

Device Modeling Report

COMPONENTS: RESISTOR
PART NUMBER: ERF5AKR15
THERMAL:TA=120(degree)
MANUFACTURER: MATSUSHITA



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

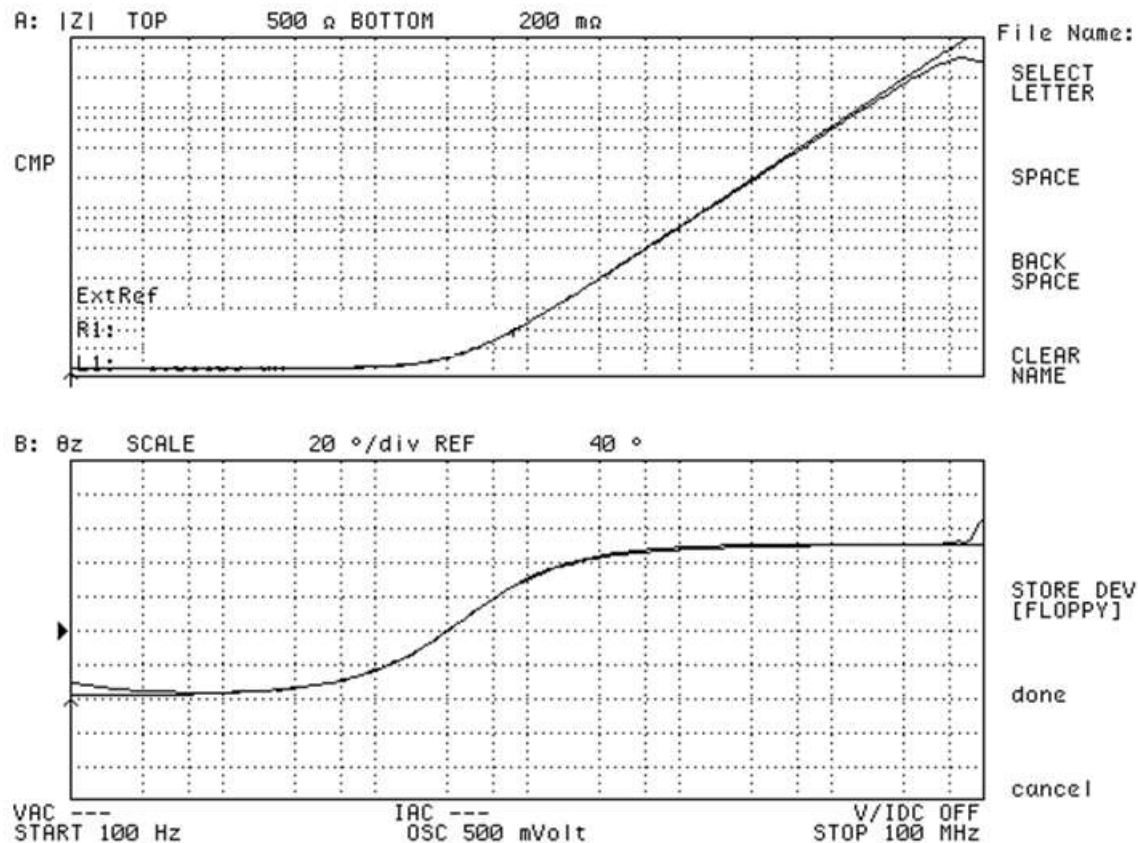
Optimization of Simulation

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

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

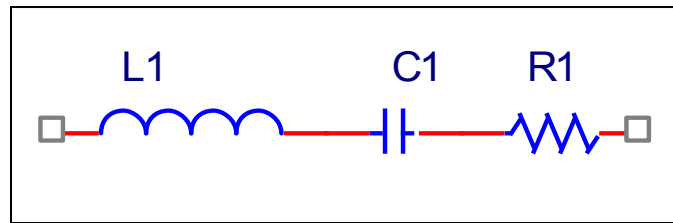
Attention

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



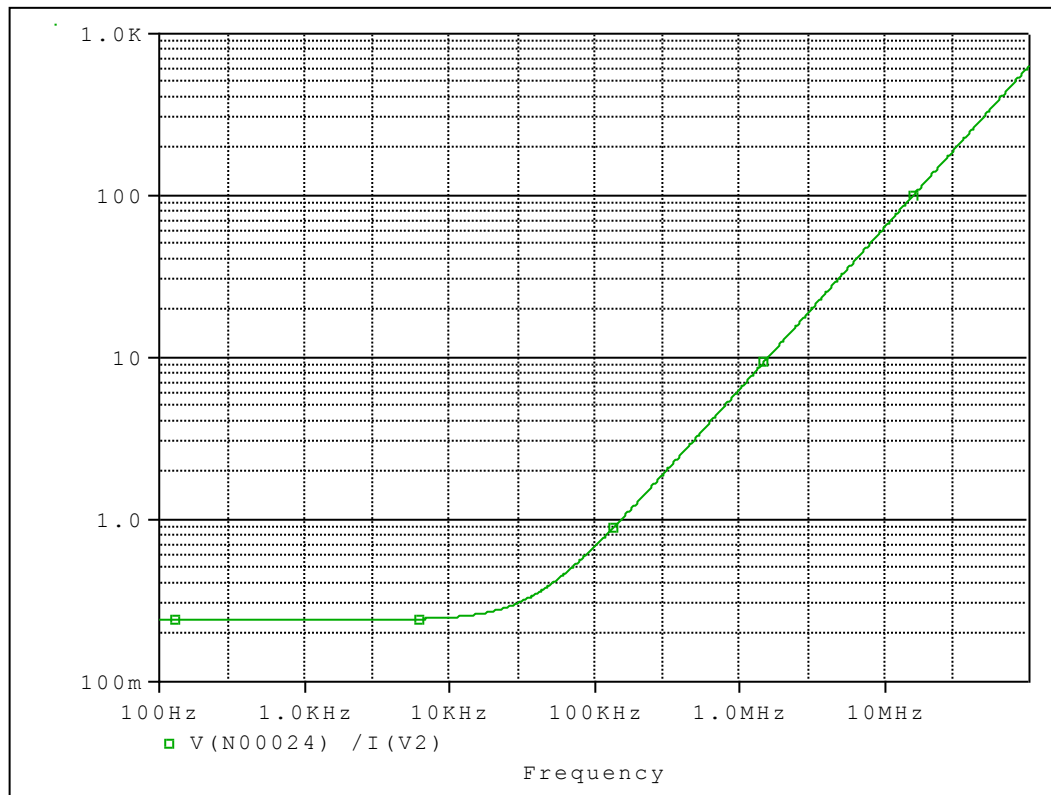
Measurement		
R1		
L1		
C1		

Equivalent circuit

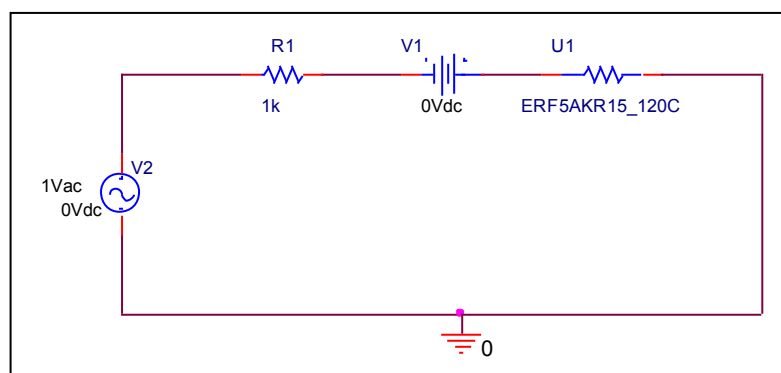


Frequency vs. $|Z|$ Characteristic

Circuit simulation result



Evaluation Circuit



Simulation Result

Frequency(HZ)	Z (ohm) Measurement	Z (ohm) Circuit Simulation	%Error
100	237.682	241.022	1.405
1K	238.107	241.105	1.259
10K	249.166	249.252	0.034
100K	672.932	679.447	0.968
1M	6.372	6.357	0.232
10M	60.123	63.257	5.213