

Device Modeling Report

COMPONENTS: RESISTOR
PART NUMBER: ERF10AJ120
THERMAL: TA=80(degree)
MANUFACTURER: MATSUSHITA



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

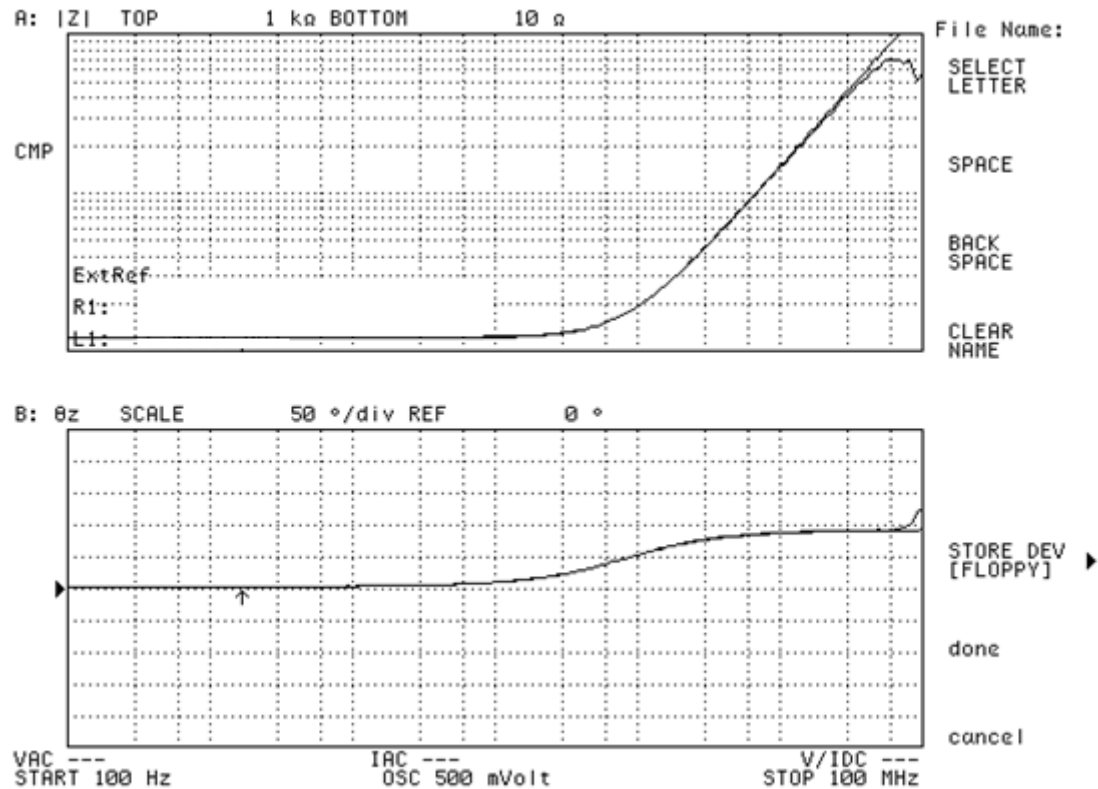
Optimization of Simulation

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)



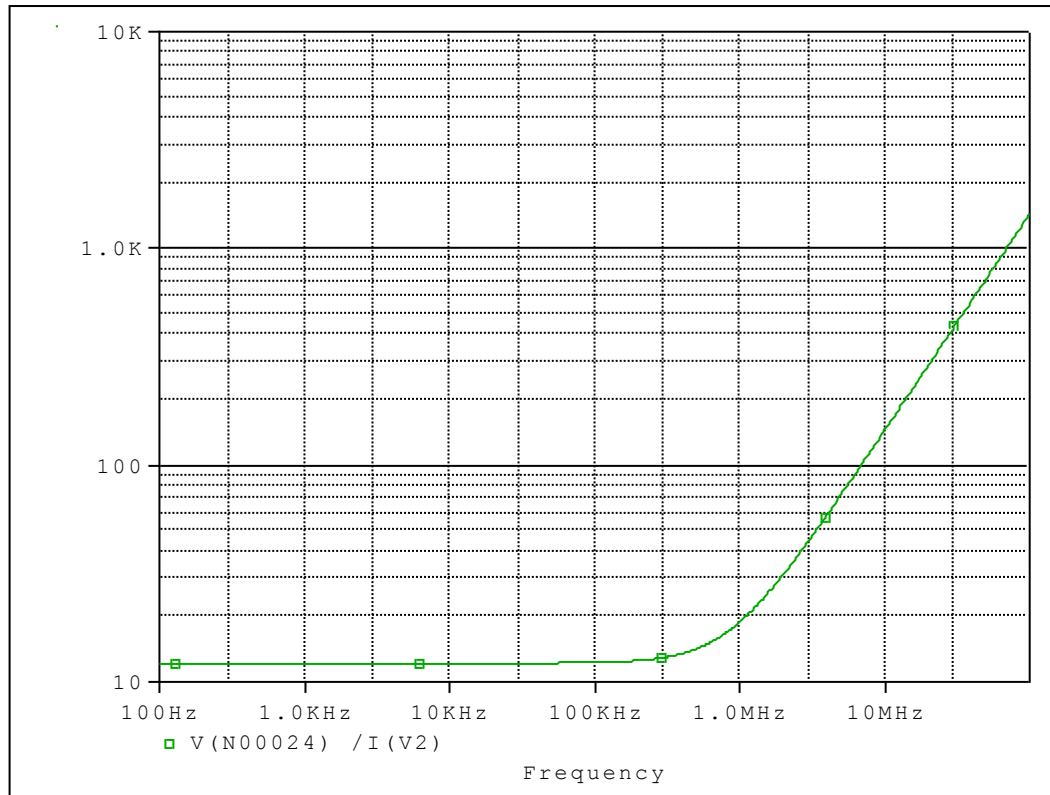
Measurement		
R1		
L1		
C1		

Equivalent circuit

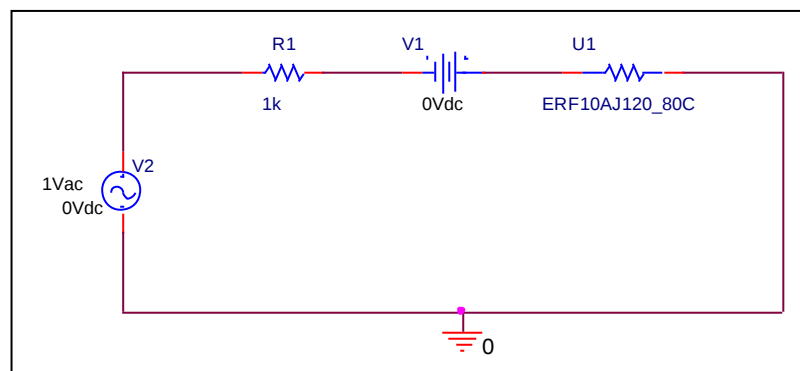


Frequency vs. $|Z|$ Characteristic

Circuit simulation result



Evaluation Circuit



Simulation Result

Frequency(HZ)	Z (ohm) Measurement	Z (ohm) Circuit Simulation	%Error
100	12.053	12.218	1.371
1K	12.058	12.211	1.269
10K	12.046	12.211	1.374
100K	12.156	12.295	1.142
1M	19.423	18.883	2.779
10M	144.743	144.559	0.127