

Device Modeling Report

COMPONENTS: RESISTOR
PART NUMBER: ERF5AJ470
MANUFACTURER: MATSUSHITA



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

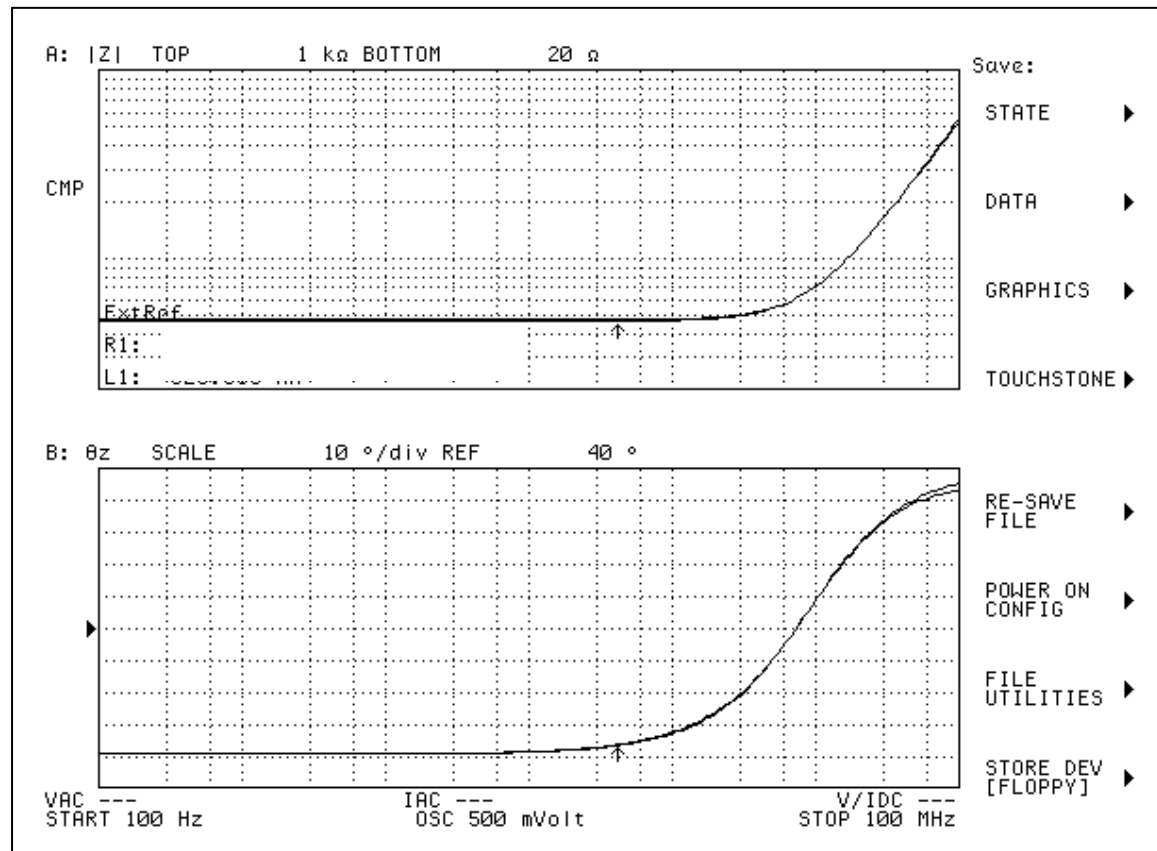
Optimization of Simulation

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

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

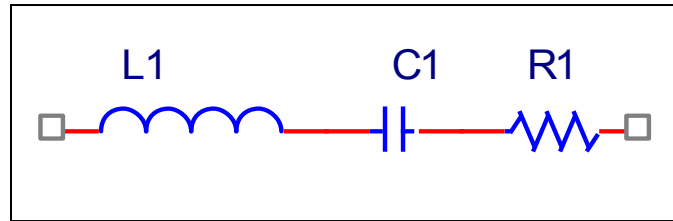
Attention

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



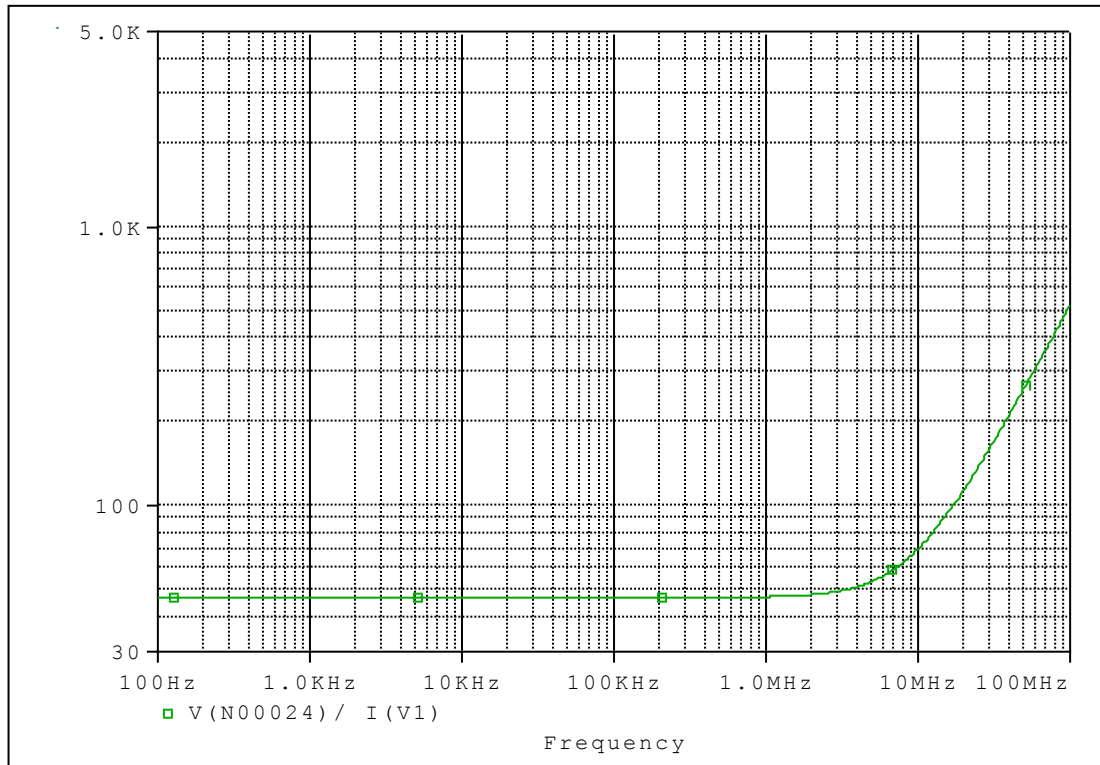
Measurement		
R1		
L1		
C1		

Equivalent circuit

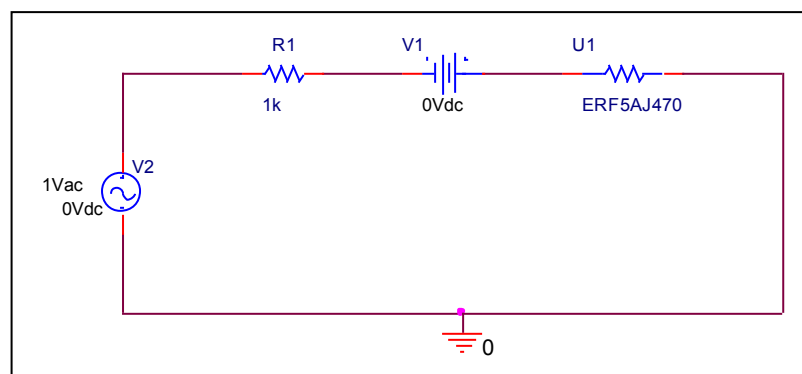


Frequency vs. $|Z|$ Characteristic

Circuit simulation result



Evaluation Circuit



Simulation Result

Frequency(HZ)	Z (ohm) Measurement	Z (ohm) Circuit Simulation	%Error
100	45.913	46.906	2.162
1K	45.924	46.905	2.136
10K	45.906	46.905	2.176
100K	45.922	46.908	2.148
1M	46.399	47.191	1.708
10M	70.046	69.993	0.076
100M	546.393	521.630	4.532