

Device Modeling Report

COMPONENTS: RESISTOR
PART NUMBER: ERF10AJ510
THERMAL:TA=80(degree)
MANUFACTURER: MATSUSHITA



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

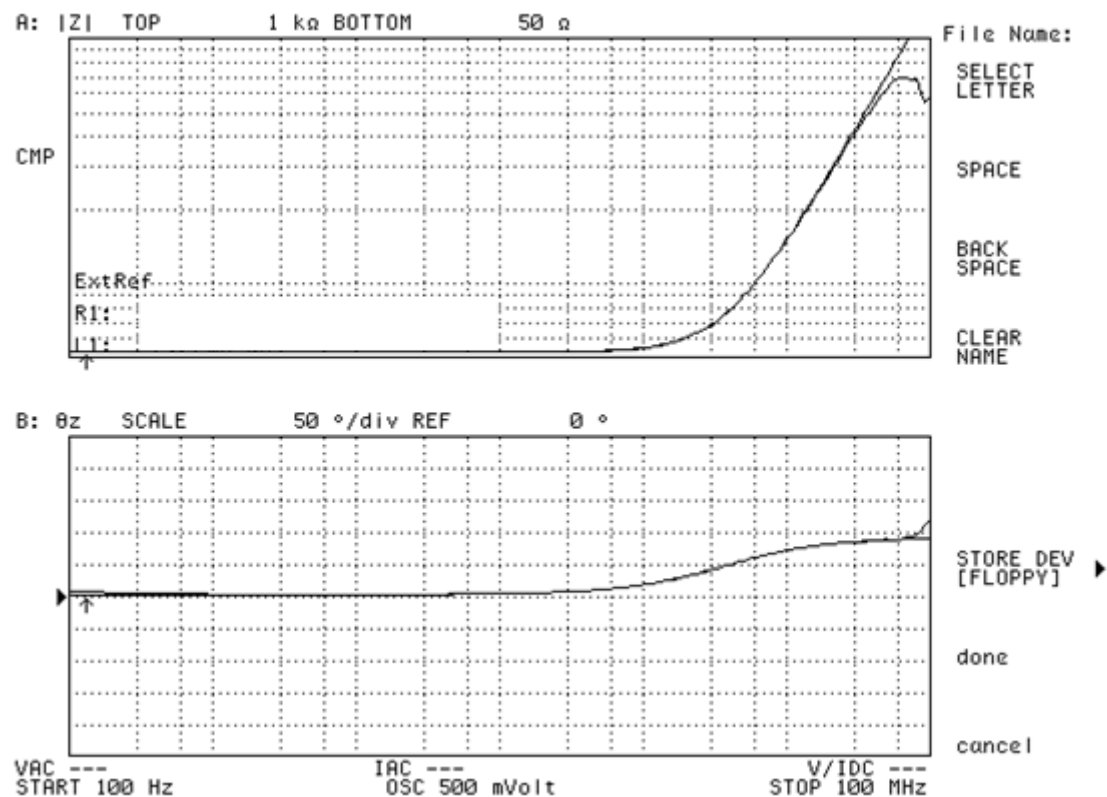
Optimization of Simulation

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

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

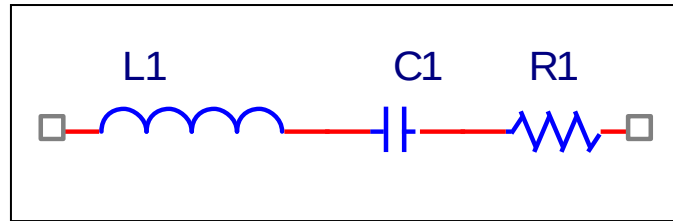
Attention

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



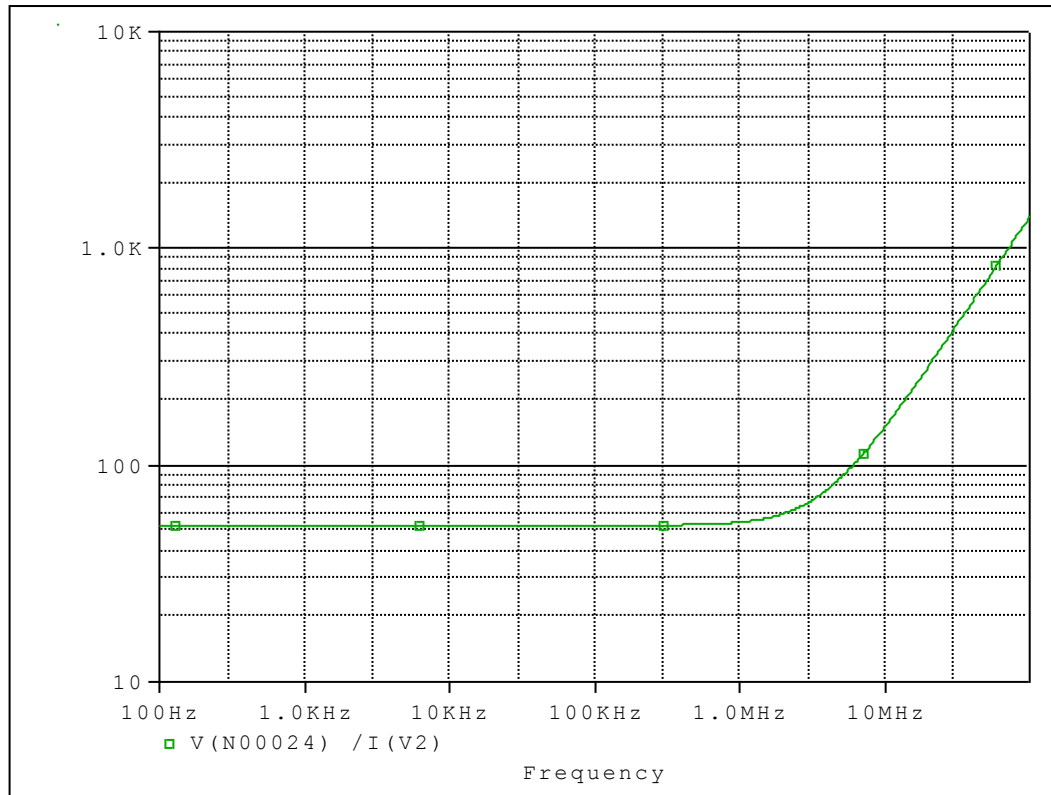
Measurement		
R1		
L1		
C1		

Equivalent circuit

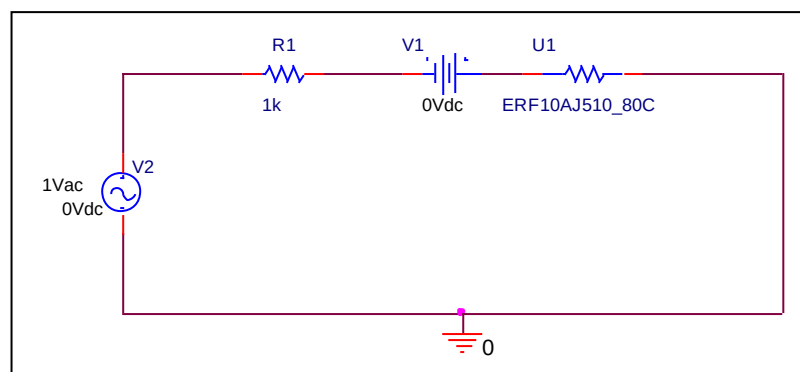


Frequency vs. $|Z|$ Characteristic

Circuit simulation result



Evaluation Circuit



Simulation Result

Frequency(HZ)	Z (ohm) Measurement	Z (ohm) Circuit Simulation	%Error
100	52.393	52.704	0.594
1K	52.401	52.739	0.645
10K	52.391	52.740	0.667
100K	52.375	52.758	0.731
1M	54.614	54.756	0.261
10M	151.722	149.630	1.379