

# Device Modeling Report

COMPONENTS : CHOKE COIL  
PART NUMBER : 8RHB  
VALUE : 100  $\mu$ H  
CURRENT MAX : 1 A  
MANUFACTURER : TOKO



**Bee Technologies Inc.**

## Theory: Auto Balancing Bridge Method

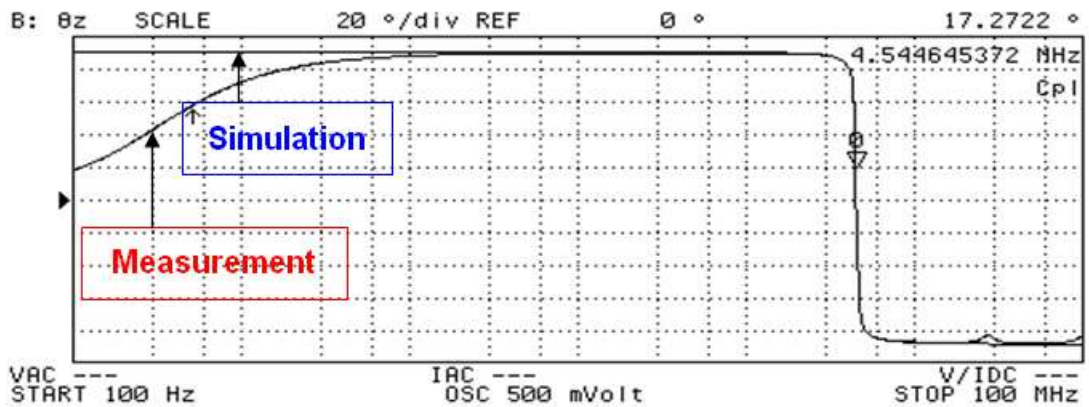
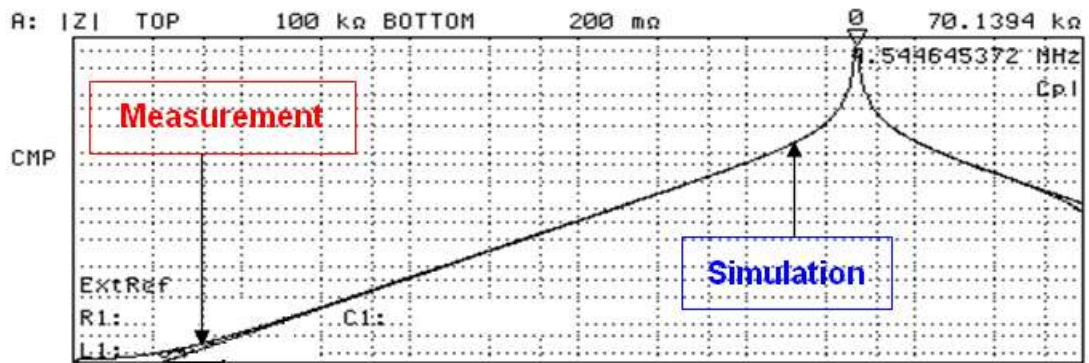
### Optimization of Simulation

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

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

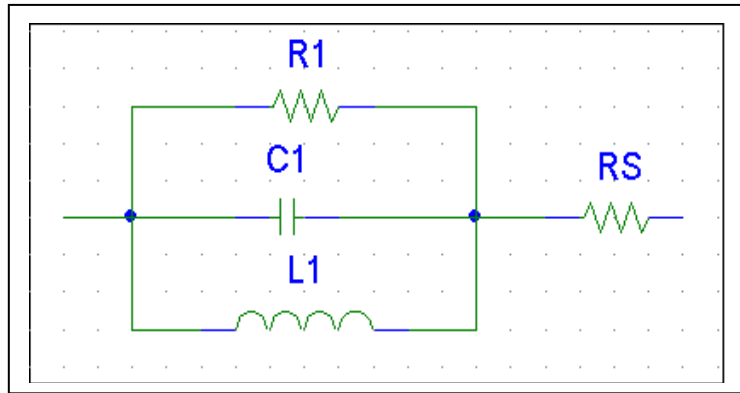
Attention)

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



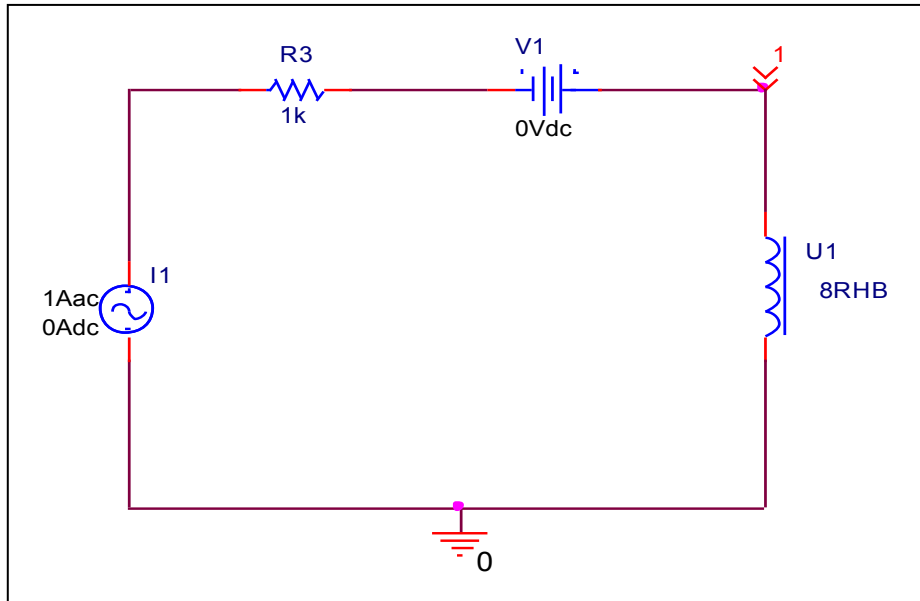
L1	
C1	
R1	

Equivalent circuit

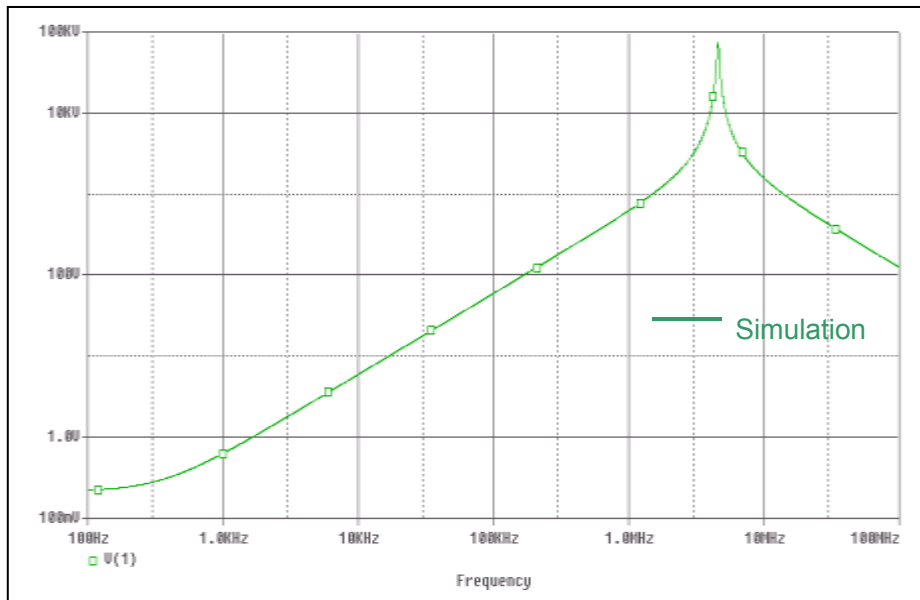


## Frequency vs. |Z| Characteristic

### Evaluation circuit



### Simulation result



Comparison Table

Frequency (Hz)	Z (ohm) : Measurement	Z (ohm) : Simulation	% Error
<b>100</b>	222.251 m	222.338 m	-0.039
<b>10K</b>	6.23879	5.9538	4.568
<b>100K</b>	61.2142	59.186	3.313
<b>1M</b>	625.596	624.873	0.116
<b>10M</b>	1.56849 k	1.5711 k	-0.166

	Measurement	Simulation	% Error
<b>F<sub>SRF</sub> (Hz)</b>	4.545 M	4.575 M	-0.660
<b> Z  (ohm), at F<sub>SRF</sub></b>	70.139 k	73.488 k	-4.775