

Device Modeling Report

COMPONENTS: RESISTOR
PART NUMBER: ERF5AJ331
THERMAL: TA=120(degree)
MANUFACTURER: MATSUSHITA



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

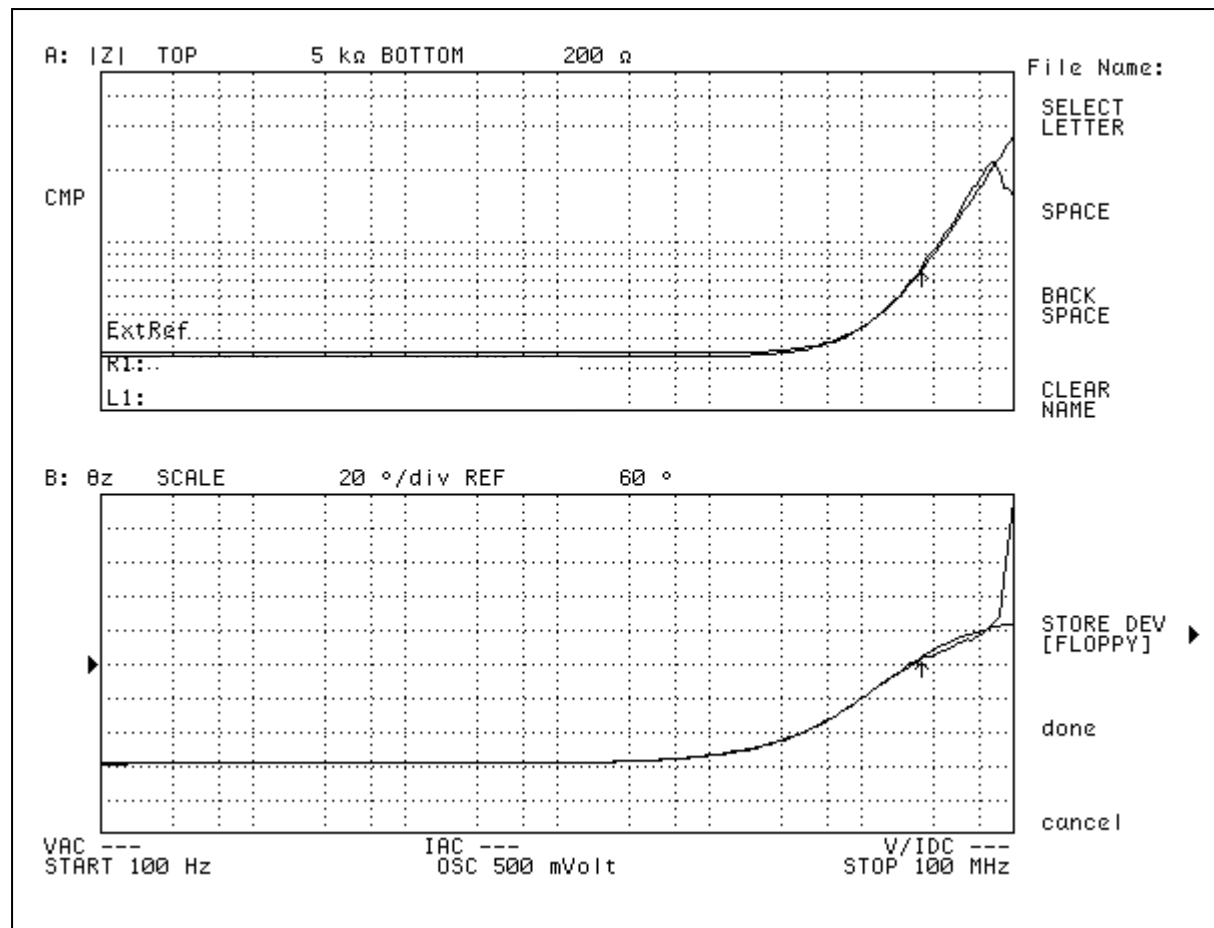
Optimization of Simulation

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

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

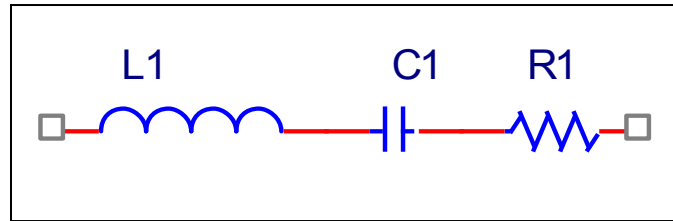
Attention

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



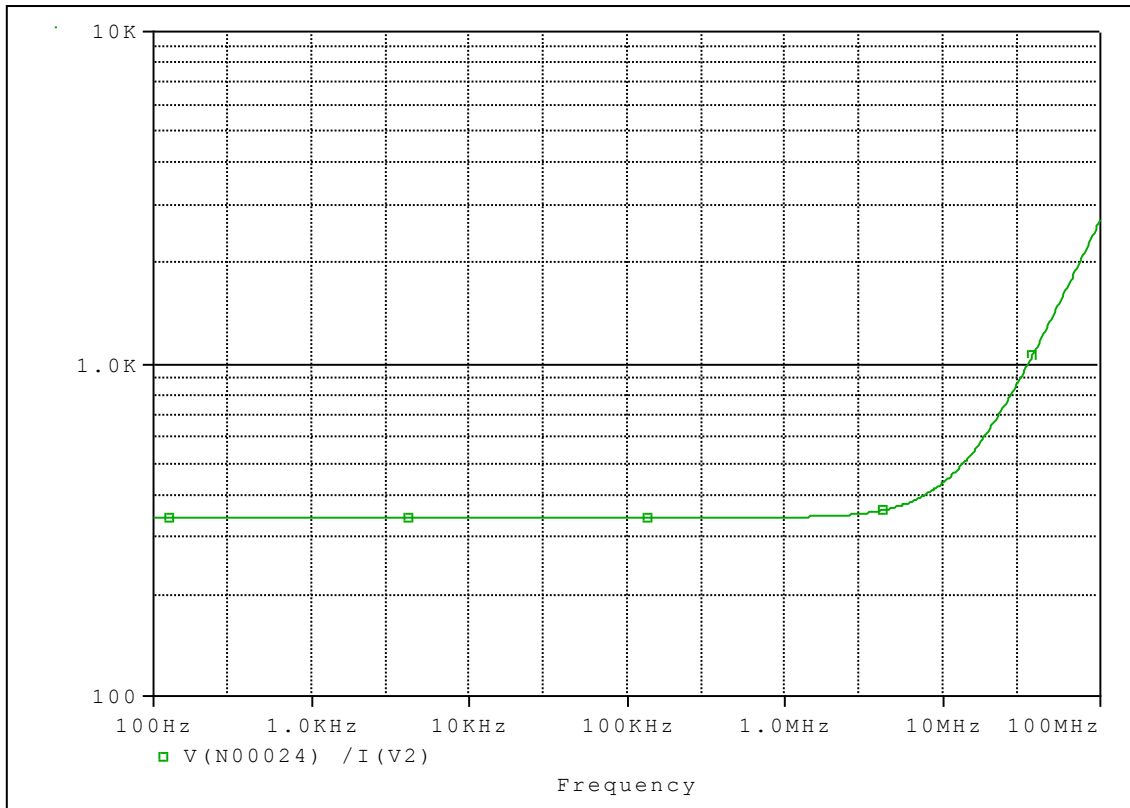
Measurement		
R1		
L1		
C1		

Equivalent circuit

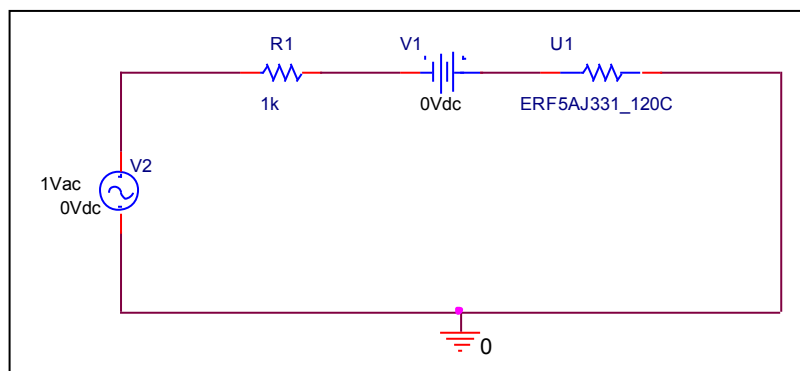


Frequency vs. $|Z|$ Characteristic

Circuit simulation result



Evaluation Circuit



Simulation Result

Frequency(HZ)	Z (ohm) Measurement	Z (ohm) Circuit Simulation	%Error
100	332.666	344.416	3.532
1K	332.612	344.415	3.549
10K	332.713	344.415	3.517
100K	332.679	344.426	3.531
1M	334.821	346.469	3.479
10M	440.046	437.388	0.604