

Device Modeling Report

COMPONENTS: RESISTOR
PART NUMBER: ERF5AKR22
THERMAL:TA=150(degree)
MANUFACTURER: MATSUSHITA



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

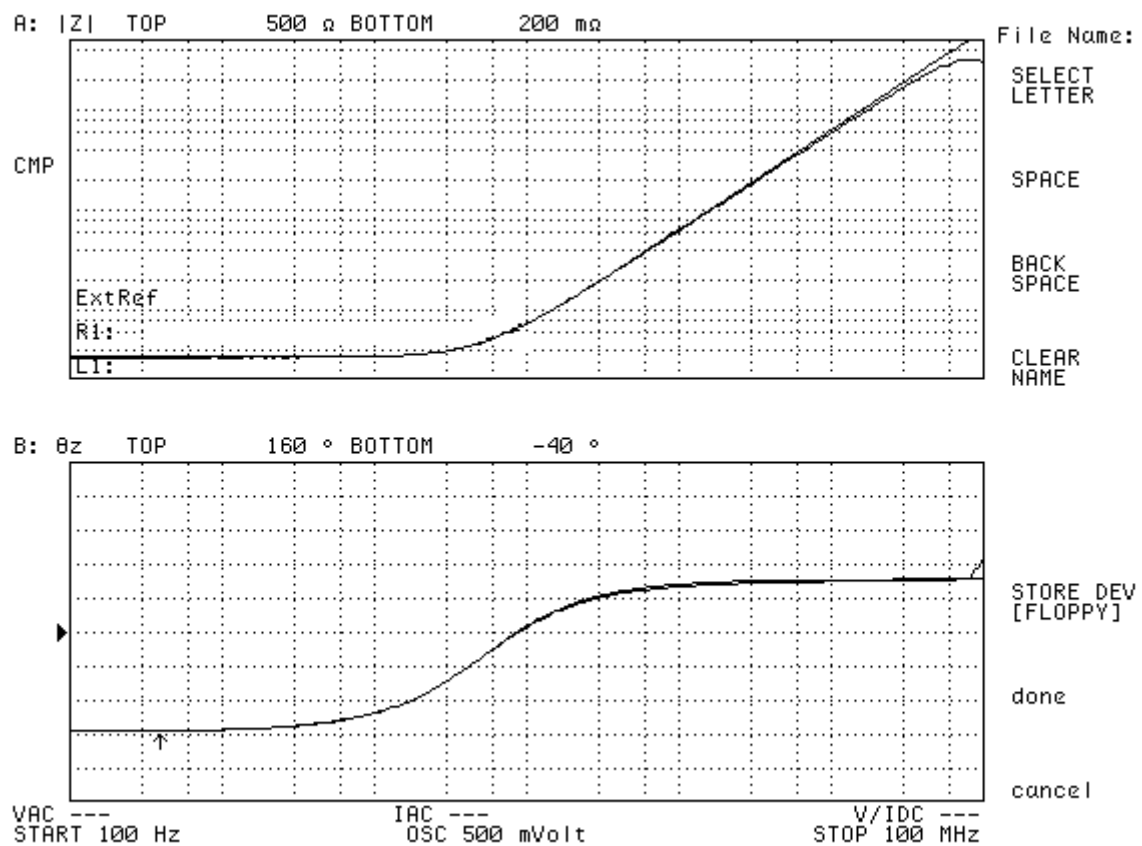
Optimization of Simulation

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)



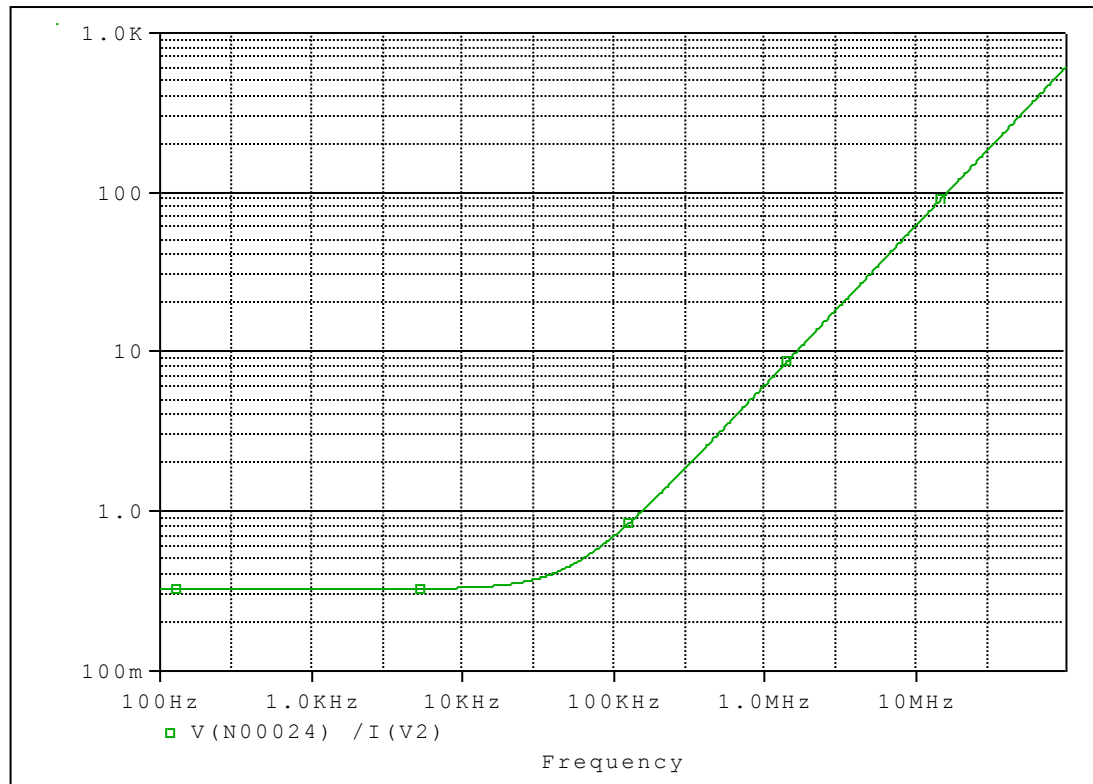
Measurement		
R1		
L1		
C1		

Equivalent circuit

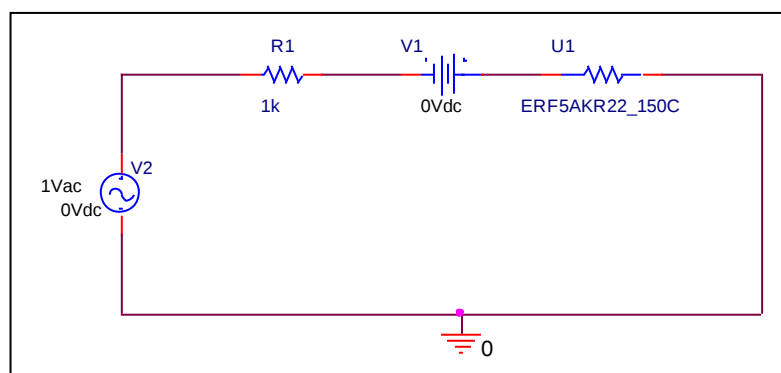


Frequency vs. $|Z|$ Characteristic

Circuit simulation result



Evaluation Circuit



Simulation Result

Frequency(HZ)	Z (ohm) Measurement	Z (ohm) Circuit Simulation	%Error
100	319.858	326.647	2.123
1K	320.035	326.704	2.084
10K	327.374	332.373	1.527
100K	693.858	695.738	0.271
1M	6.269	6.152	1.870
10M	59.090	61.430	3.961