

Device Modeling Report

COMPONENTS: RESISTOR
PART NUMBER: ERF10AJ120
THERMAL:TA=120(degree)
MANUFACTURER: MATSUSHITA



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

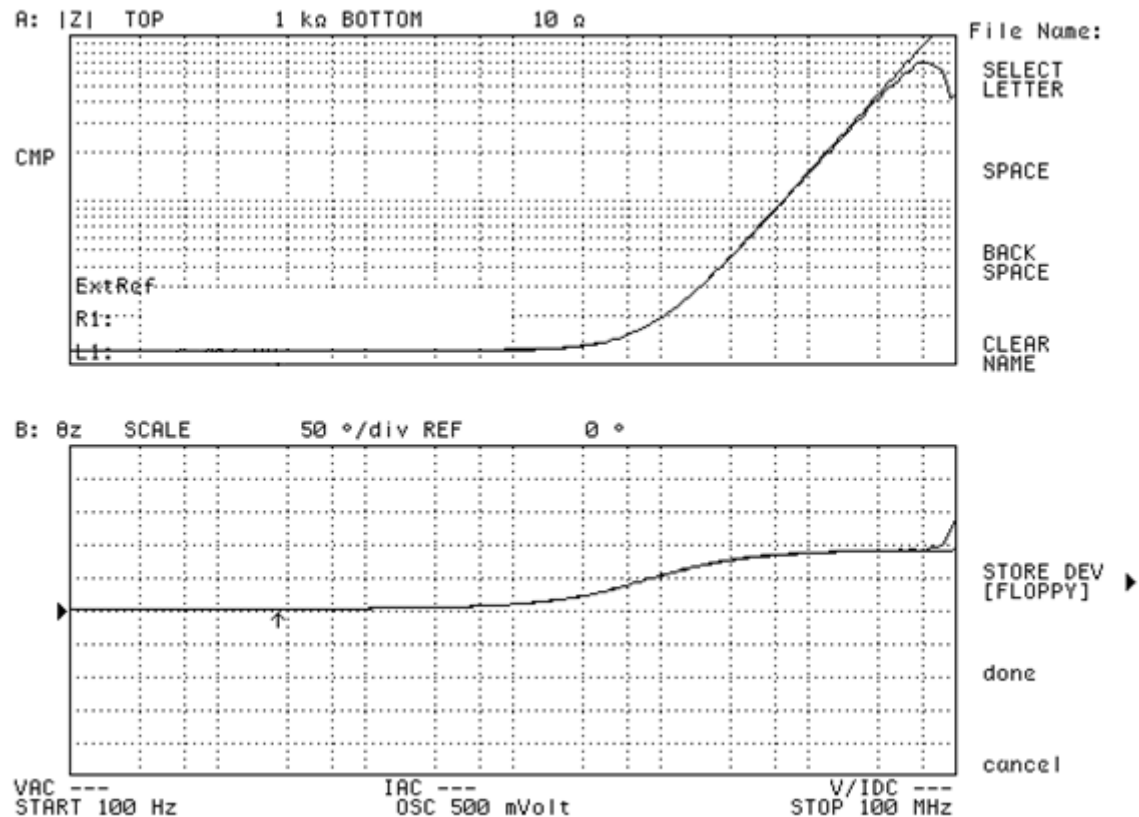
Optimization of Simulation

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

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

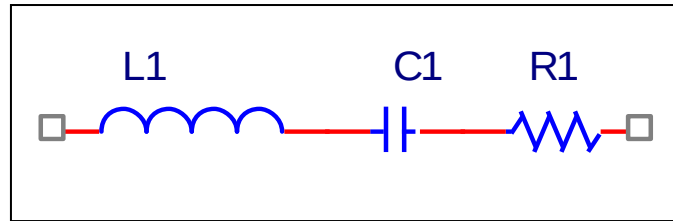
Attention

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



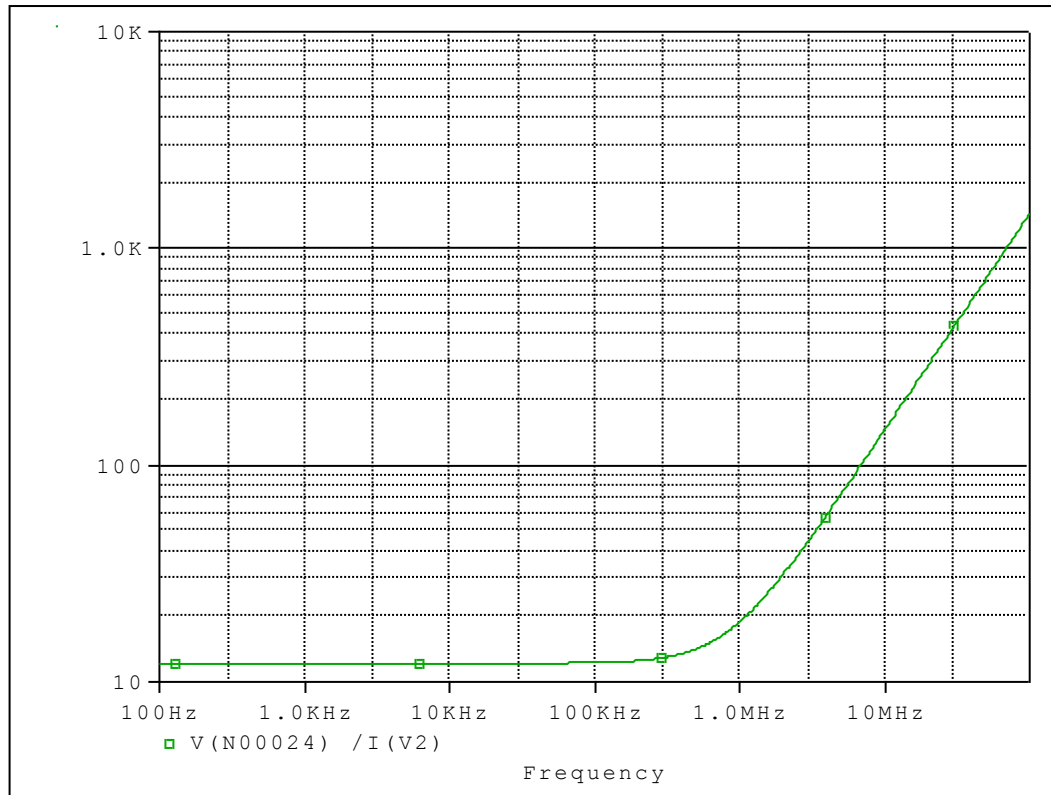
Measurement		
R1		
L1		
C1		

Equivalent circuit

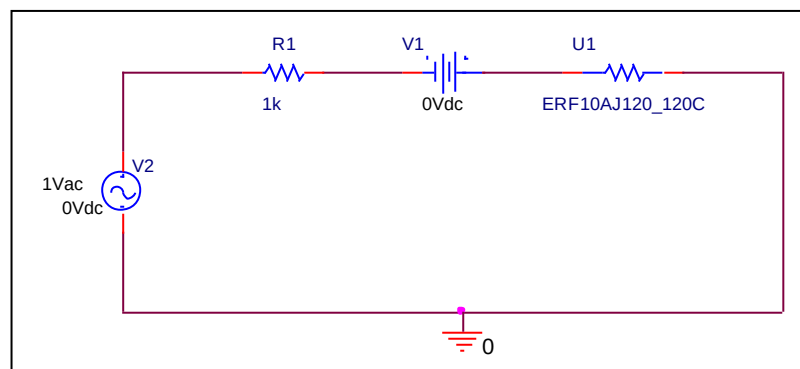


Frequency vs. $|Z|$ Characteristic

Circuit simulation result



Evaluation Circuit



Simulation Result

Frequency(HZ)	Z (ohm) Measurement	Z (ohm) Circuit Simulation	%Error
100	12.046	12.205	1.322
1K	12.058	12.199	1.169
10K	12.036	12.200	1.363
100K	12.146	12.284	1.139
1M	19.458	18.296	5.972
10M	145.125	145.215	0.062