

Device Modeling Report

COMPONENTS: RESISTOR
PART NUMBER: ERF5AJ221
THERMAL: TA=150(degree)
MANUFACTURER: MATSUSHITA



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

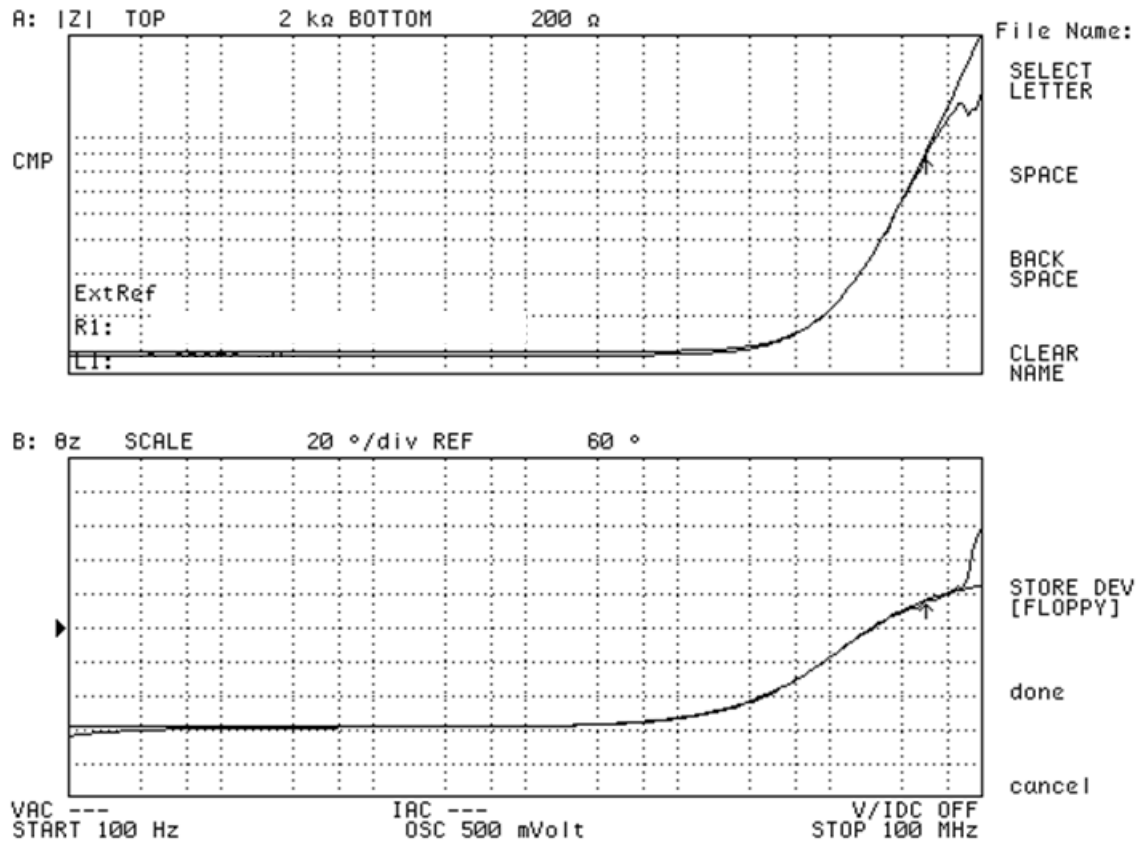
Optimization of Simulation

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

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

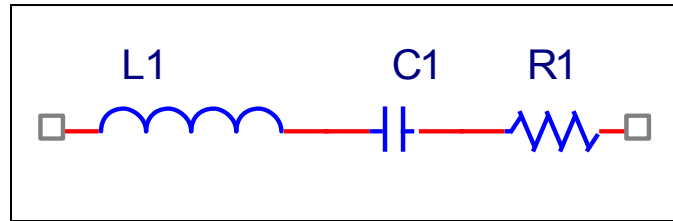
Attention

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



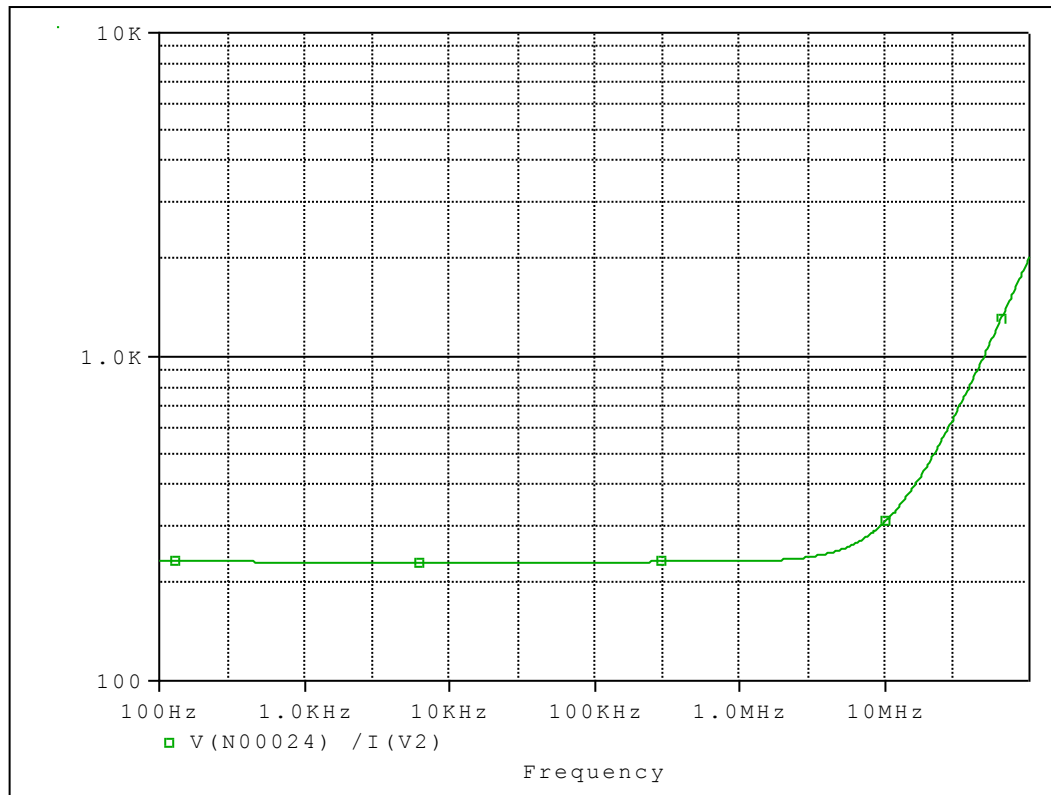
Measurement		
R1		
L1		
C1		

Equivalent circuit

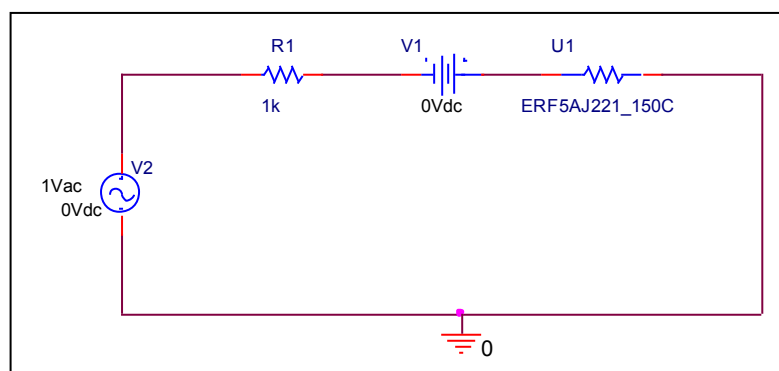


Frequency vs. $|Z|$ Characteristic

Circuit simulation result



Evaluation Circuit



Simulation Result

Frequency(HZ)	 Z (ohm) Measurement	 Z (ohm) Circuit Simulation	%Error
100	226.744	233.958	3.181
1K	226.775	232.921	2.710
10K	226.882	232.911	2.657
100K	226.784	232.920	2.706
1M	228.499	233.782	2.312
10M	311.401	308.042	1.079