

Device Modeling Report

COMPONENTS: RESISTOR
PART NUMBER: ERF10AJ181
THERMAL:TA= 150(degree)
MANUFACTURER: MATSUSHITA



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

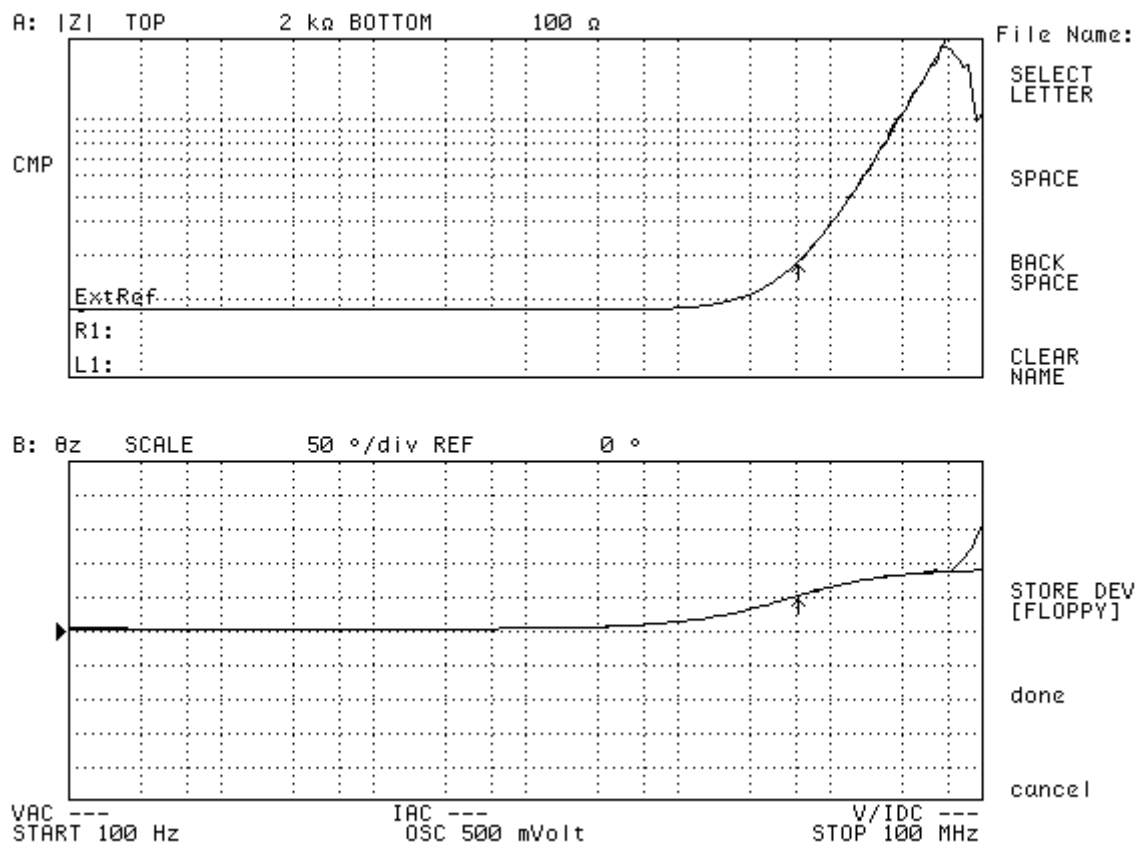
Optimization of Simulation

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

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

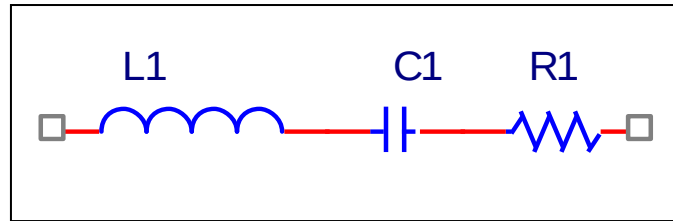
Attention

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



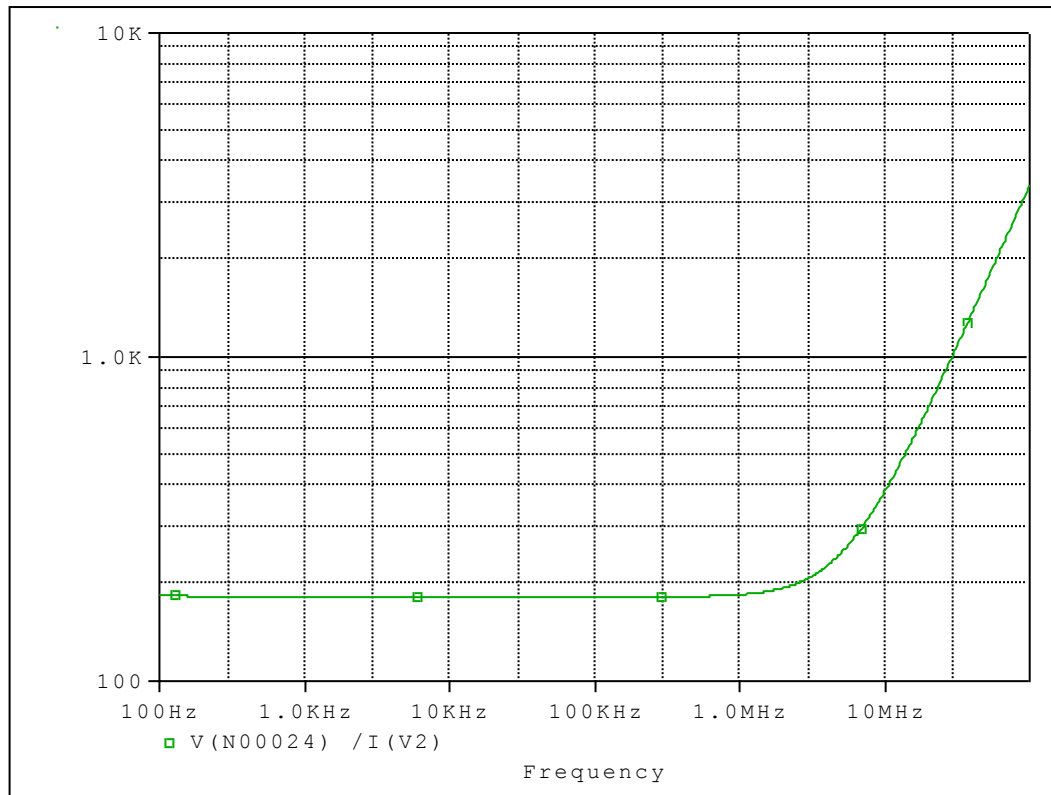
Measurement		
R1		
L1		
C1		

Equivalent circuit

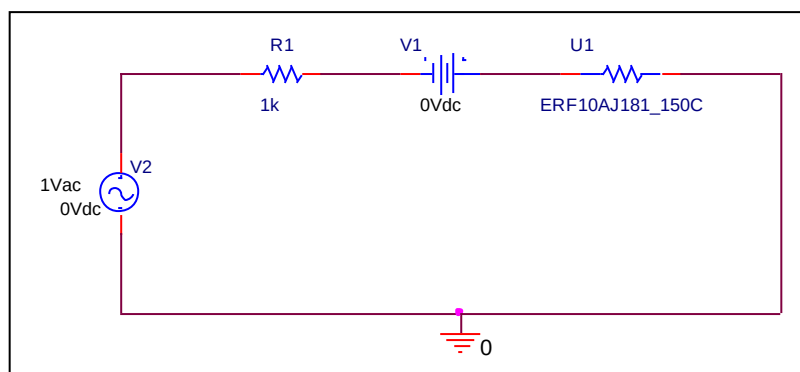


Frequency vs. |Z| Characteristic

Circuit simulation result



Evaluation Circuit



Simulation Result

Frequency(HZ)	Z (ohm) Measurement	Z (ohm) Circuit Simulation	%Error
100	181.384	184.768	1.865
1K	181.430	181.775	0.190
10K	181.512	181.745	0.128
100K	181.461	181.776	0.174
1M	185.175	184.864	0.168
10M	389.448	383.923	1.419