

Device Modeling Report

COMPONENTS: RESISTOR
PART NUMBER: ERF5AKR47
MANUFACTURER: MATSUSHITA



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

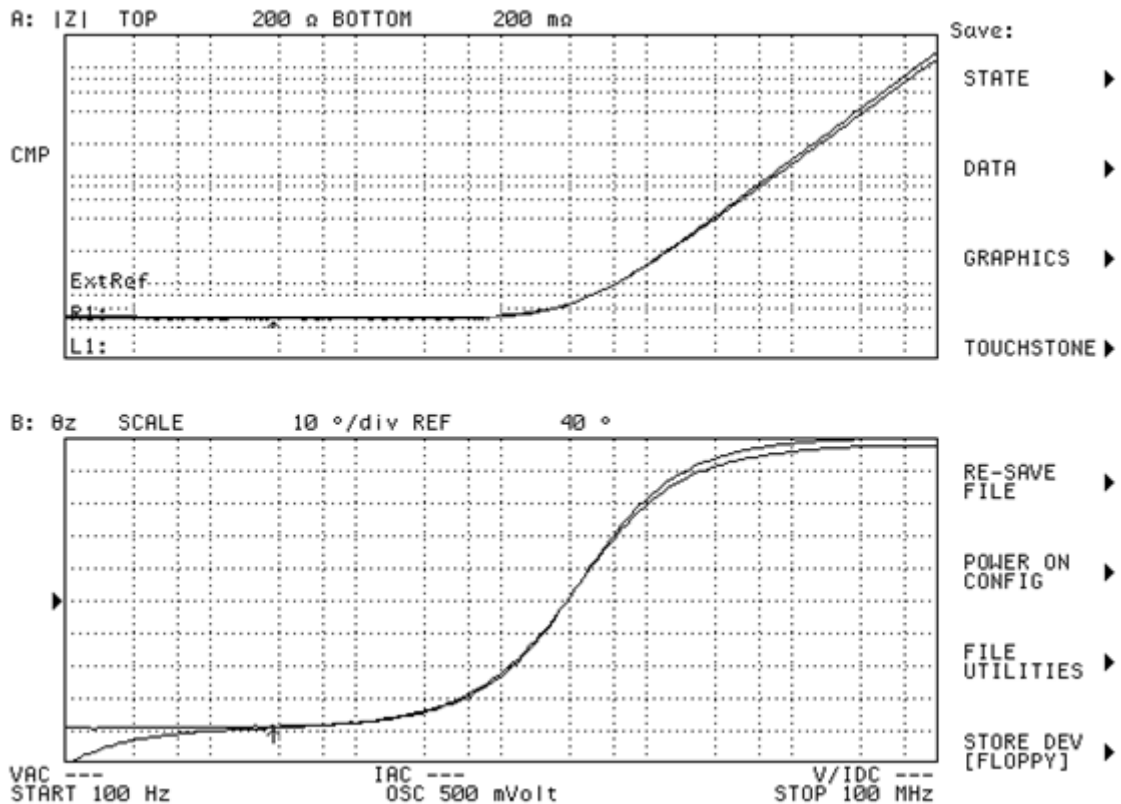
Optimization of Simulation

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)



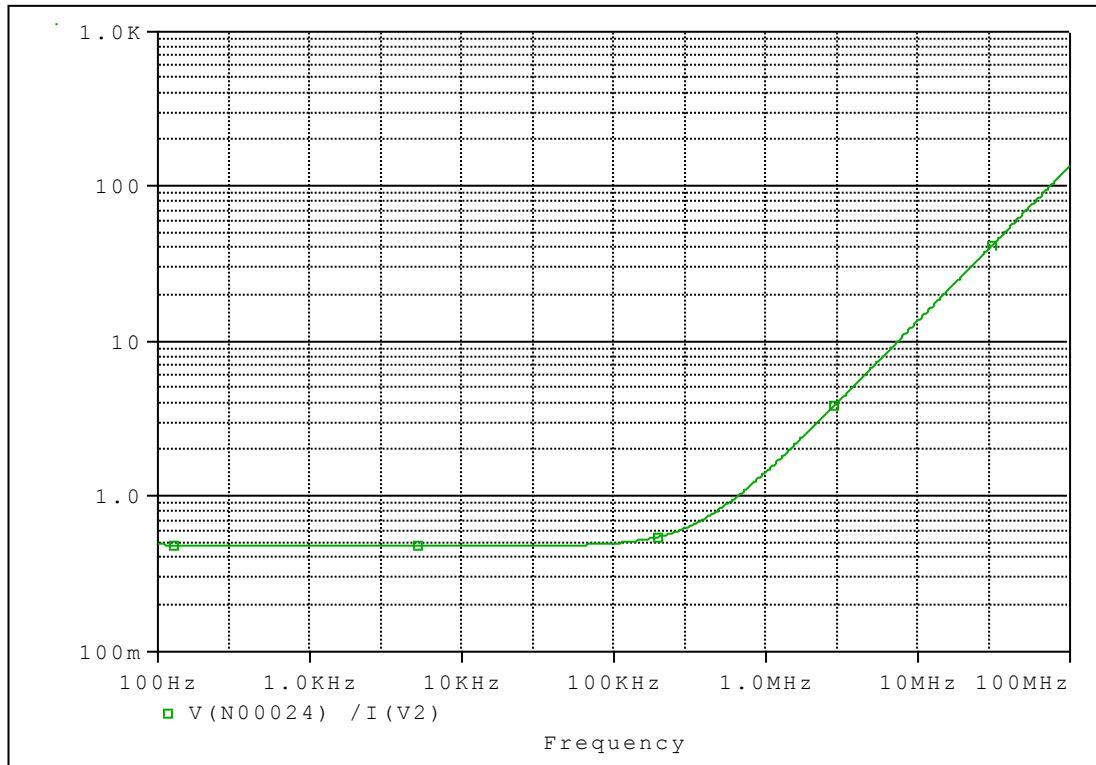
Measurement		
R1		
L1		
C1		

Equivalent circuit

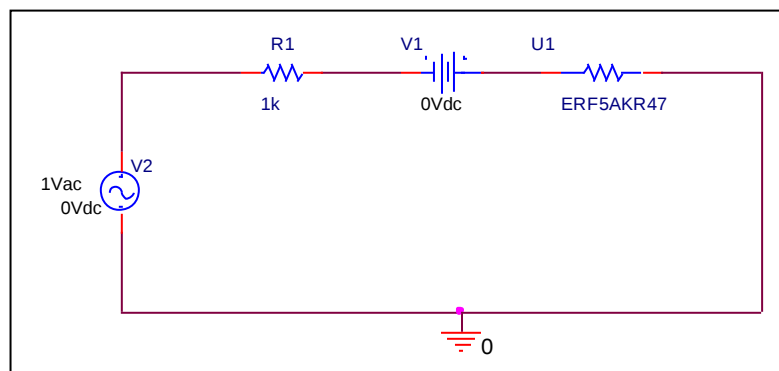


Frequency vs. $|Z|$ Characteristic

Circuit simulation result



Evaluation Circuit



Simulation Result

Frequency(HZ)	Z (ohm) Measurement	Z (ohm) Circuit Simulation	%Error
100	466.035	491.991	5.570
1K	465.458	481.770	3.505
10K	466.173	481.858	3.365
100K	490.650	500.649	2.038
1M	1.427	1.448	1.479
10M	12.514	13.665	9.199