

Device Modeling Report

COMPONENTS: RESISTOR
PART NUMBER: ERF5AJ100
THERMAL: TA=80(degree)
MANUFACTURER: MATSUSHITA



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

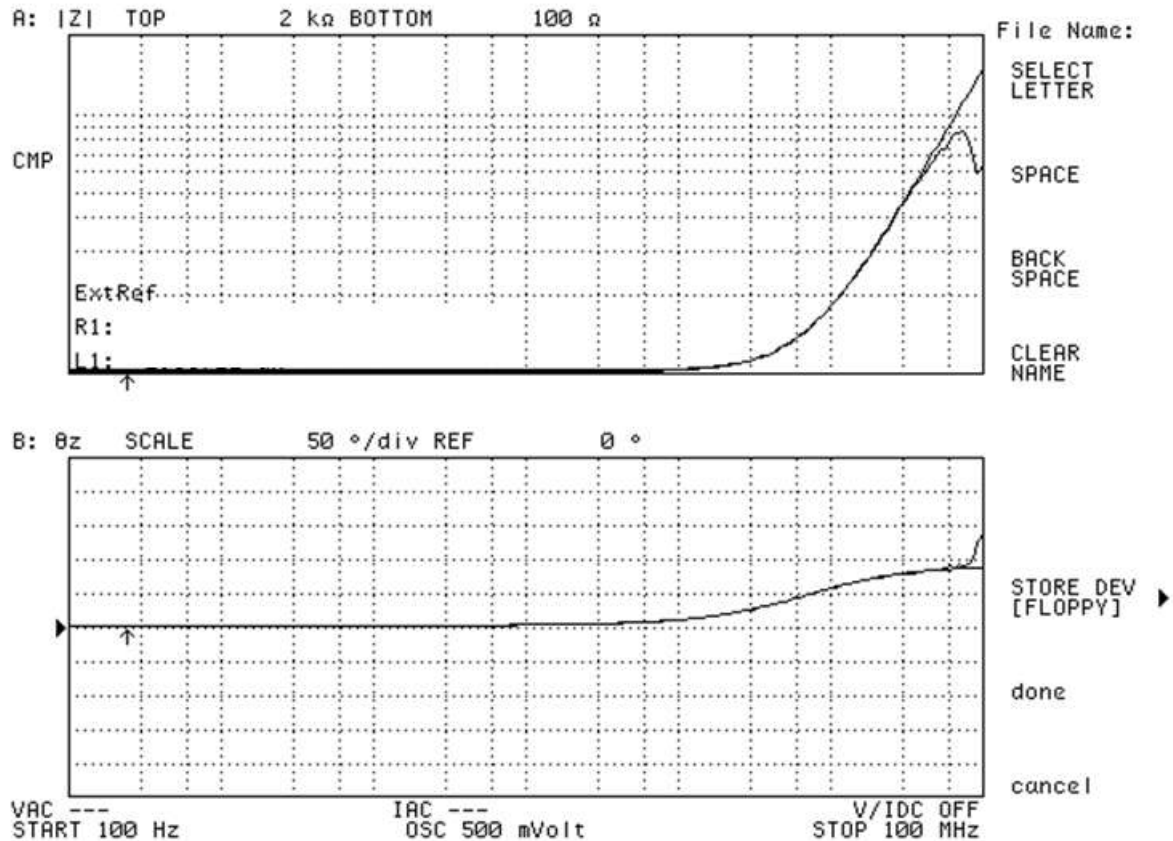
Optimization of Simulation

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

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

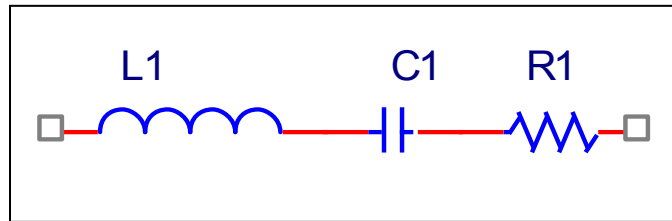
Attention

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



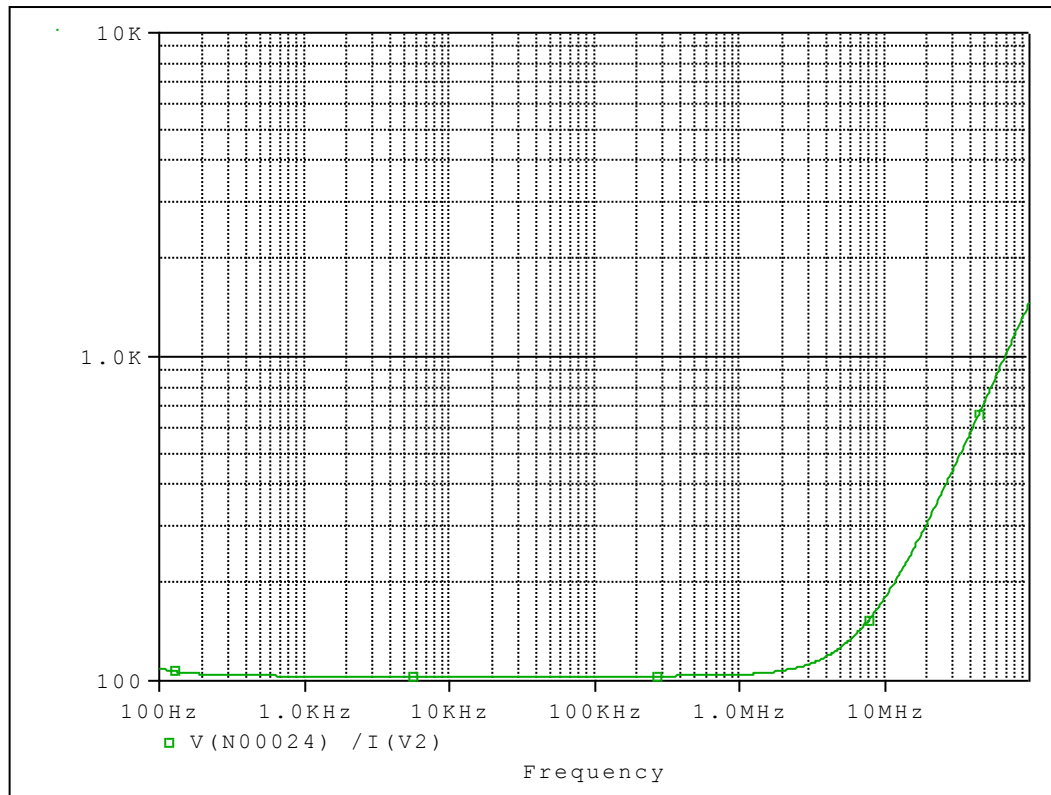
Measurement		
R1		
L1		
C1		

Equivalent circuit

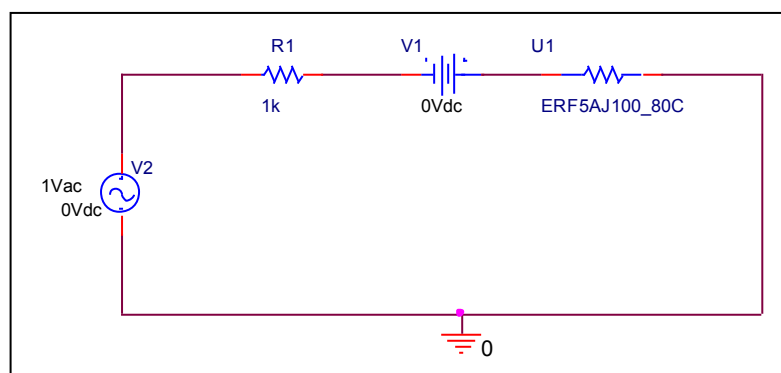


Frequency vs. $|Z|$ Characteristic

Circuit simulation result



Evaluation Circuit



Simulation Result

Frequency(HZ)	 Z (ohm) Measurement	 Z (ohm) Circuit Simulation	%Error
100	101.706	109.062	7.233
1K	101.708	103.532	1.793
10K	101.604	103.475	1.841
100K	101.720	103.485	1.735
1M	103.416	104.511	1.059
10M	182.644	179.645	1.642