Device Modeling Report

COMPONENTS: INDUCTOR
PART NUMBER: 22R474
MANUFACTURER: Newport Components

Bee Technologies Inc.

Theory: Auto Balancing Bridge Method
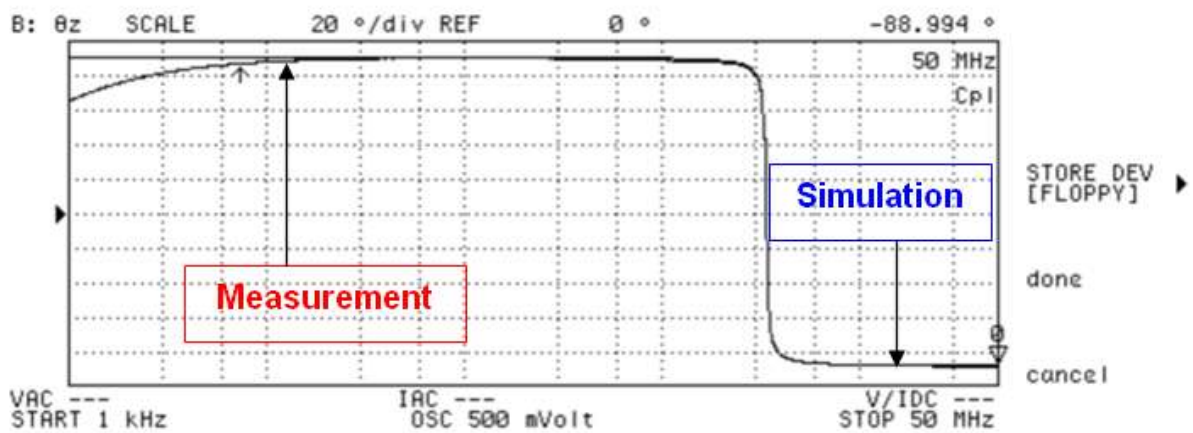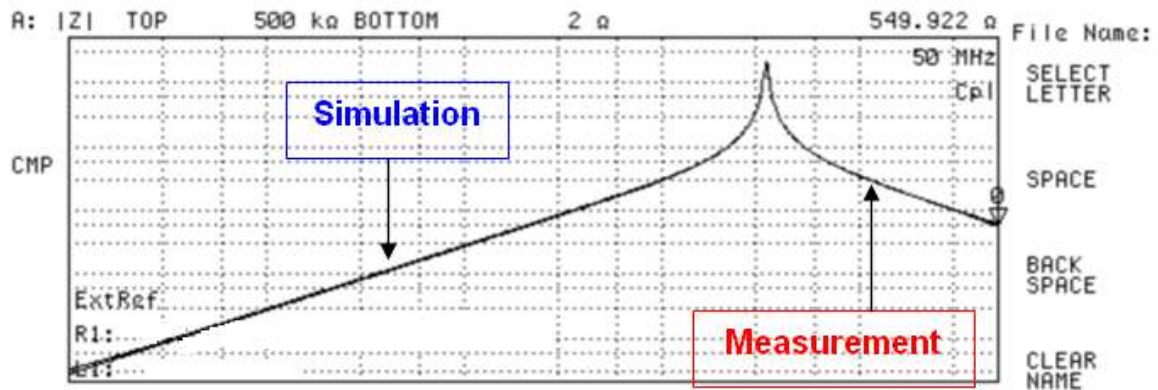
Optimization of Simulation
Range of adjustment Frequency:1K to 50M(Hz)
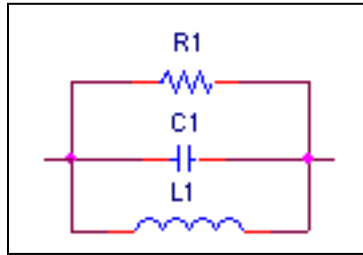Frequency vs.|Z| and Frequency vs. θ z Characteristic

Attention)
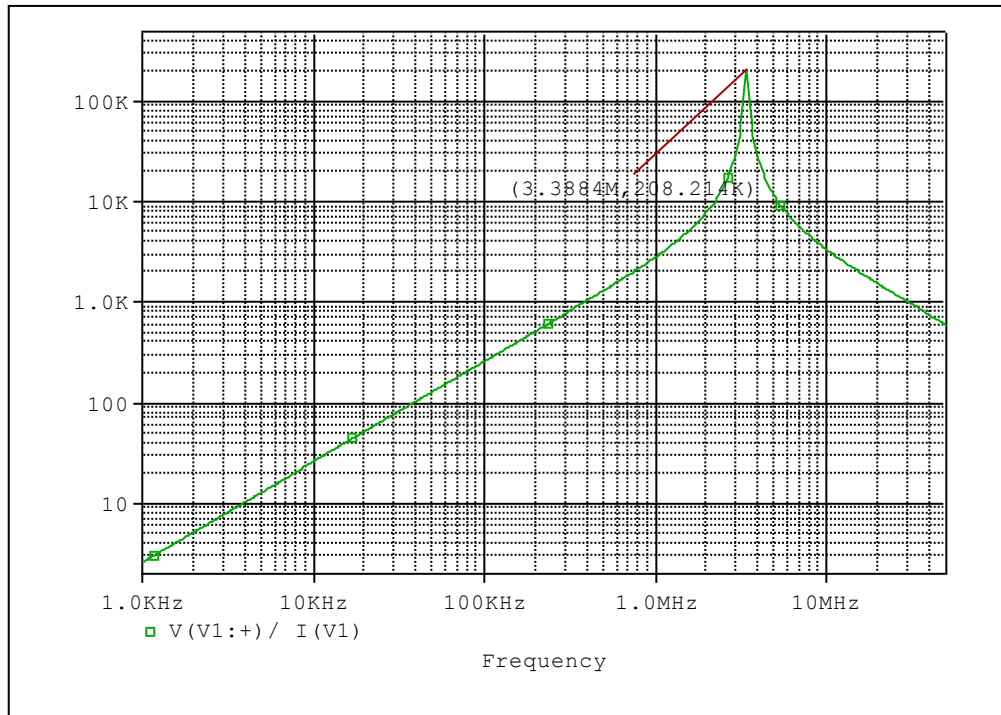*Please use SPICE MODEL within the range from 1K to 50M(Hz)*

A: |Z| TOP   500 kΩ BOTTOM   2 Ω   549.922 Ω   File Name:
                                                                          50 MHz
                                                                          Cpl   SELECT
                            Simulation   LETTER

CMP
                                                                                   SPACE

                                                                                   BACK
                                                                                   SPACE
ExtRef
R1:   Measurement   CLEAR
                                                                          NAME

B: θz   SCALE   20 °/div REF   0 °   -88.994 °
                                                                          50 MHz
                                                                          Cpl

                                                                                   STORE DEV
                                                        Simulation   [FLOPPY] ▶

                                                                                   done
              Measurement
                                                                                   cancel
VAC ---   IAC ---   V/IDC ---
START 1 kHz   OSC 500 mVolt   STOP 50 MHz
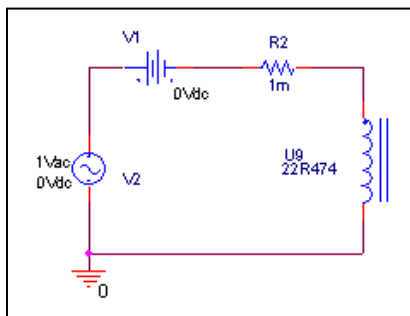
L1	
C1	
R1	

Frequency vs.|Z| Characteristic

Circuit Simulation Result

Evaluation Circuit

Simulation result

Frequency (Hz)	IZI (ohm) :Measurement	IZI (ohm) :Simulation	% Error
1K	3.07451	2.6104	-15.09541
10K	27.4776	25.997	-5.38839
100K	272.503	262.302	-3.74345
1M	2.92438k	2.8585k	-2.25279
10M	3.38951k	3.4042k	0.43340
50M	550.043	602.257	9.49271

	Measurement	Simulation	%Error
FSRF(Hz)	3.3892M	3.3884M	-0.02360
IZI (ohm)	210.337k	208.214k	-1.00933