

Device Modeling Report

COMPONENTS: RESISTOR
PART NUMBER: ERF5AK3R3
THERMAL:TA=120(degree)
MANUFACTURER: MATSUSHITA



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

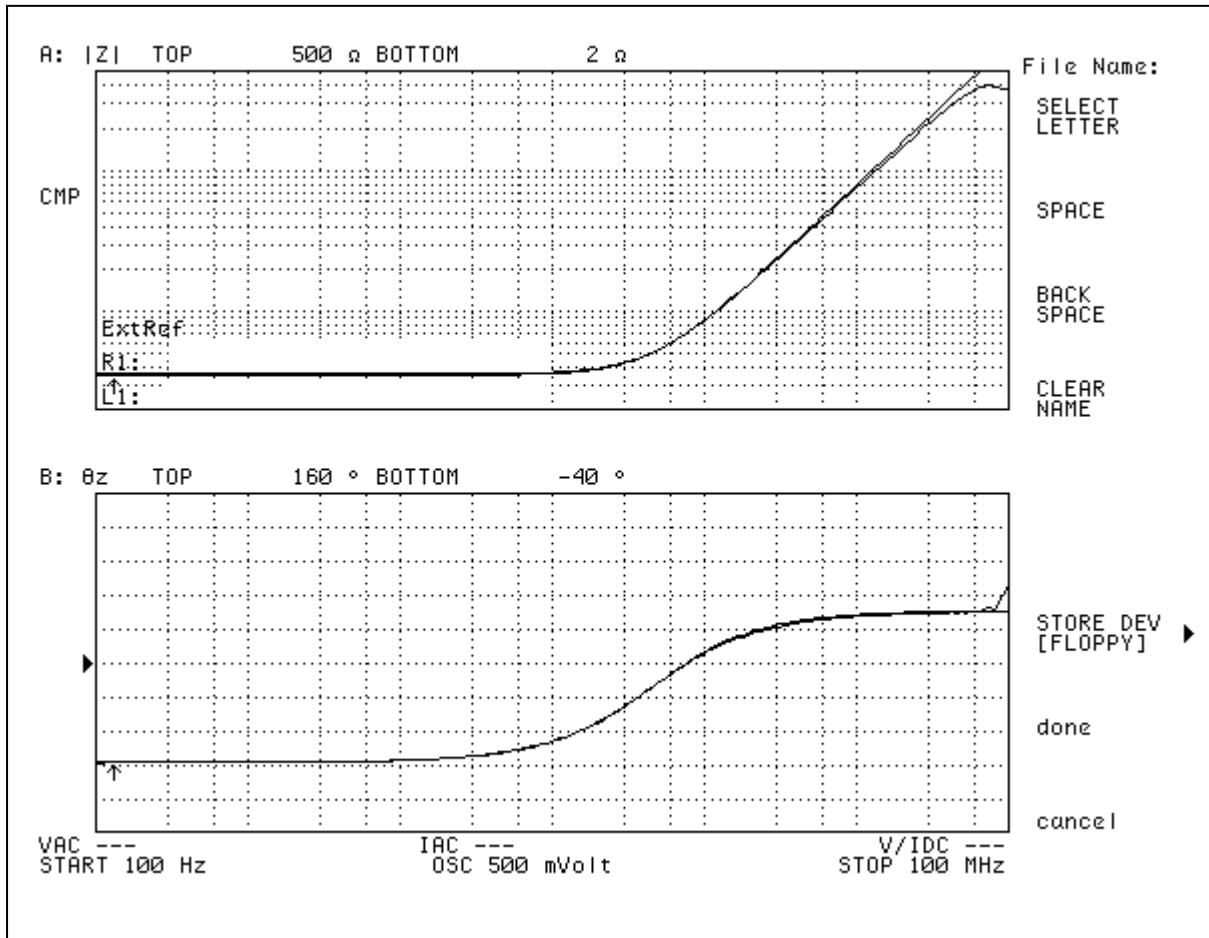
Optimization of Simulation

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

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

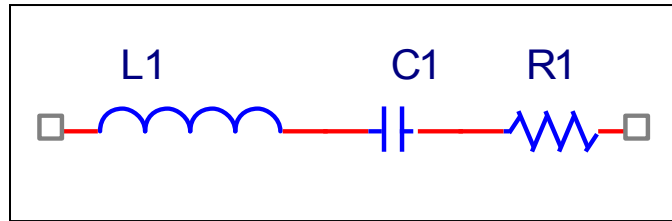
Attention

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



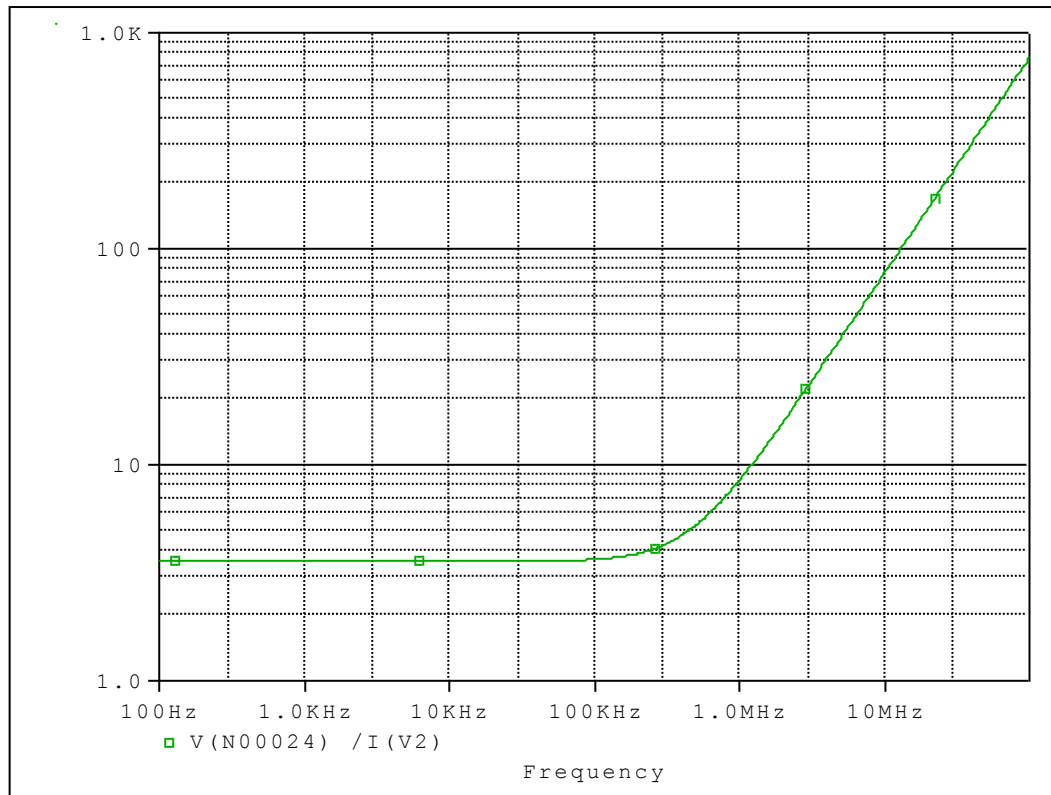
Measurement		
R1		
L1		
C1		

Equivalent circuit

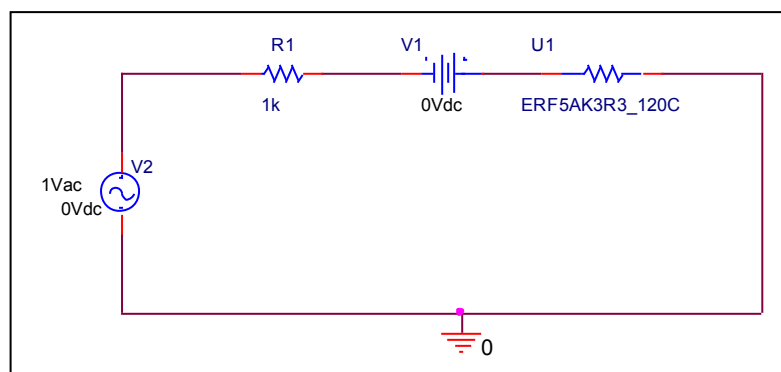


Frequency vs. |Z| Characteristic

Circuit simulation result



Evaluation Circuit



Simulation Result

Frequency(HZ)	 Z (ohm) Measurement	 Z (ohm) Circuit Simulation	%Error
100	3.493	3.569	2.193
1K	3.497	3.569	2.051
10K	3.500	3.570	2.007
100K	3.591	3.651	1.679
1M	8.727	8.472	2.926
10M	74.833	76.919	2.787