

Device Modeling Report

COMPONENTS: RESISTOR
PART NUMBER: ERF5AJ510
THERMAL: TA=150(degree)
MANUFACTURER: MATSUSHITA



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

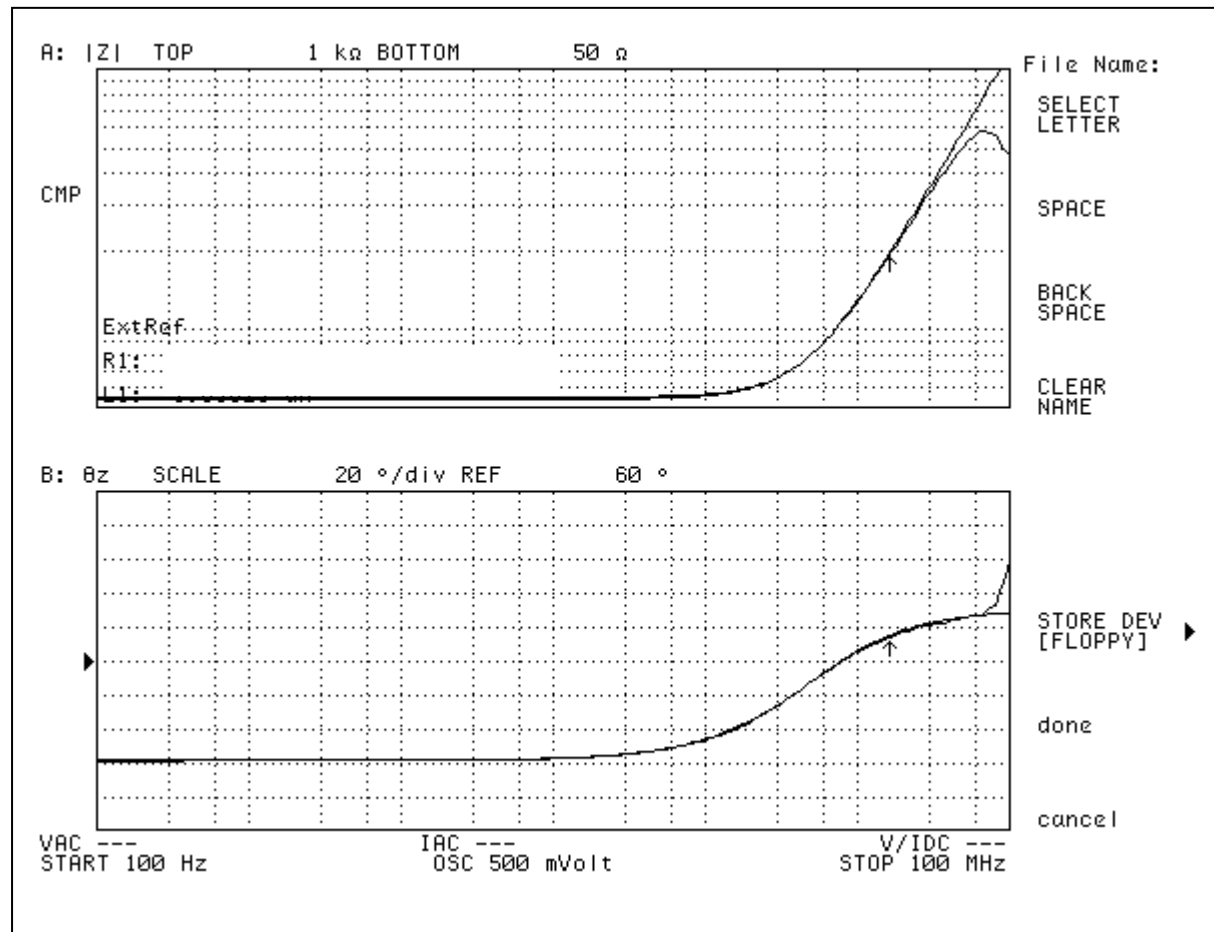
Optimization of Simulation

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

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

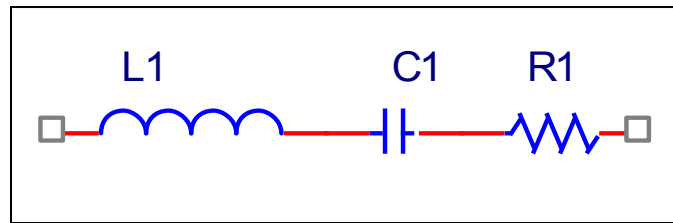
Attention

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



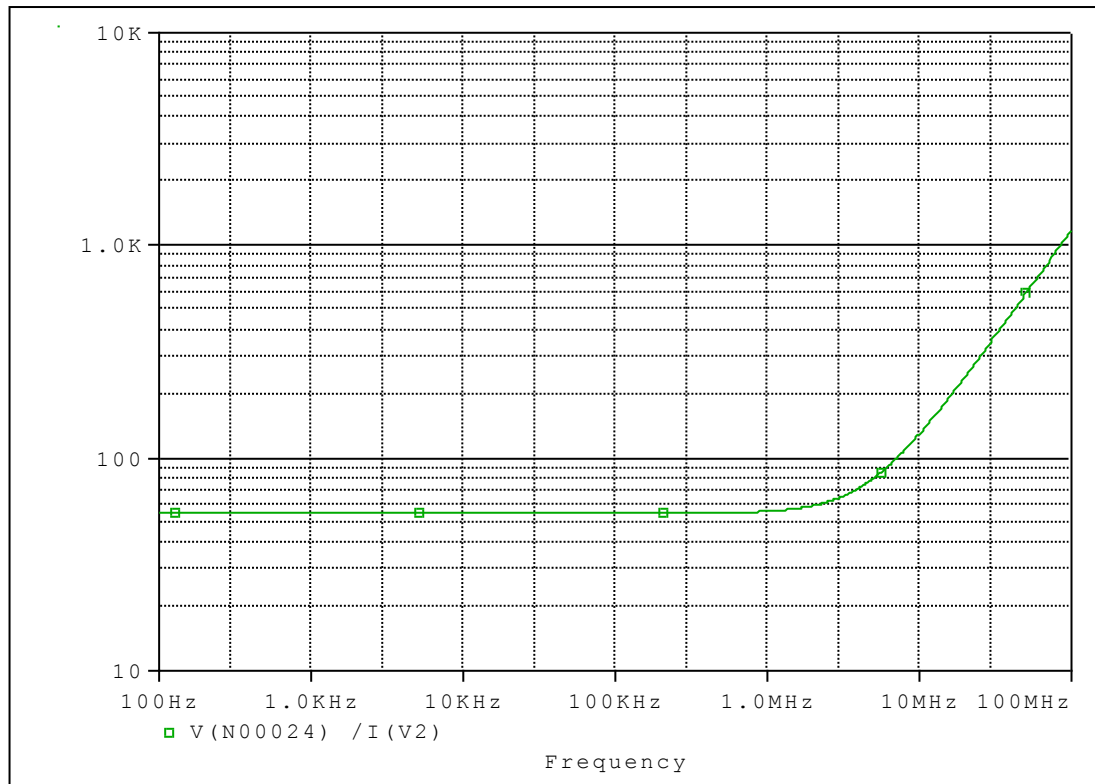
Measurement		
R1		
L1		
C1		

Equivalent circuit

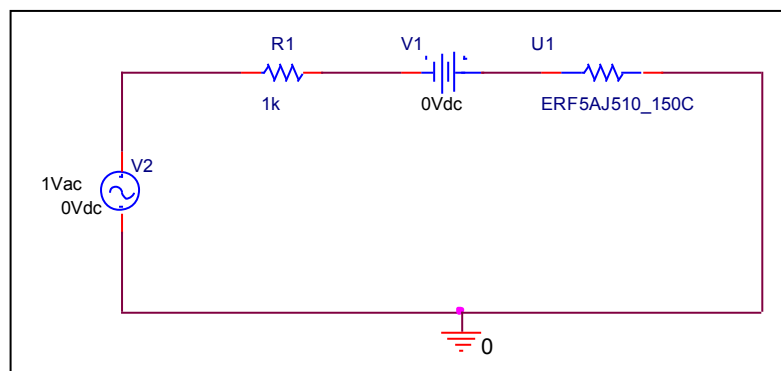


Frequency vs. $|Z|$ Characteristic

Circuit simulation result



Evaluation Circuit



Simulation Result

Frequency(HZ)	 Z (ohm) Measurement	 Z (ohm) Circuit Simulation	%Error
100	53.831	54.976	2.127
1K	53.821	54.950	2.097
10K	53.860	54.950	2.023
100K	53.849	54.963	2.069
1M	55.557	56.200	1.158
10M	129.184	130.065	0.682