

Device Modeling Report

COMPONENTS: RESISTOR
PART NUMBER: ERF5AJ4R7
MANUFACTURER: MATSUSHITA



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

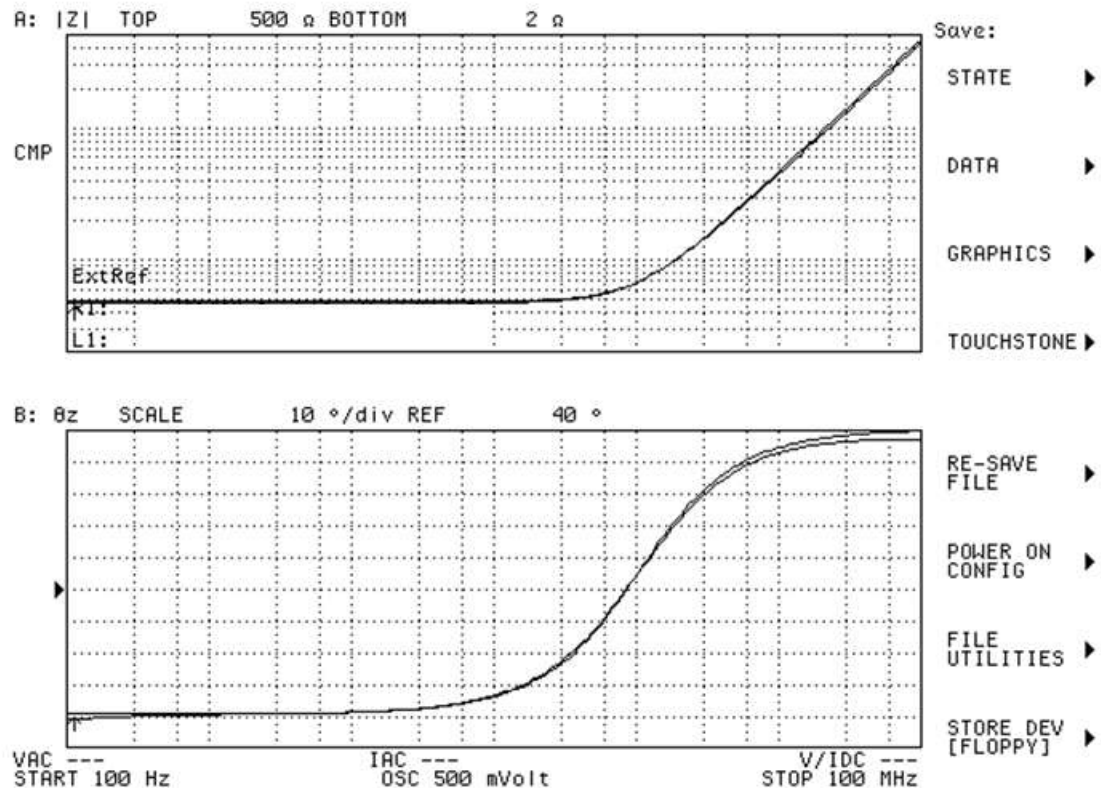
Optimization of Simulation

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

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

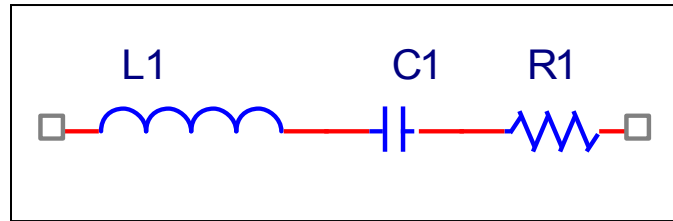
Attention

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



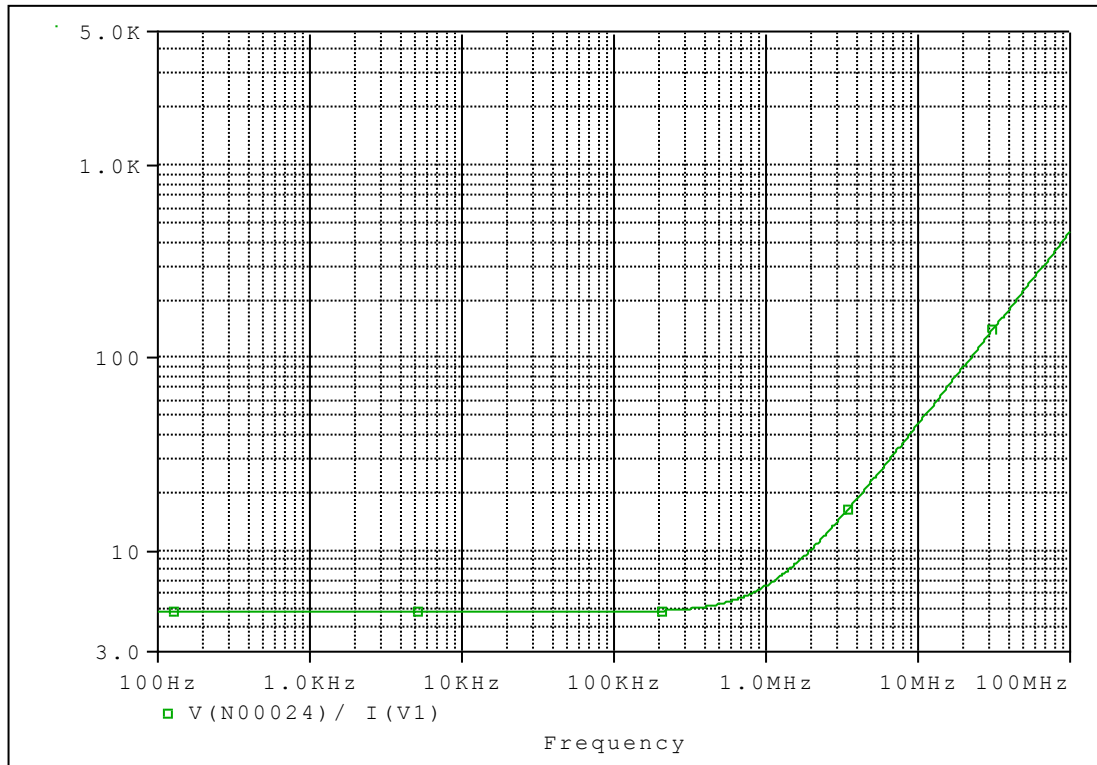
Measurement		
R1		
L1		
C1		

Equivalent circuit

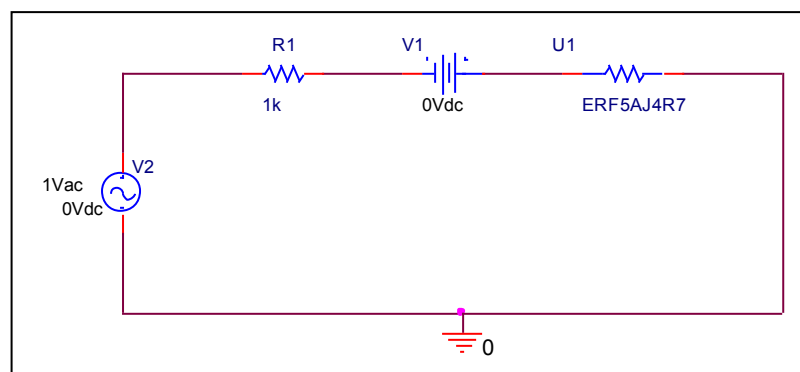


Frequency vs. $|Z|$ Characteristic

Circuit simulation result



Evaluation Circuit



Simulation Result

Frequency(HZ)	Z (ohm) Measurement	Z (ohm) Circuit Simulation	%Error
100	4.654	4.805	3.246
1K	4.653	4.802	3.204
10K	4.653	4.802	3.206
100K	4.683	4.823	2.983
1M	6.614	6.613	0.014
10M	43.779	45.723	4.440
100M	433.766	454.726	4.832