

Device Modeling Report

COMPONENTS: RESISTOR
PART NUMBER: ERF10AK5R1
THERMAL: TA=120 (degree)
MANUFACTURER: MATSUSHITA



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

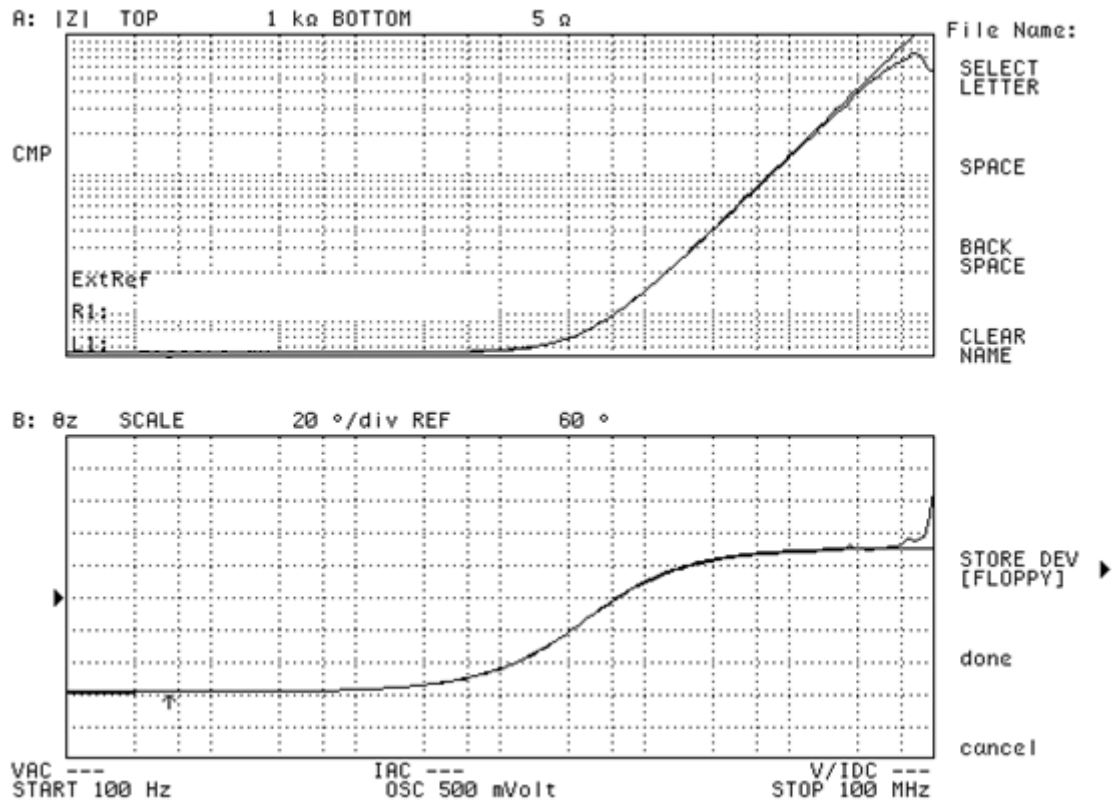
Optimization of Simulation

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

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

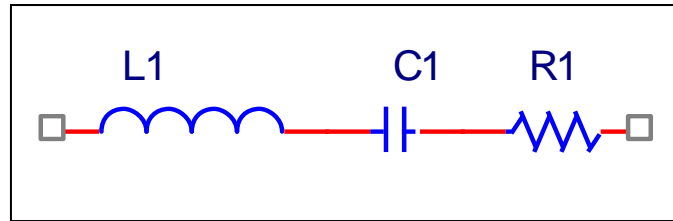
Attention

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



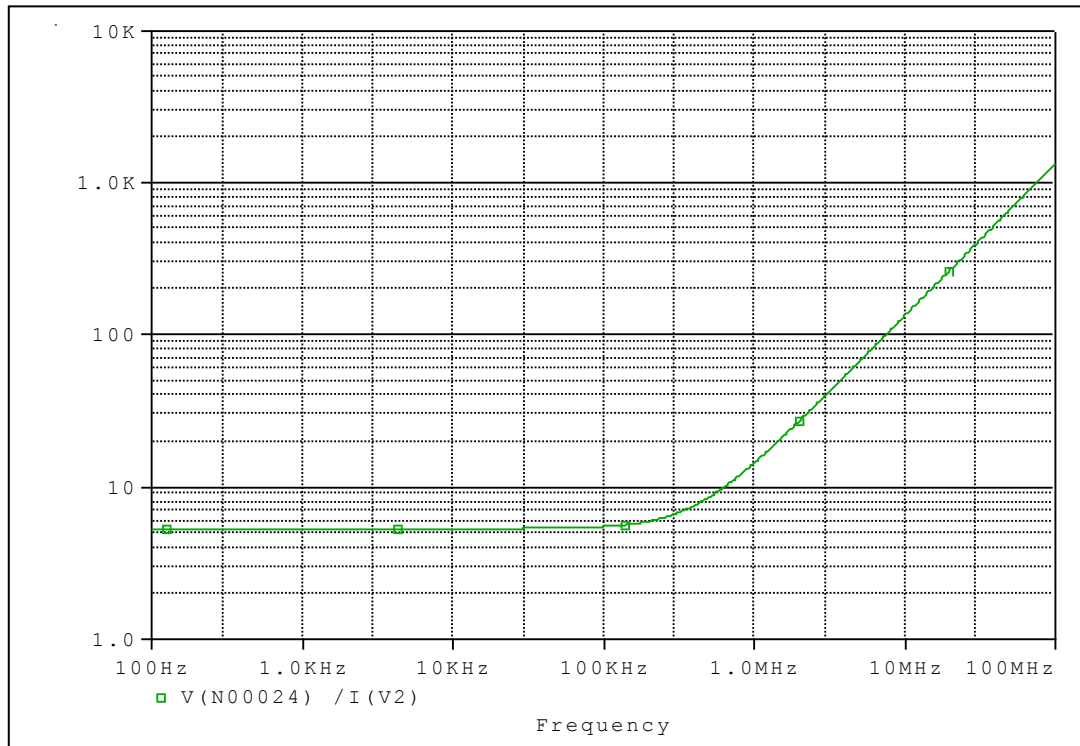
Measurement		
R1		
L1		
C1		

Equivalent circuit

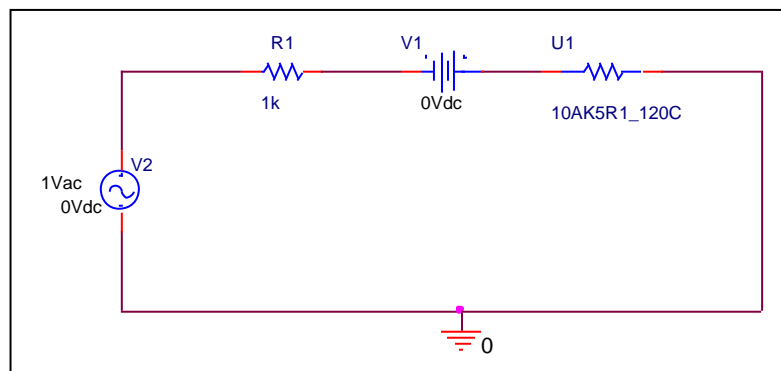


Frequency vs. $|Z|$ Characteristic

Circuit simulation result



Evaluation Circuit



Simulation Result

Frequency(HZ)	Z (ohm) Measurement	Z (ohm) Circuit Simulation	%Error
100	5.293	5.343	0.950
1K	5.293	5.343	0.948
10K	5.292	5.344	0.983
100K	5.472	5.509	0.680
1M	14.953	14.444	3.404
10M	132.715	134.300	1.194