

Device Modeling Report

COMPONENTS: RESISTOR
PART NUMBER: ERF5AJ470
THERMAL: TA=120(degree)
MANUFACTURER: MATSUSHITA



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

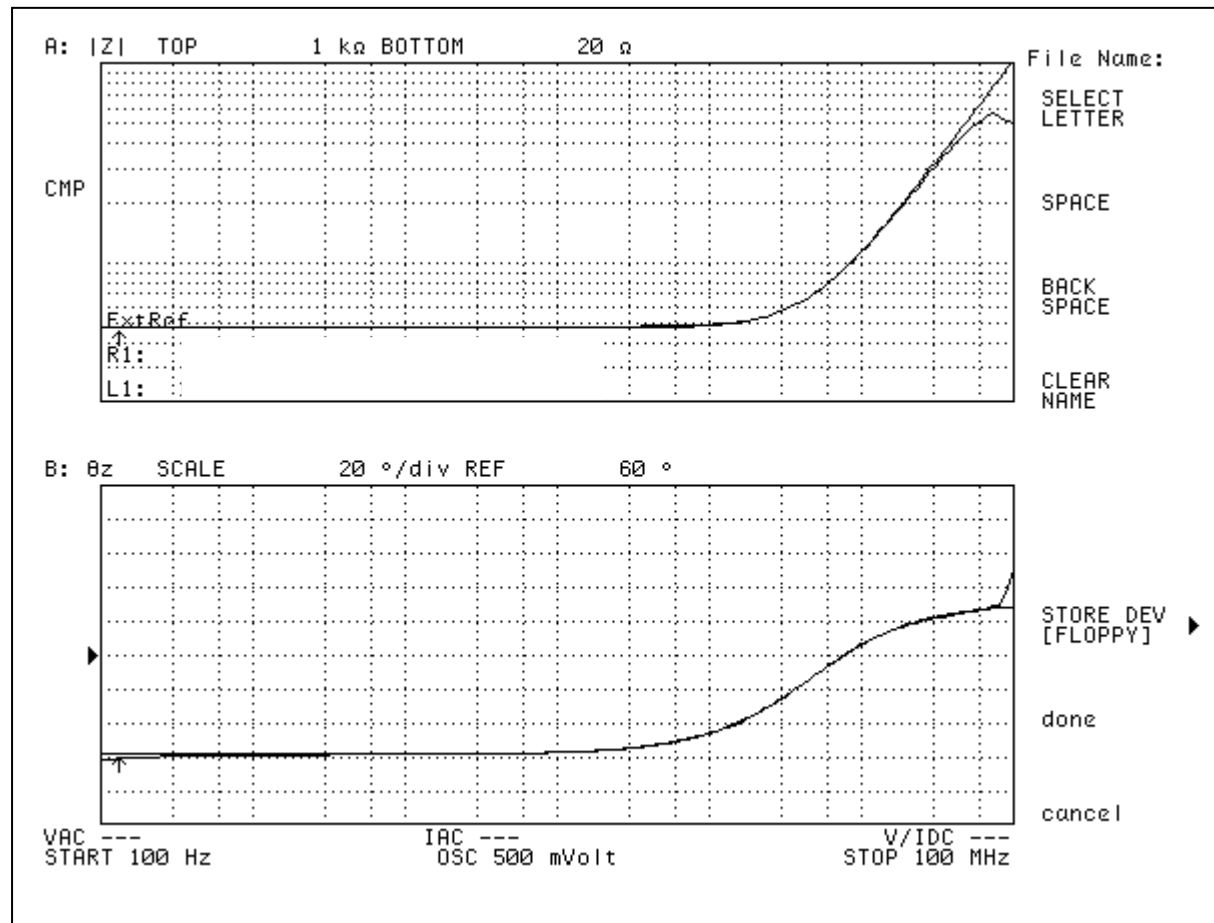
Optimization of Simulation

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

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

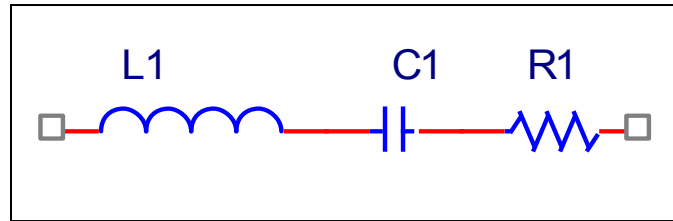
Attention

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



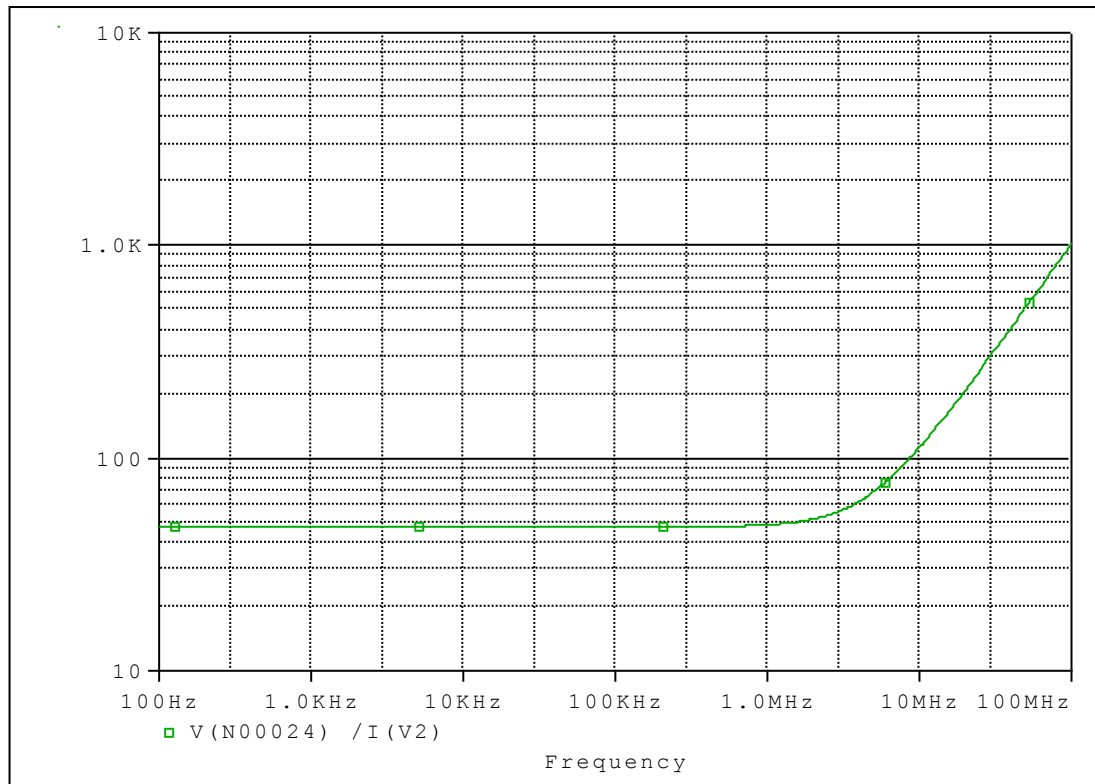
Measurement		
R1		
L1		
C1		

Equivalent circuit

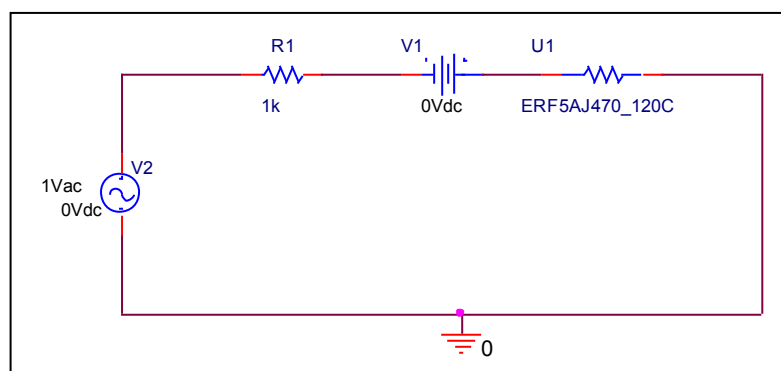


Frequency vs. $|Z|$ Characteristic

Circuit simulation result



Evaluation Circuit



Simulation Result

Frequency(HZ)	 Z (ohm) Measurement	 Z (ohm) Circuit Simulation	%Error
100	46.720	47.580	1.840
1K	46.722	47.510	1.686
10K	46.753	47.510	1.620
100K	46.760	47.521	1.628
1M	48.256	48.587	0.686
10M	113.611	112.547	0.936