

Device Modeling Report

COMPONENTS: RESISTOR
PART NUMBER: ERF5AJ100
THERMAL: TA=150(degree)
MANUFACTURER: MATSUSHITA



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

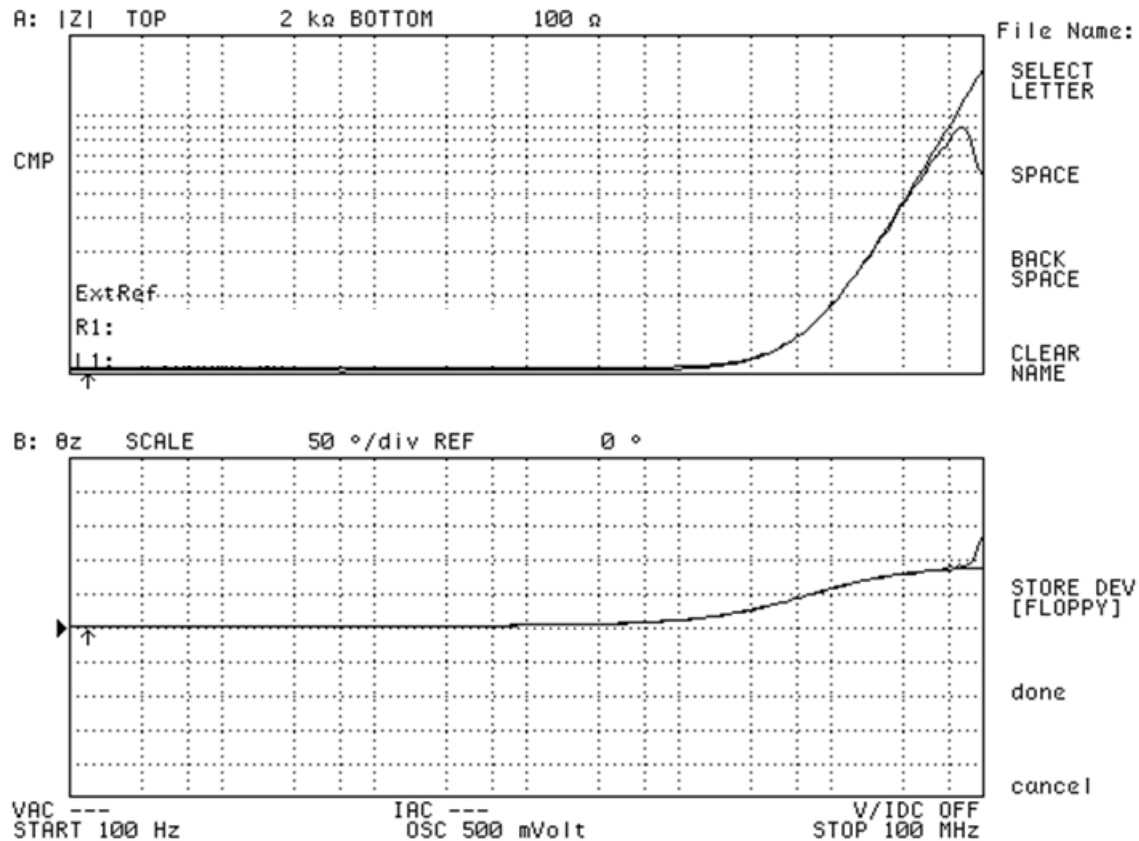
Optimization of Simulation

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

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

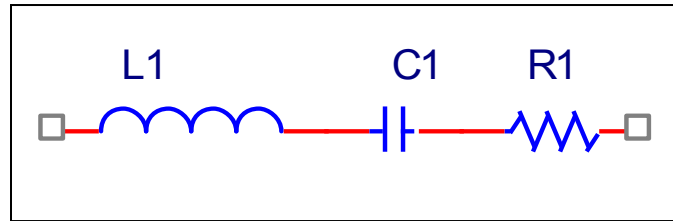
Attention

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



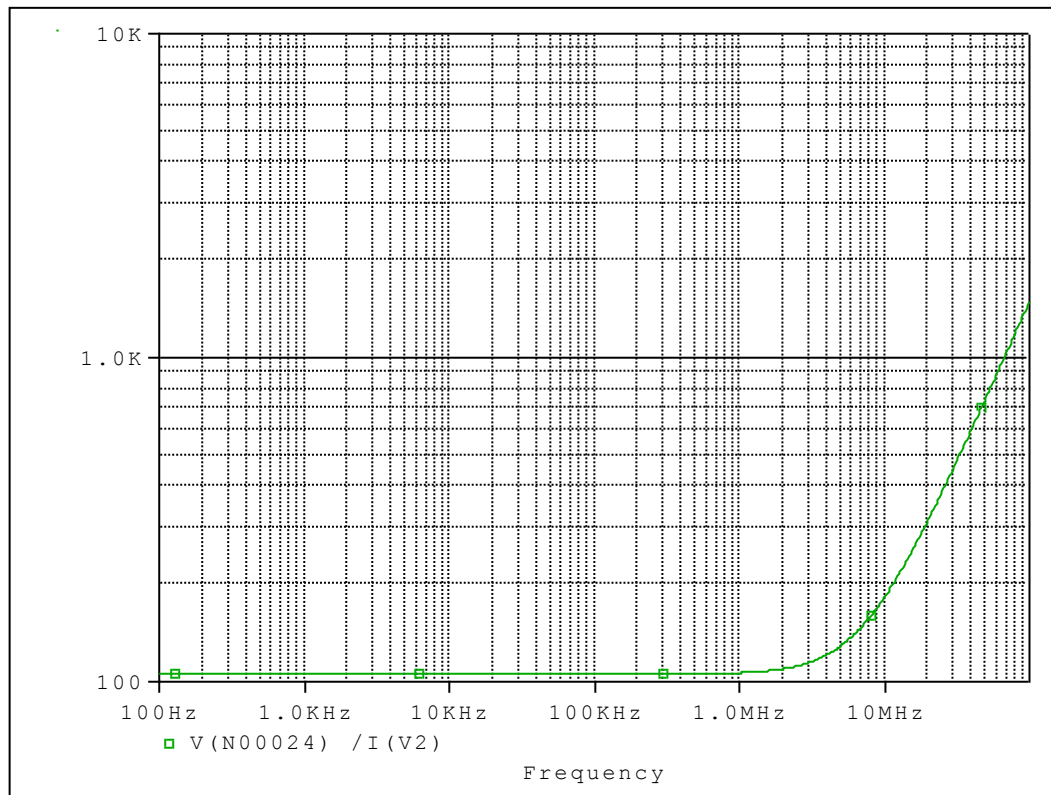
Measurement		
R1		
L1		
C1		

Equivalent circuit

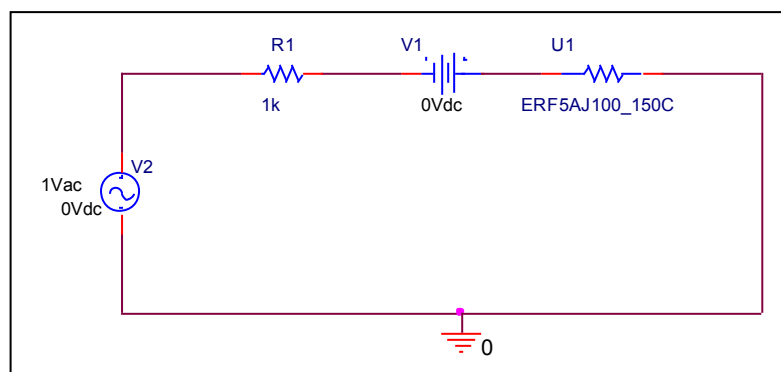


Frequency vs. $|Z|$ Characteristic

Circuit simulation result



Evaluation Circuit



Simulation Result

Frequency(HZ)	 Z (ohm) Measurement	 Z (ohm) Circuit Simulation	%Error
100	102.783	105.483	2.627
1K	102.804	105.469	2.592
10K	102.701	105.469	2.695
100K	102.823	105.479	2.583
1M	104.531	106.509	1.892
10M	184.223	182.147	1.127