

Device Modeling Report

COMPONENTS: RESISTOR
PART NUMBER: ERF10AJ181
THERMAL:TA= 120(degree)
MANUFACTURER: MATSUSHITA



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

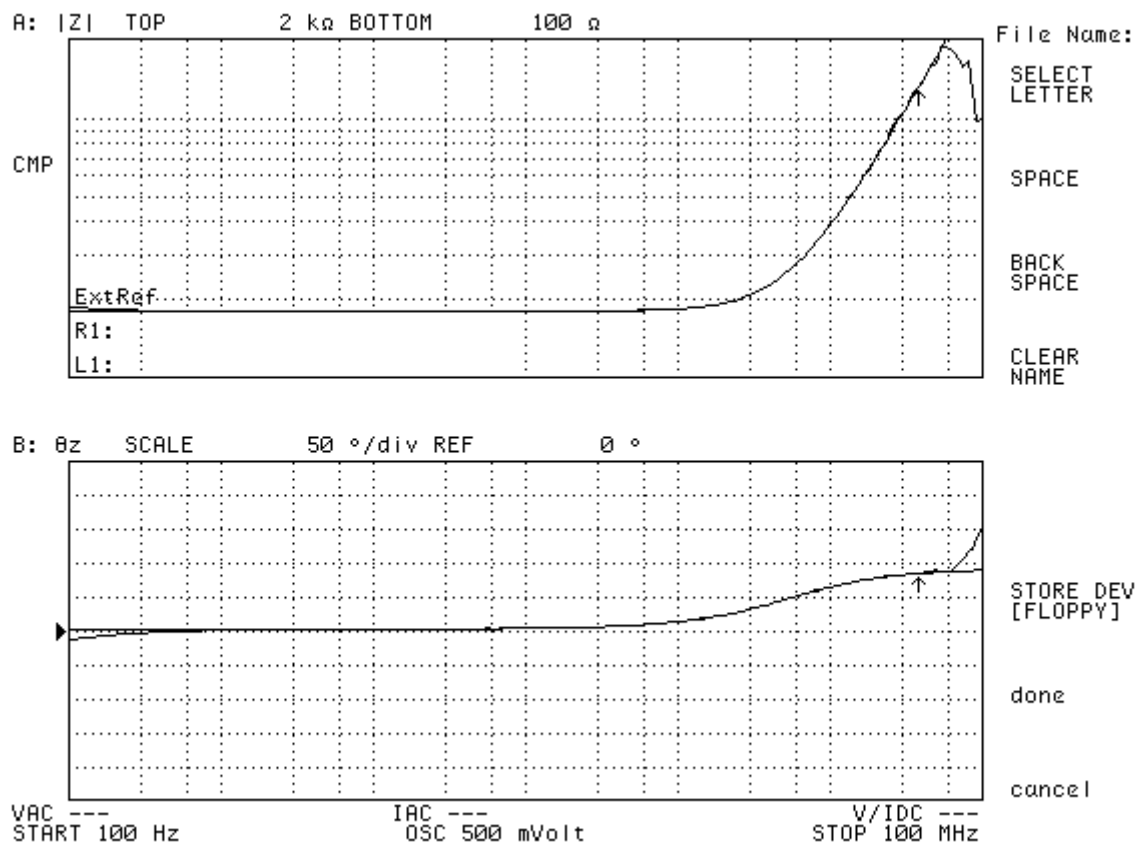
Optimization of Simulation

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

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

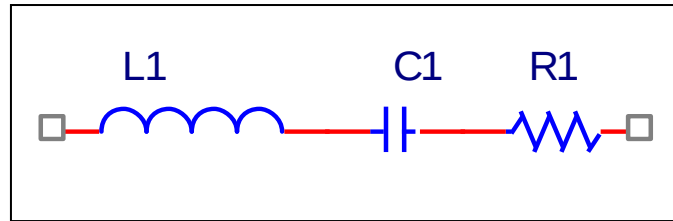
Attention

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



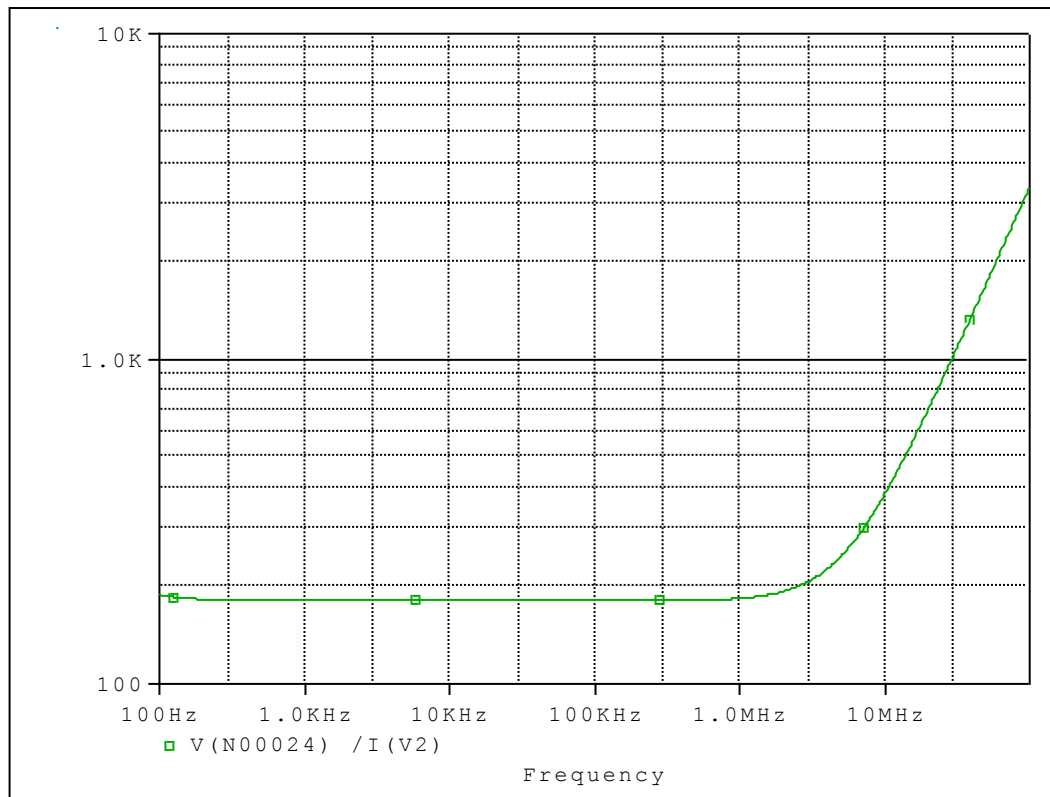
Measurement		
R1		
L1		
C1		

Equivalent circuit

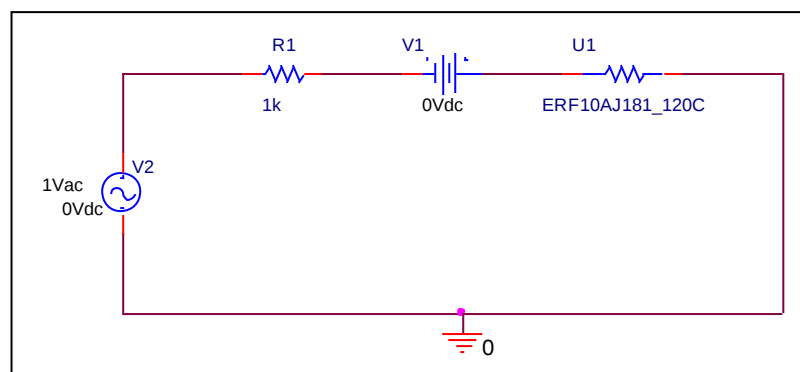


Frequency vs. |Z| Characteristic

Circuit simulation result



Evaluation Circuit



Simulation Result

Frequency(HZ)	Z (ohm) Measurement	Z (ohm) Circuit Simulation	%Error
100	179.892	188.003	4.509
1K	179.936	180.271	0.186
10K	179.898	180.192	0.164
100K	179.891	180.223	0.185
1M	183.653	183.325	0.179
10M	388.459	382.613	1.505