

Device Modeling Report

COMPONENTS: RESISTOR
PART NUMBER: ERF10AK3R0
MANUFACTURER: MATSUSHITA



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

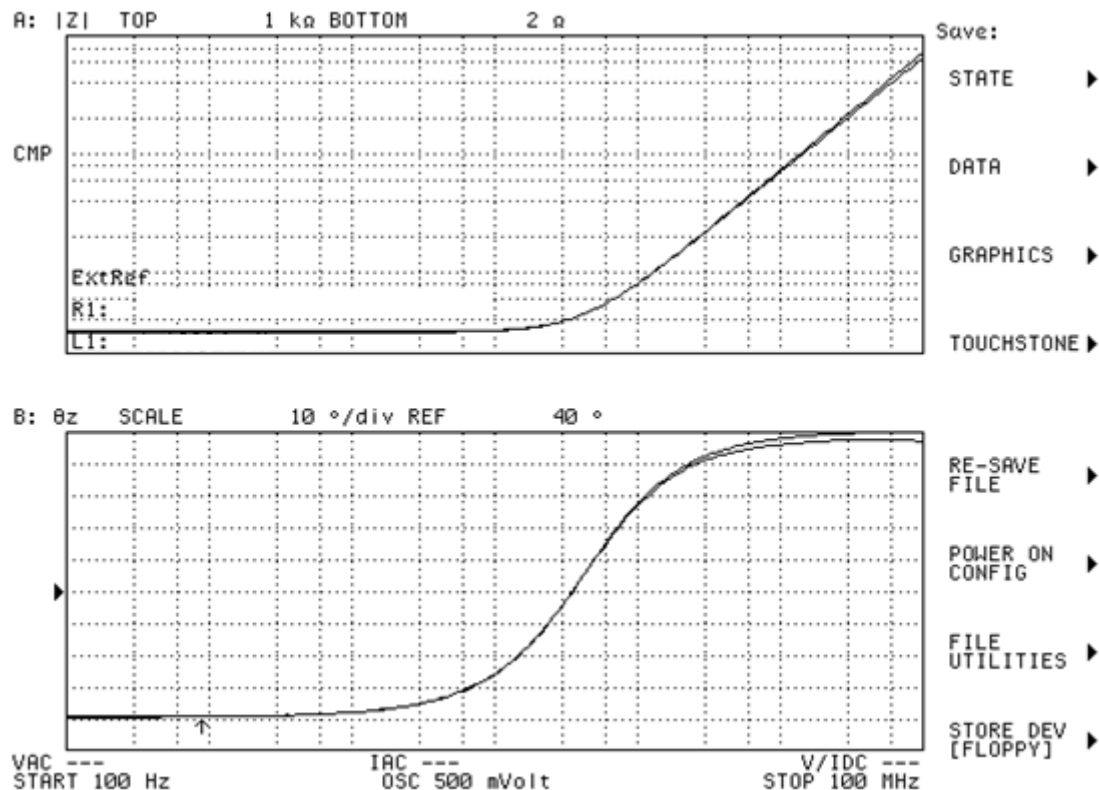
Optimization of Simulation

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

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

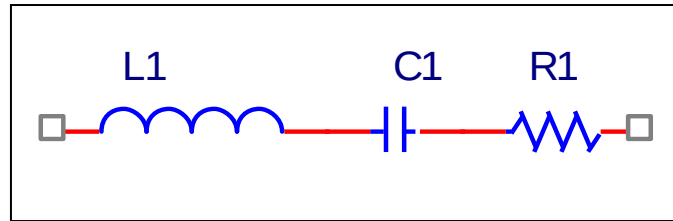
Attention

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



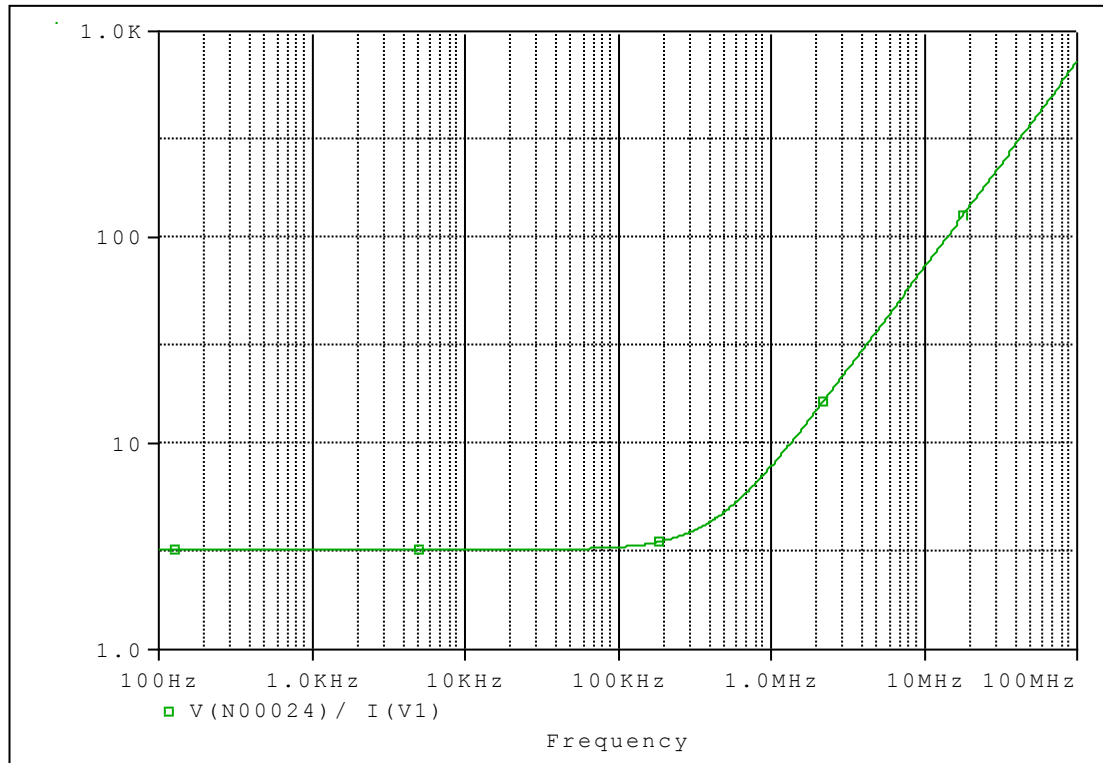
Measurement		
R1		
L1		
C1		

Equivalent circuit

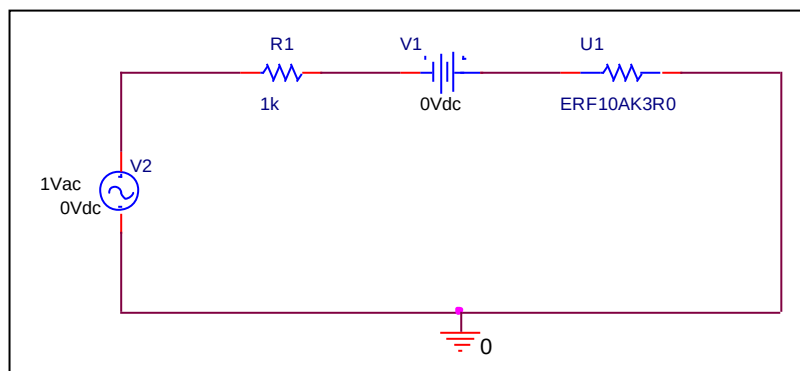


Frequency vs. |Z| Characteristic

Circuit simulation result



Evaluation Circuit



Simulation Result

Frequency(HZ)	Z (ohm) Measurement	Z (ohm) Circuit Simulation	%Error
100	3.022	3.057	1.165
1K	3.023	3.057	1.111
10K	3.023	3.058	1.155
100K	3.113	3.139	0.836
1M	7.737	7.752	0.194
10M	68.691	71.307	3.808