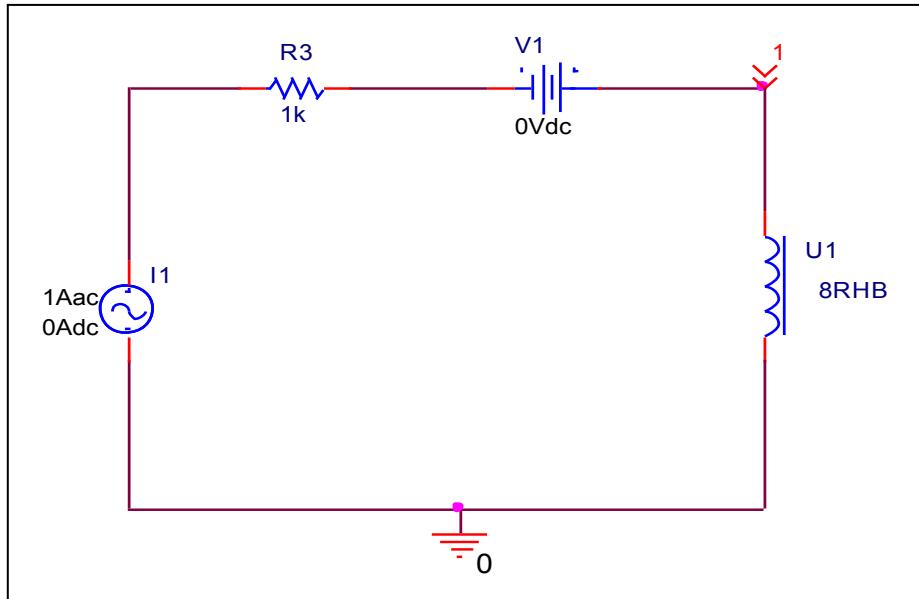
L1	
C1	
R1	

**Equivalent circuit**

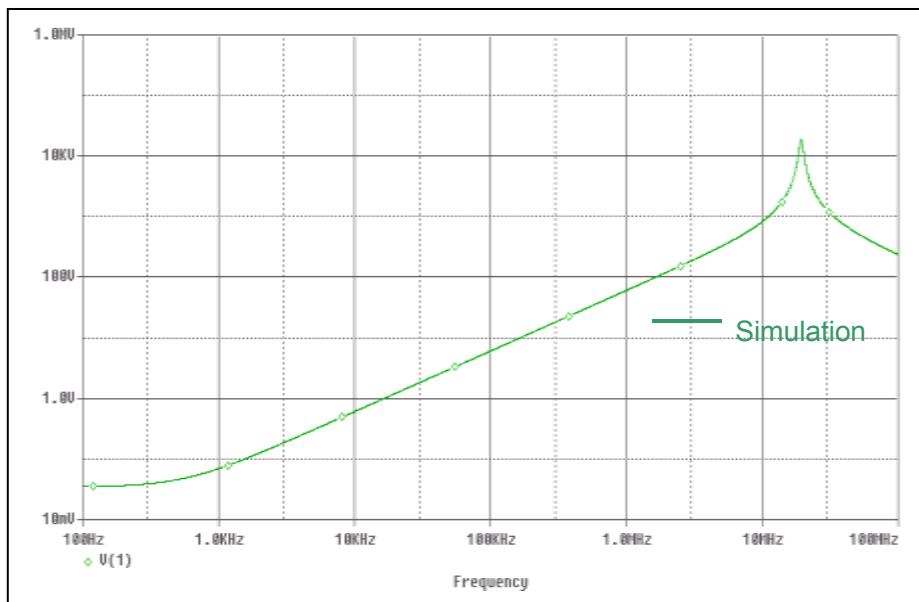


## Frequency vs. |Z| Characteristic

Evaluation circuit



Simulation result



**Comparison Table**

<b>Frequency (Hz)</b>	<b><math> Z (\text{ohm}) : \text{Measurement}</math></b>	<b><math> Z (\text{ohm}) : \text{Simulation}</math></b>	<b>% Error</b>
<b>100</b>	33.8191 m	34.931 m	-3.288
<b>100K</b>	6.32555	6.0512	4.337
<b>1M</b>	61.938	60.672	2.044
<b>10M</b>	833.269	838.075	-0.577

	<b>Measurement</b>	<b>Simulation</b>	<b>% Error</b>
<b><math>F_{\text{SRF}}(\text{Hz})</math></b>	19.389 M	19.364 M	0.129
<b><math> Z  (\text{ohm}), \text{at } F_{\text{SRF}}</math></b>	18.7211 k	18.753 k	-0.170