

Device Modeling Report

COMPONENTS: RESISTOR
PART NUMBER: ERF5AK1R0
MANUFACTURER: MATSUSHITA



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

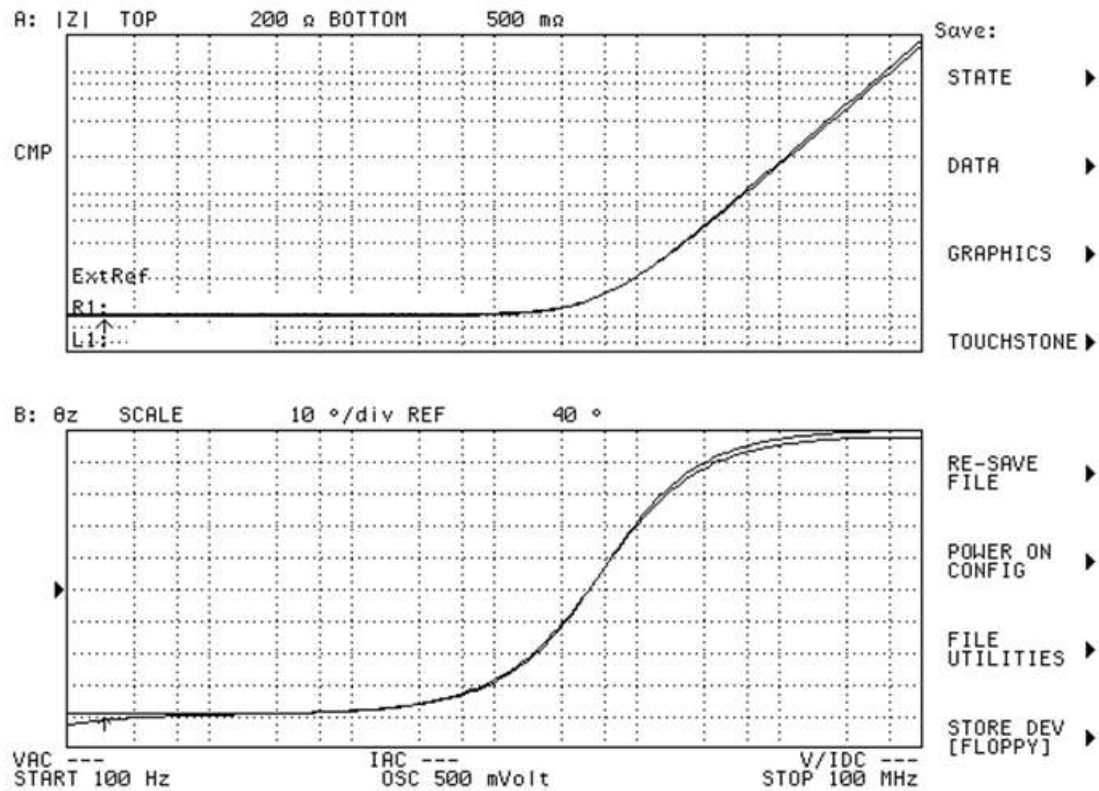
Optimization of Simulation

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

Frequency vs. $|Z|$ and Frequency vs. θz Characteristic

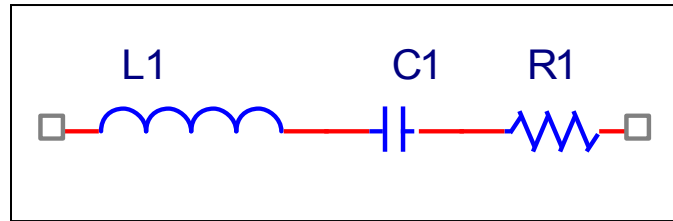
Attention

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



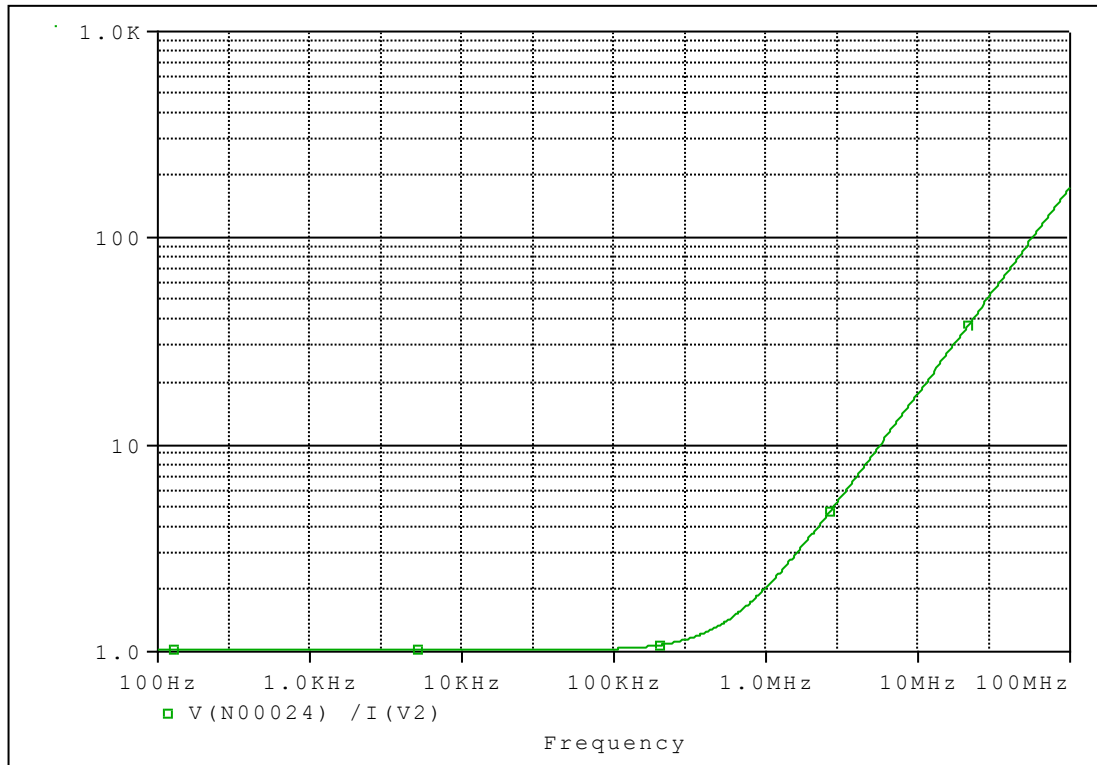
Measurement		
R1		
L1		
C1		

Equivalent circuit

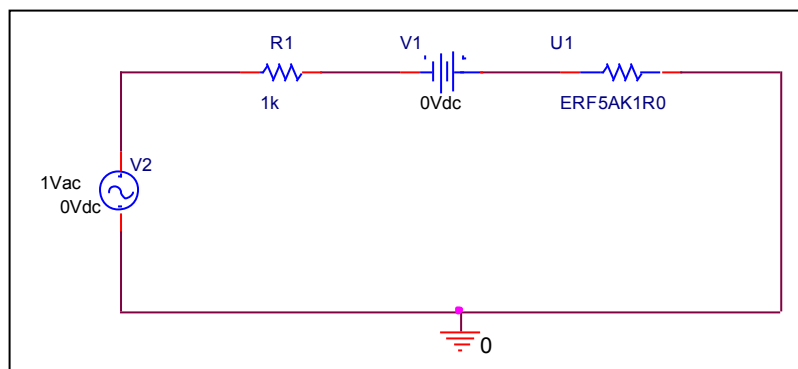


Frequency vs. $|Z|$ Characteristic

Circuit simulation result



Evaluation Circuit



Simulation Result

Frequency(HZ)	 Z (ohm) Measurement	 Z (ohm) Circuit Simulation	%Error
100	982.881	1018.000	3.573
1K	984.244	1016.000	3.226
10K	984.852	1016.000	3.163
100K	1.005	1.032	2.663
1M	2.036	2.045	0.467
10M	16.786	17.776	5.898