

Device Modeling Report

COMPONENTS: RESISTOR
PART NUMBER: ERF5AKR15
THERMAL: TA=80(degree)
MANUFACTURER: MATSUSHITA



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

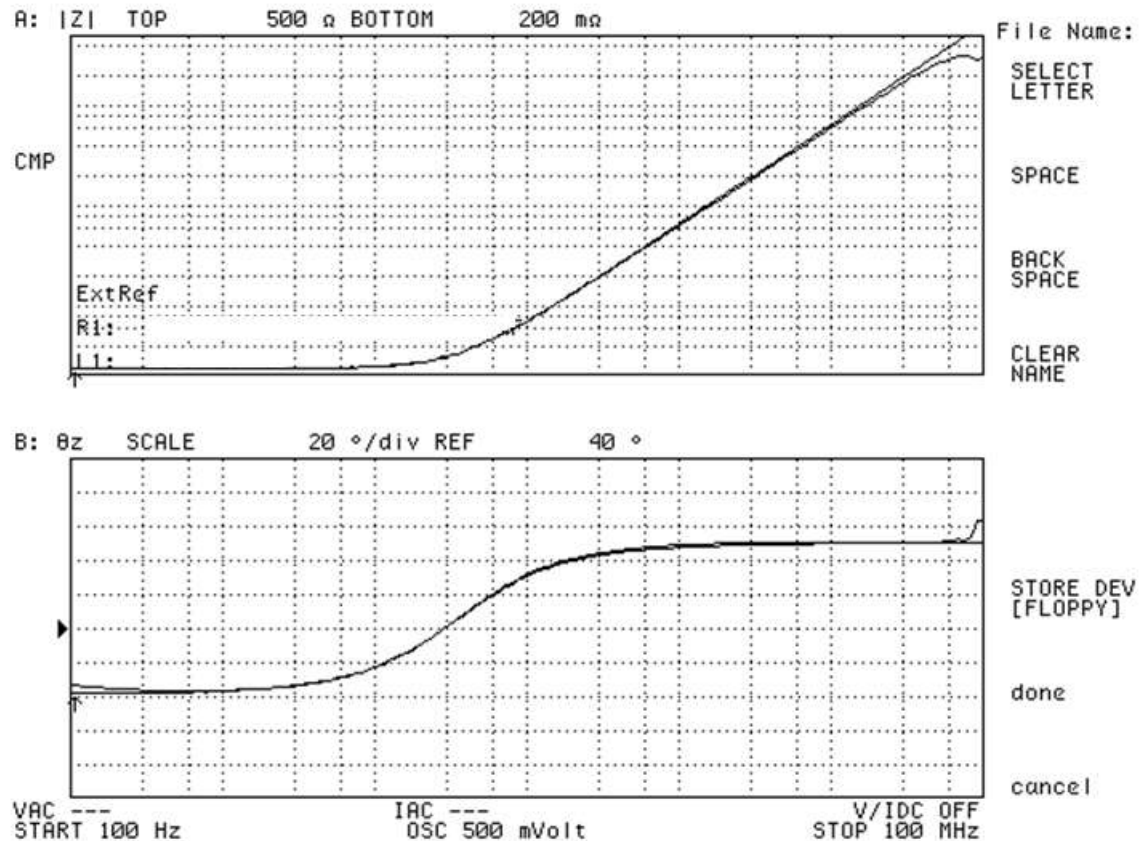
Optimization of Simulation

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

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

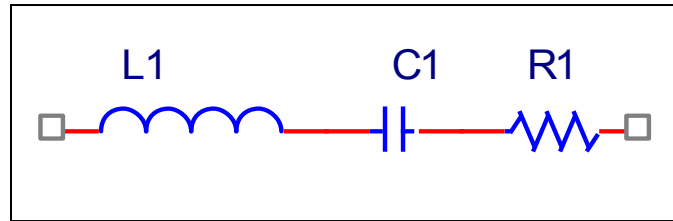
Attention

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



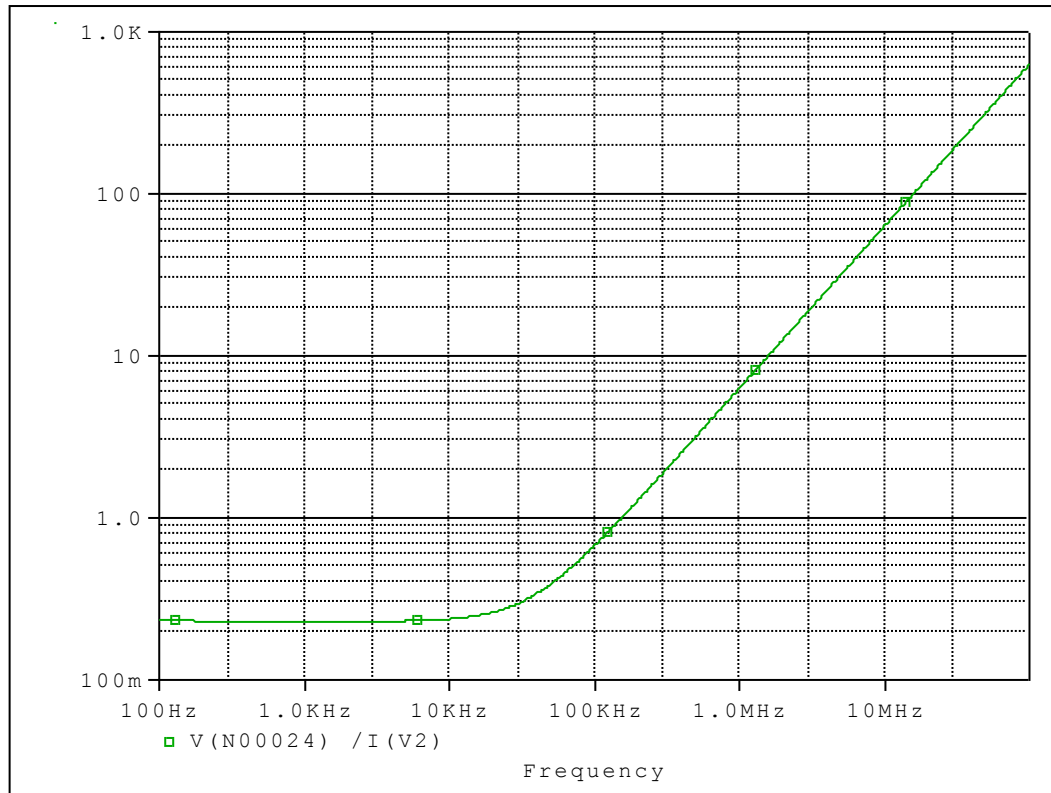
Measurement		
R1		
L1		
C1		

Equivalent circuit

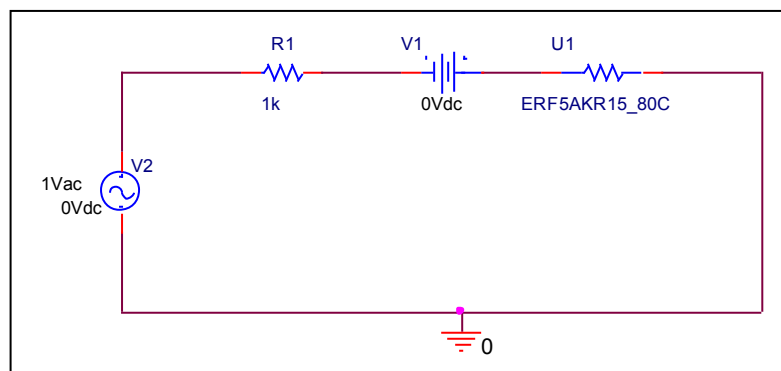


Frequency vs. $|Z|$ Characteristic

Circuit simulation result



Evaluation Circuit



Simulation Result

Frequency(HZ)	Z (ohm) Measurement	Z (ohm) Circuit Simulation	%Error
100	231.561	235.838	1.847
1K	230.914	229.333	0.685
10K	242.136	237.734	1.818
100K	671.388	672.276	0.132
1M	6.354	6.324	0.467
10M	60.010	63.201	5.317