

Device Modeling Report

COMPONENTS: RESISTOR
PART NUMBER: ERF10AJ181
MANUFACTURER: MATSUSHITA



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

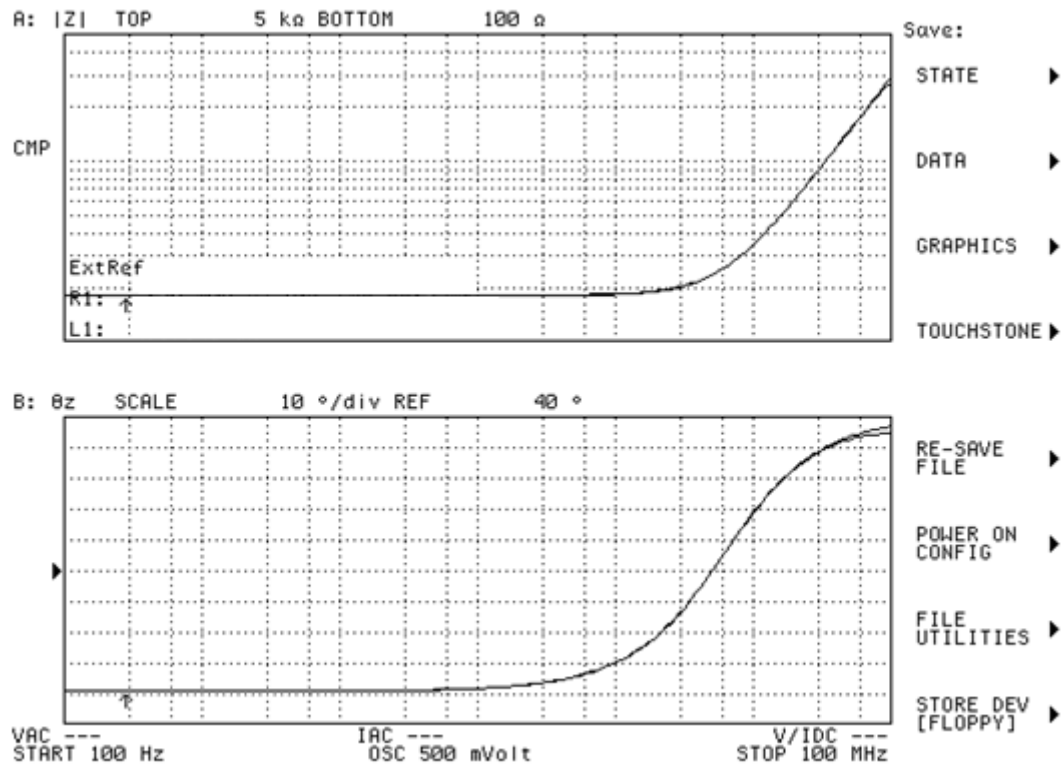
Optimization of Simulation

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

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

Attention

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



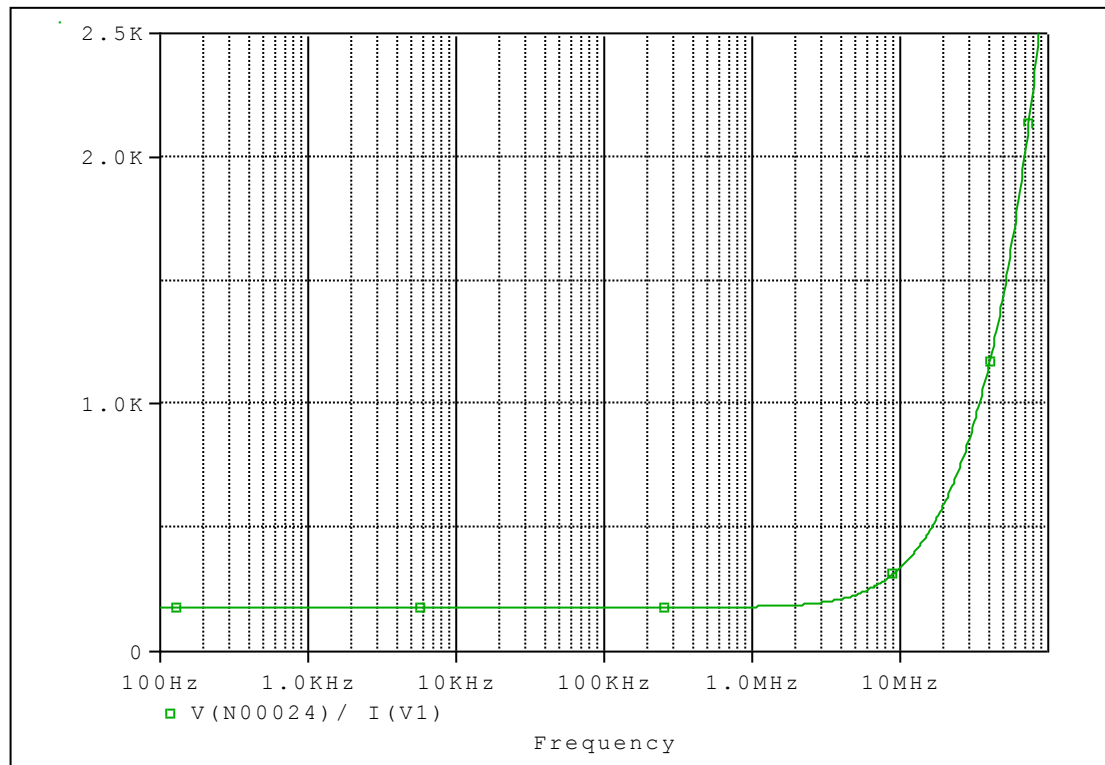
Measurement		
R1		
L1		
C1		

Equivalent circuit

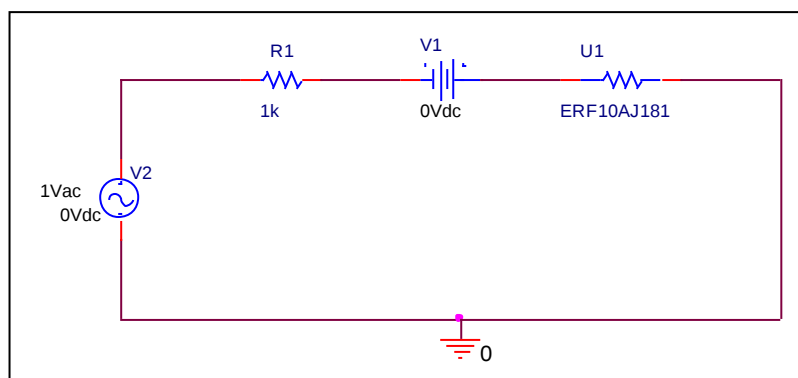


Frequency vs. |Z| Characteristic

Circuit simulation result



Evaluation Circuit



Simulation Result

Frequency(HZ)	Z (ohm) Measurement	Z (ohm) Circuit Simulation	%Error
100	177.948	179.402	0.817
1K	177.995	179.402	0.790
10K	177.941	179.402	0.821
100K	177.972	179.425	0.816
1M	180.468	181.692	0.678
10M	339.195	338.923	0.080
100M	2.675	2.881	7.705