

Device Modeling Report

COMPONENTS: RESISTOR
PART NUMBER: ERF5AK3R3
MANUFACTURER: MATSUSHITA



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

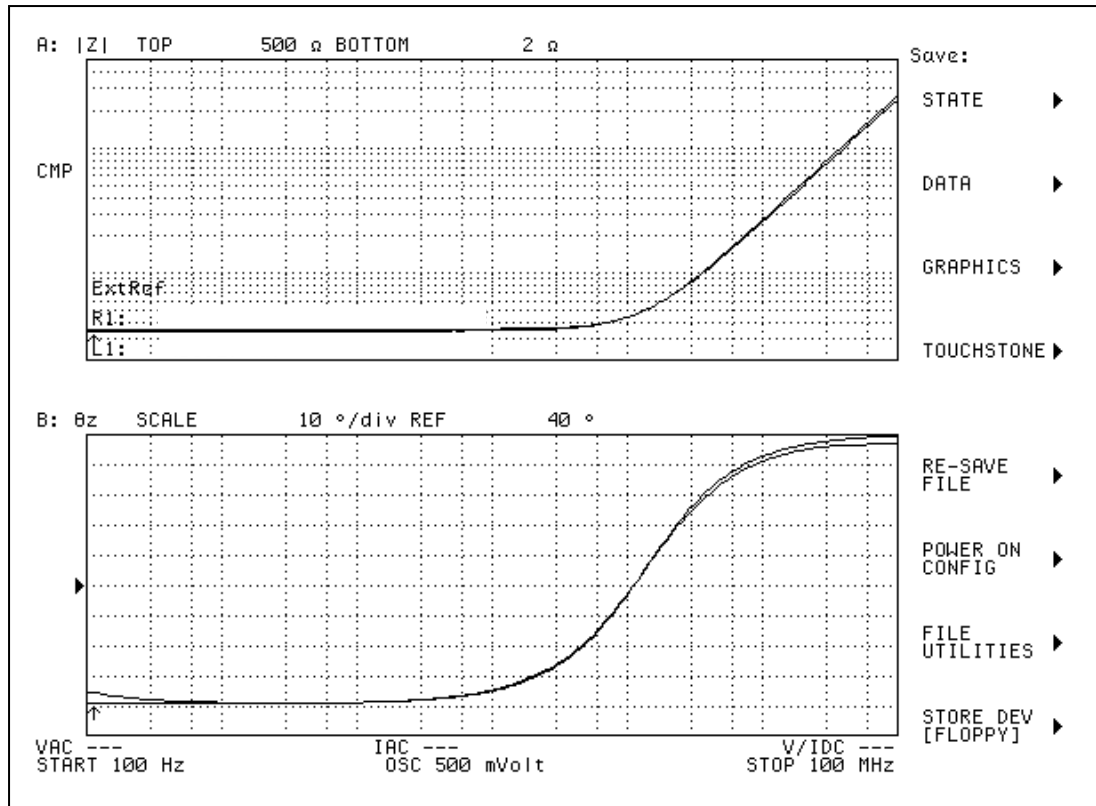
Optimization of Simulation

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

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

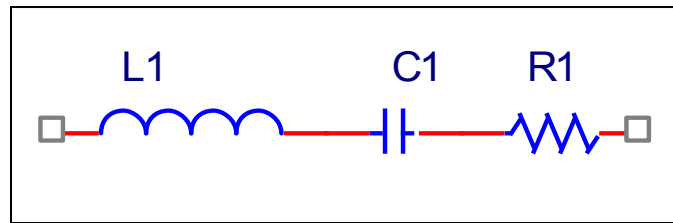
Attention

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



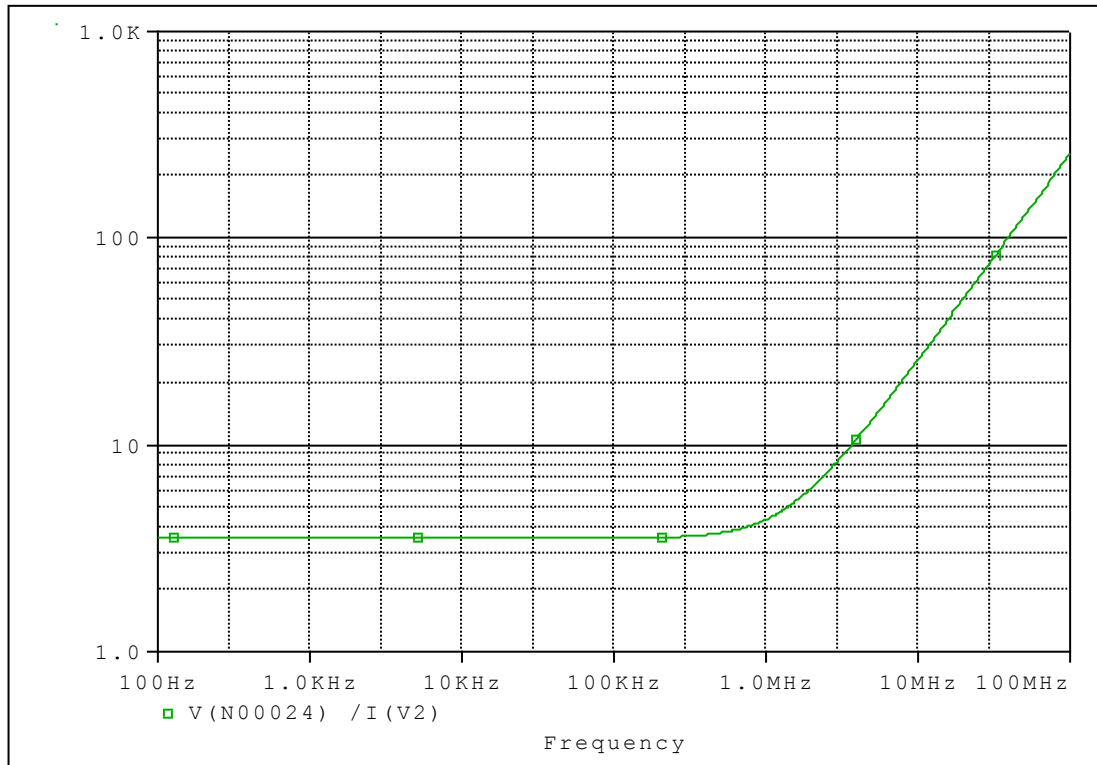
Measurement		
R1		
L1		
C1		

Equivalent circuit

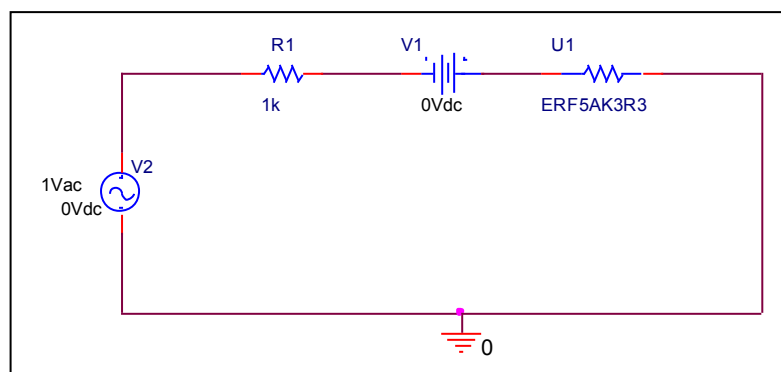


Frequency vs. $|Z|$ Characteristic

Circuit simulation result



Evaluation Circuit



Simulation Result

Frequency(HZ)	 Z (ohm) Measurement	 Z (ohm) Circuit Simulation	%Error
100	3.422	3.539	3.410
1K	3.423	3.529	3.106
10K	3.424	3.529	3.064
100K	3.438	3.538	2.906
1M	4.357	4.363	0.133
10M	24.942	25.894	3.819
100M	238.770	256.548	7.446