

Device Modeling Report

COMPONENTS: RESISTOR
PART NUMBER: ERF5AJ470
THERMAL: TA=80(degree)
MANUFACTURER: MATSUSHITA



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

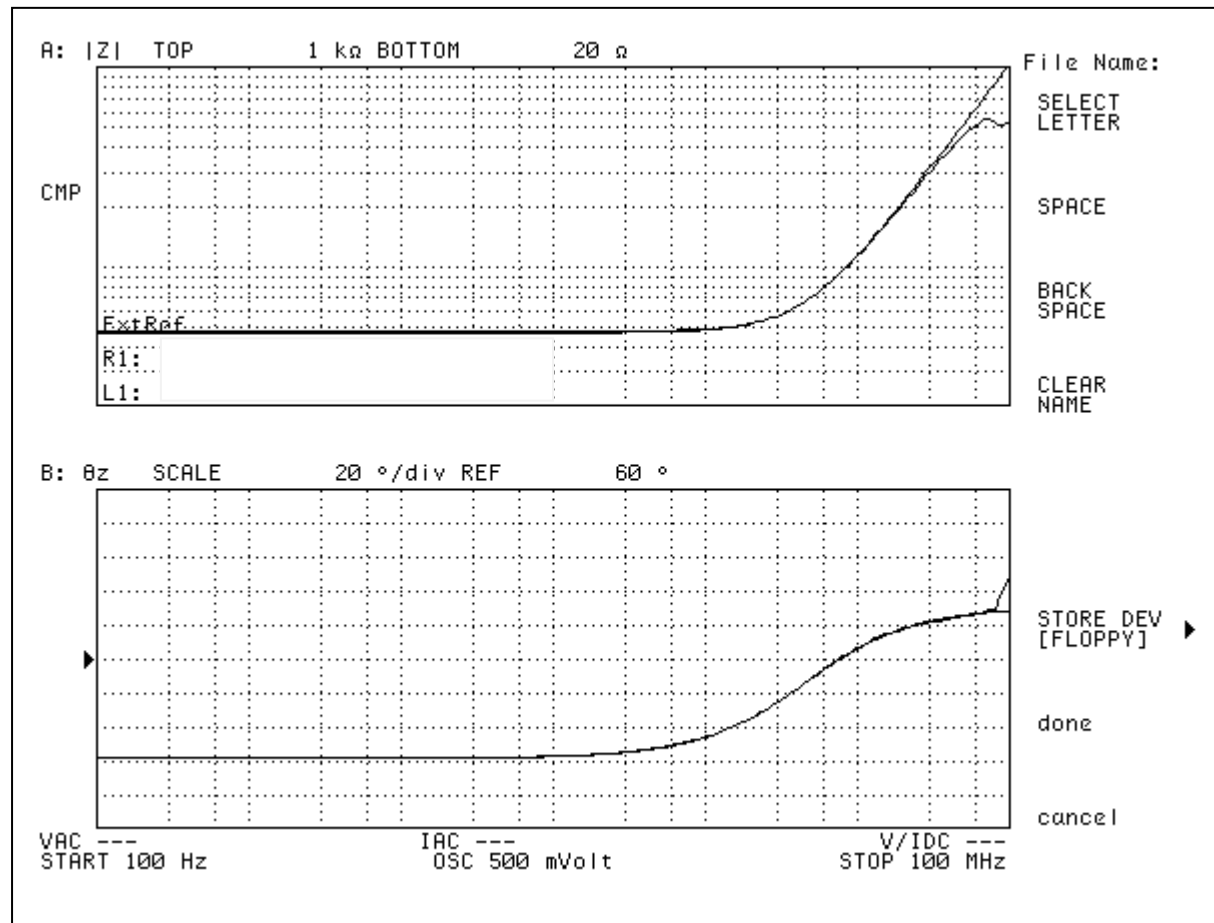
Optimization of Simulation

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

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

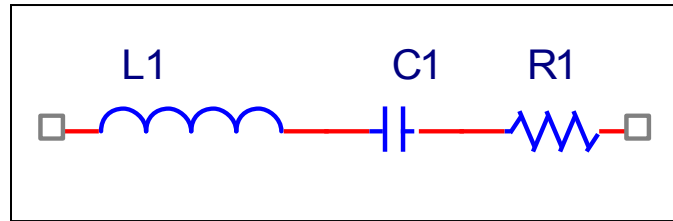
Attention

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



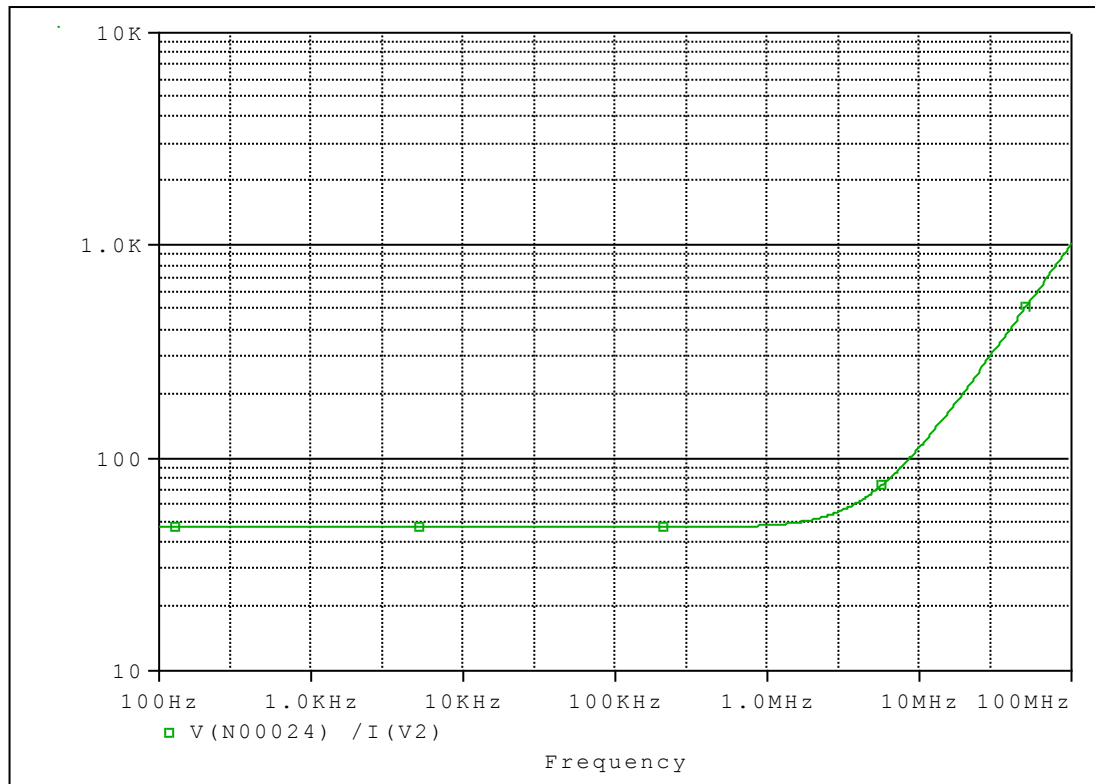
Measurement		
R1		
L1		
C1		

Equivalent circuit

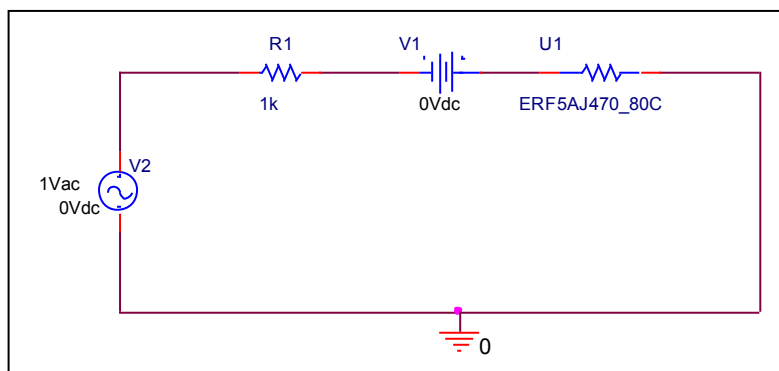


Frequency vs. $|Z|$ Characteristic

Circuit simulation result



Evaluation Circuit



Simulation Result

Frequency(HZ)	Z (ohm) Measurement	Z (ohm) Circuit Simulation	%Error
100	46.436	47.226	1.702
1K	46.434	47.221	1.694
10K	46.436	47.220	1.689
100K	46.458	47.231	1.664
1M	47.955	48.306	0.732
10M	113.398	112.225	1.035