

Device Modeling Report

COMPONENTS: RESISTOR
PART NUMBER: ERF5AJ101
THERMAL: TA=120(degree)
MANUFACTURER: MATSUSHITA



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

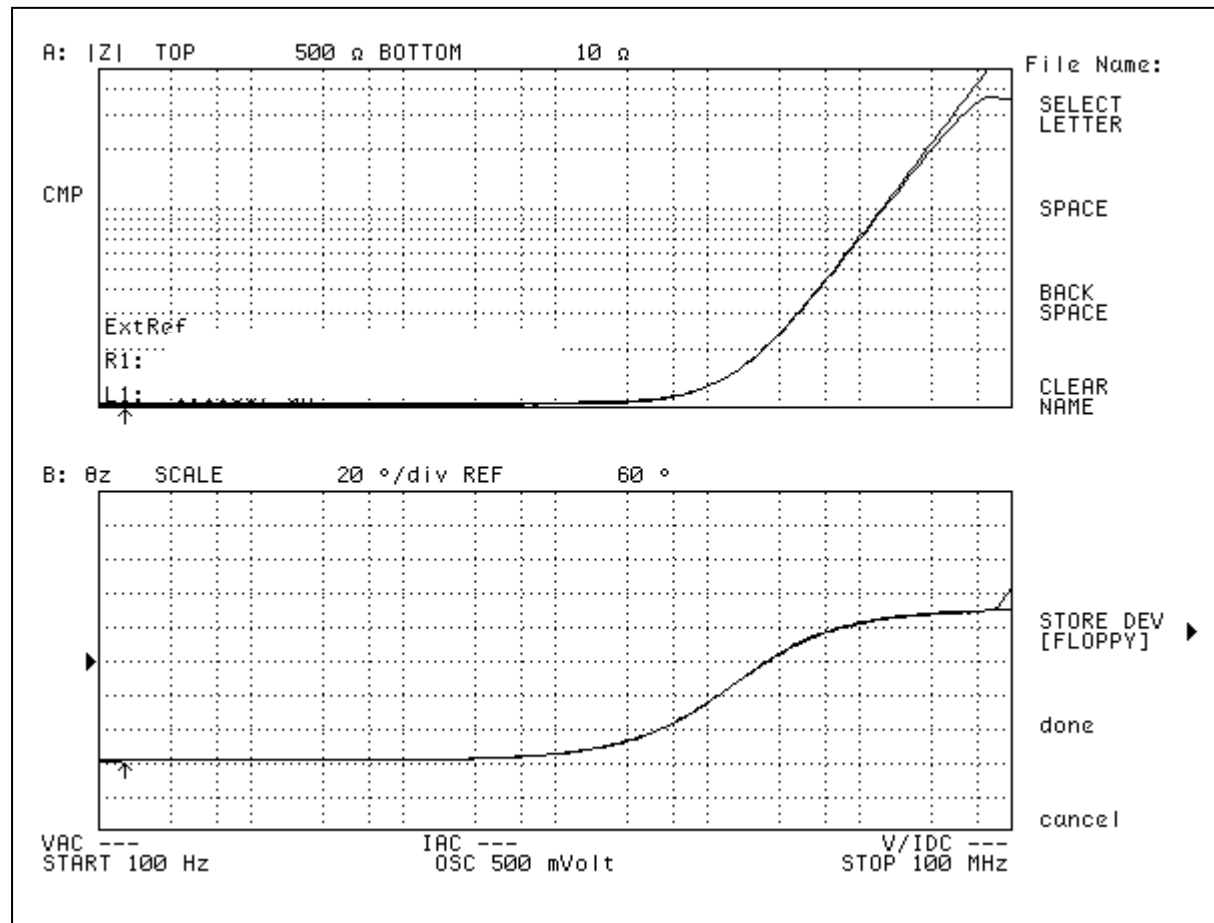
Optimization of Simulation

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

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

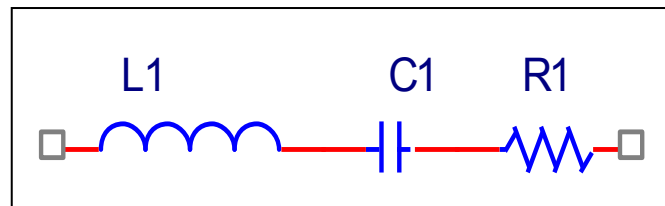
Attention

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



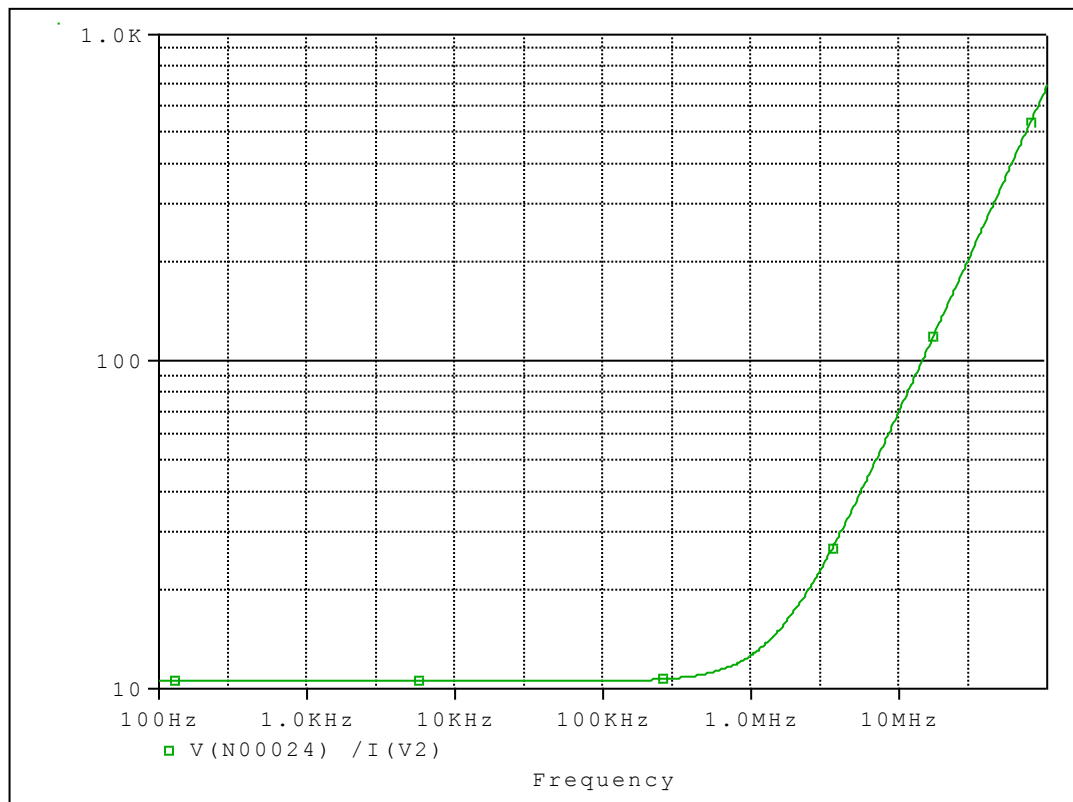
Measurement		
R1		
L1		
C1		

Equivalent circuit

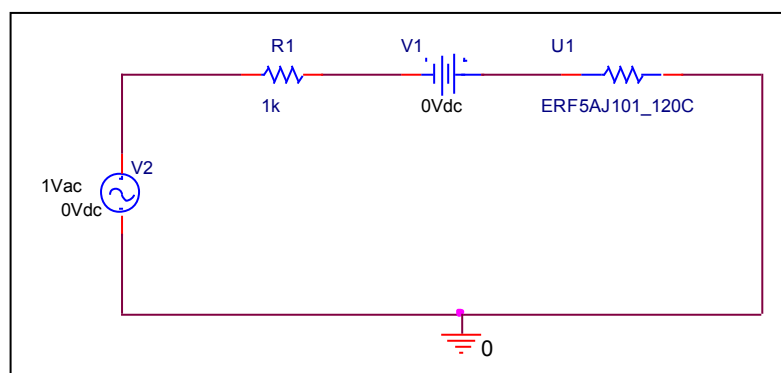


Frequency vs. $|Z|$ Characteristic

Circuit simulation result



Evaluation Circuit



Simulation Result

Frequency(HZ)	Z (ohm) Measurement	Z (ohm) Circuit Simulation	%Error
100	10.328	10.548	2.128
1K	10.330	10.548	2.109
10K	10.338	10.548	2.030
100K	10.365	10.571	1.983
1M	12.815	12.565	1.948
10M	70.481	70.840	0.509