

Device Modeling Report

COMPONENTS: RESISTOR
PART NUMBER: ERF5AK1R5
MANUFACTURER: MATSUSHITA



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

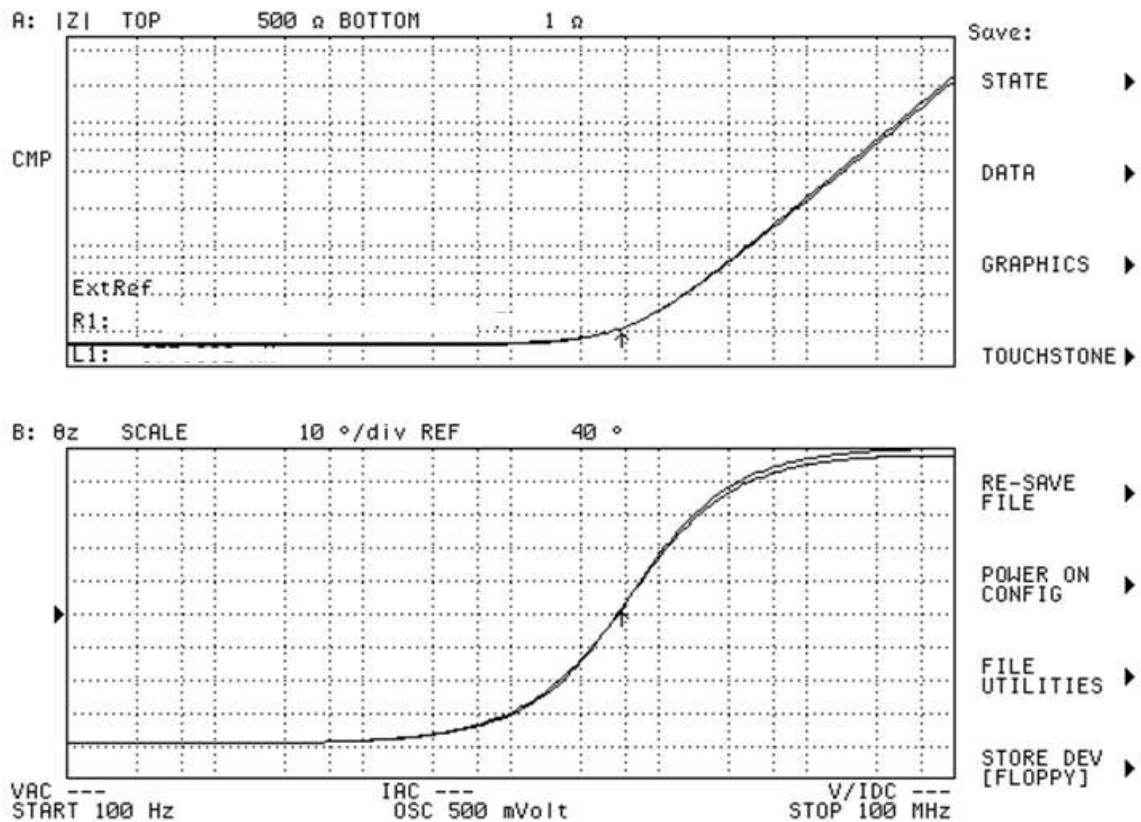
Optimization of Simulation

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

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

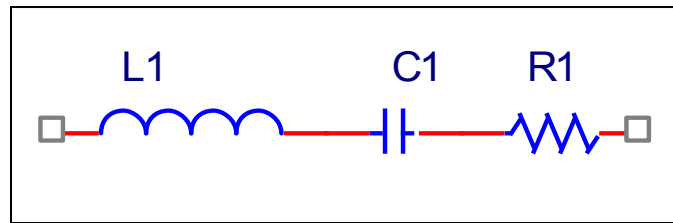
Attention

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



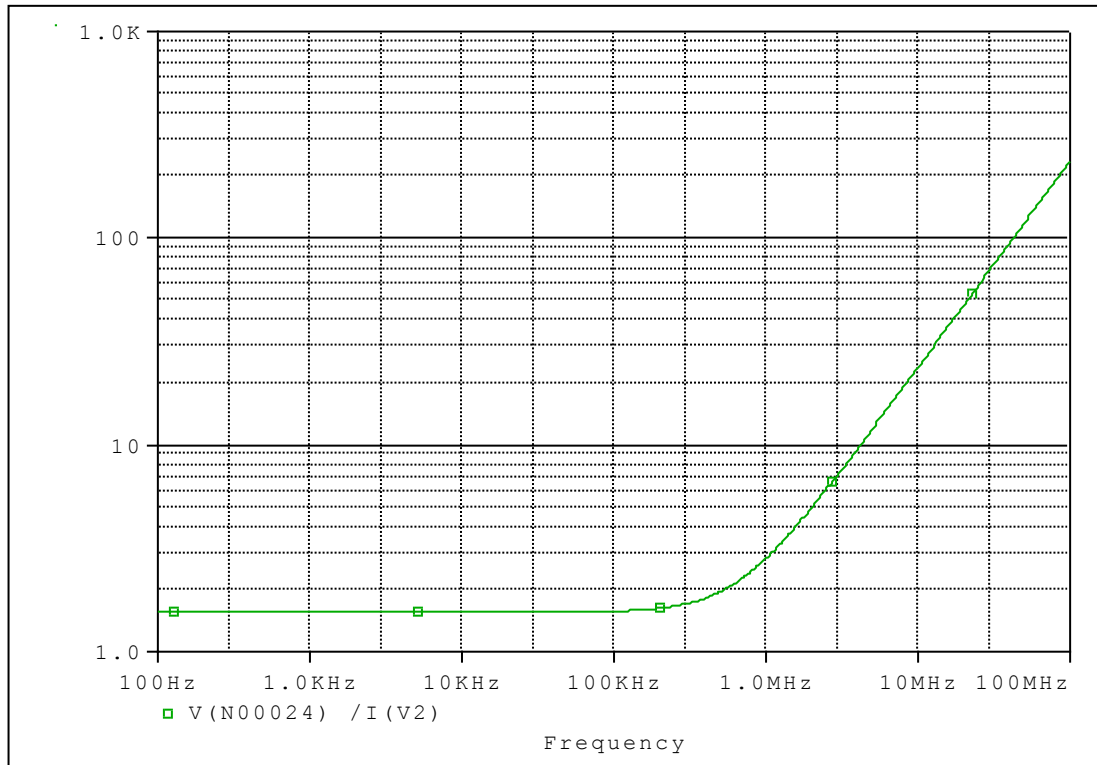
Measurement		
R1		
L1		
C1		

Equivalent circuit

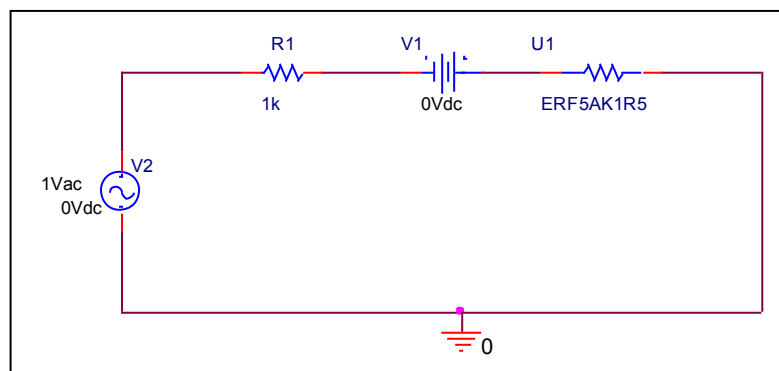


Frequency vs. $|Z|$ Characteristic

Circuit simulation result



Evaluation Circuit



Simulation Result

Frequency(HZ)	 Z (ohm) Measurement	 Z (ohm) Circuit Simulation	%Error
100	1.500	1.551	3.401
1K	1.501	1.551	3.341
10K	1.501	1.552	3.376
100K	1.526	1.569	2.854
1M	2.828	2.833	0.194
10M	22.514	23.759	5.532
100M	216.436	237.090	9.543