

Device Modeling Report

COMPONENTS: RESISTOR
PART NUMBER: ERF5AJ101
THERMAL: TA=80(degree)
MANUFACTURER: MATSUSHITA



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

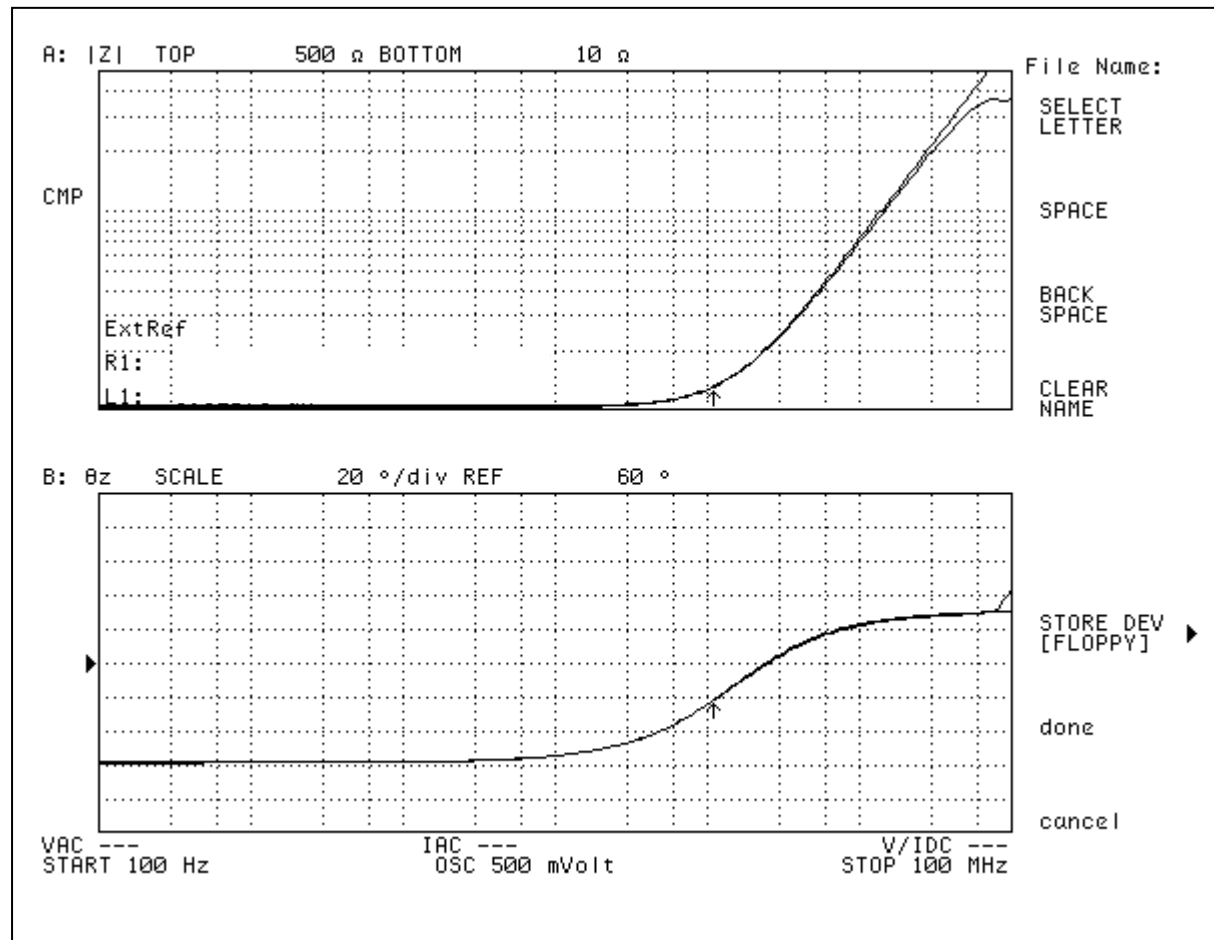
Optimization of Simulation

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

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

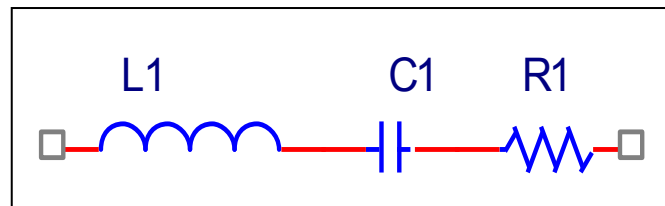
Attention

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



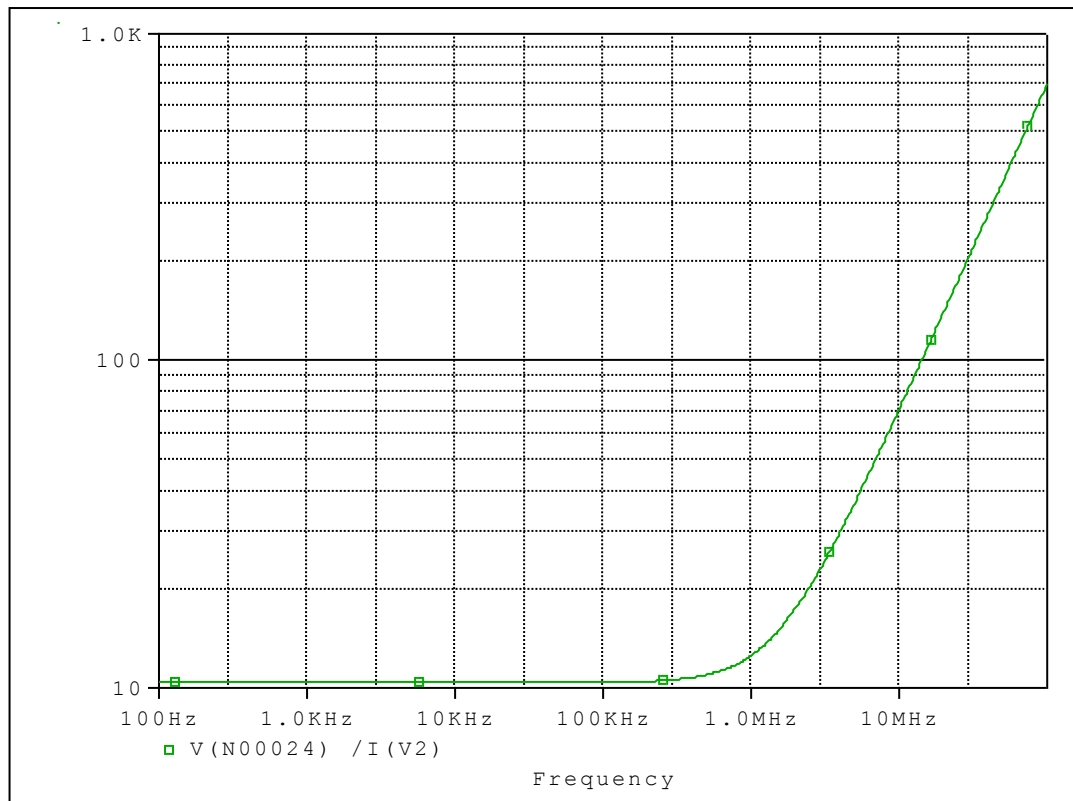
Measurement		
R1		
L1		
C1		

Equivalent circuit

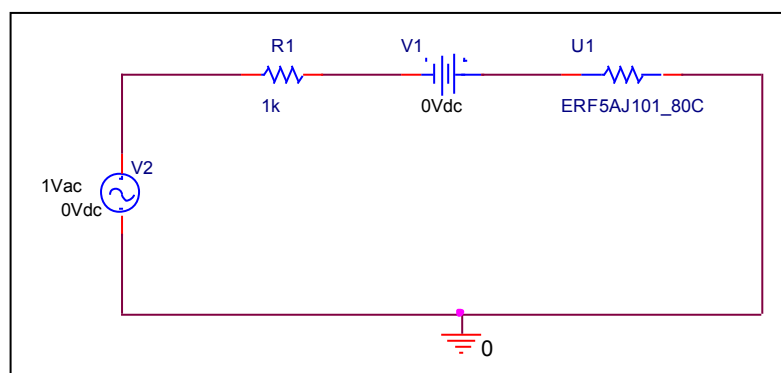


Frequency vs. $|Z|$ Characteristic

Circuit simulation result



Evaluation Circuit



Simulation Result

Frequency(HZ)	 Z (ohm) Measurement	 Z (ohm) Circuit Simulation	%Error
100	10.259	10.386	1.235
1K	10.267	10.386	1.164
10K	10.259	10.386	1.240
100K	10.295	10.410	1.120
1M	12.712	12.549	1.283
10M	69.654	71.183	2.196