

Device Modeling Report

COMPONENTS: RESISTOR
PART NUMBER: ERF10AJ431
THERMAL:TA=150(degree)
MANUFACTURER: MATSUSHITA



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

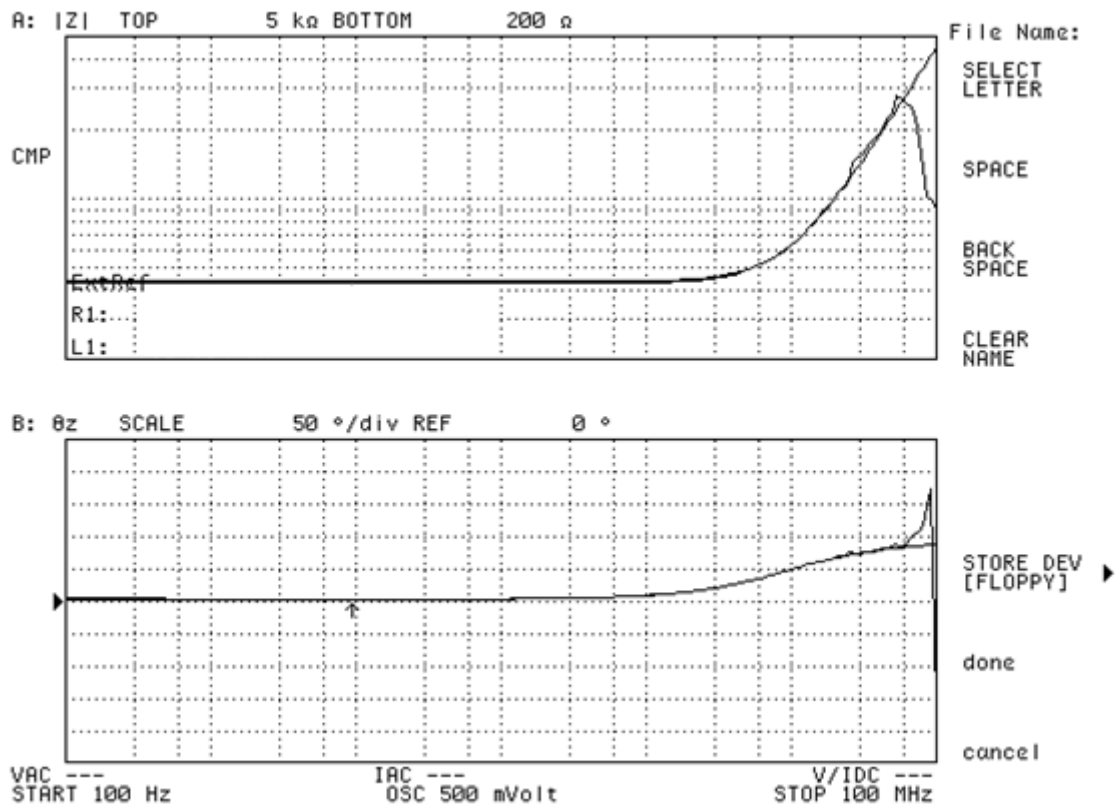
Optimization of Simulation

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

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

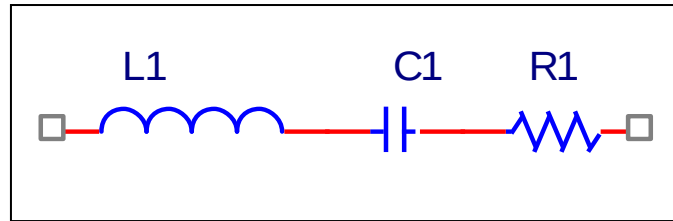
Attention

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



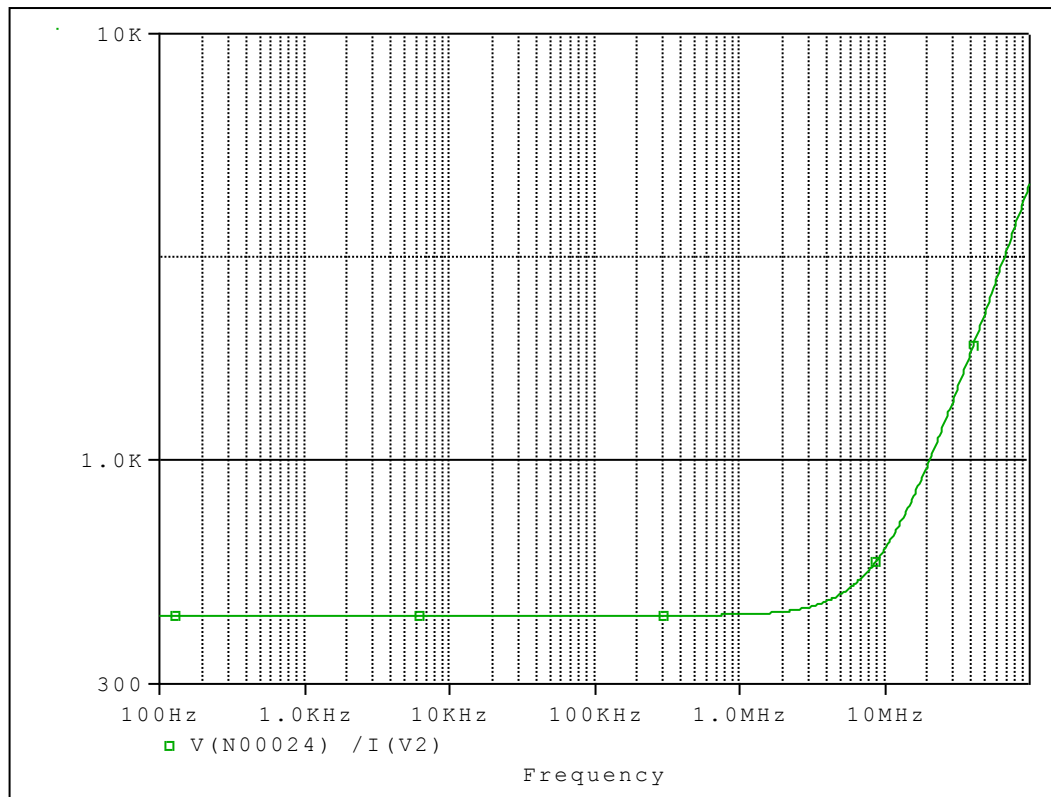
Measurement		
R1		
L1		
C1		

Equivalent circuit

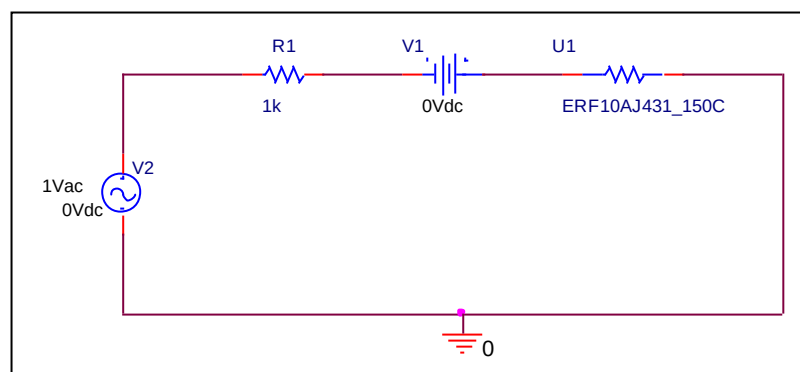


Frequency vs. $|Z|$ Characteristic

Circuit simulation result



Evaluation Circuit



Simulation Result

Frequency(HZ)	Z (ohm) Measurement	Z (ohm) Circuit Simulation	%Error
100	426.656	434.643	1.872
1K	426.756	434.043	1.707
10K	426.670	434.039	1.727
100K	426.790	434.016	1.693
1M	429.564	436.293	1.566
10M	626.678	620.160	1.040