

Device Modeling Report

COMPONENTS: RESISTOR
PART NUMBER: ERF10AK5R1
MANUFACTURER: MATSUSHITA



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

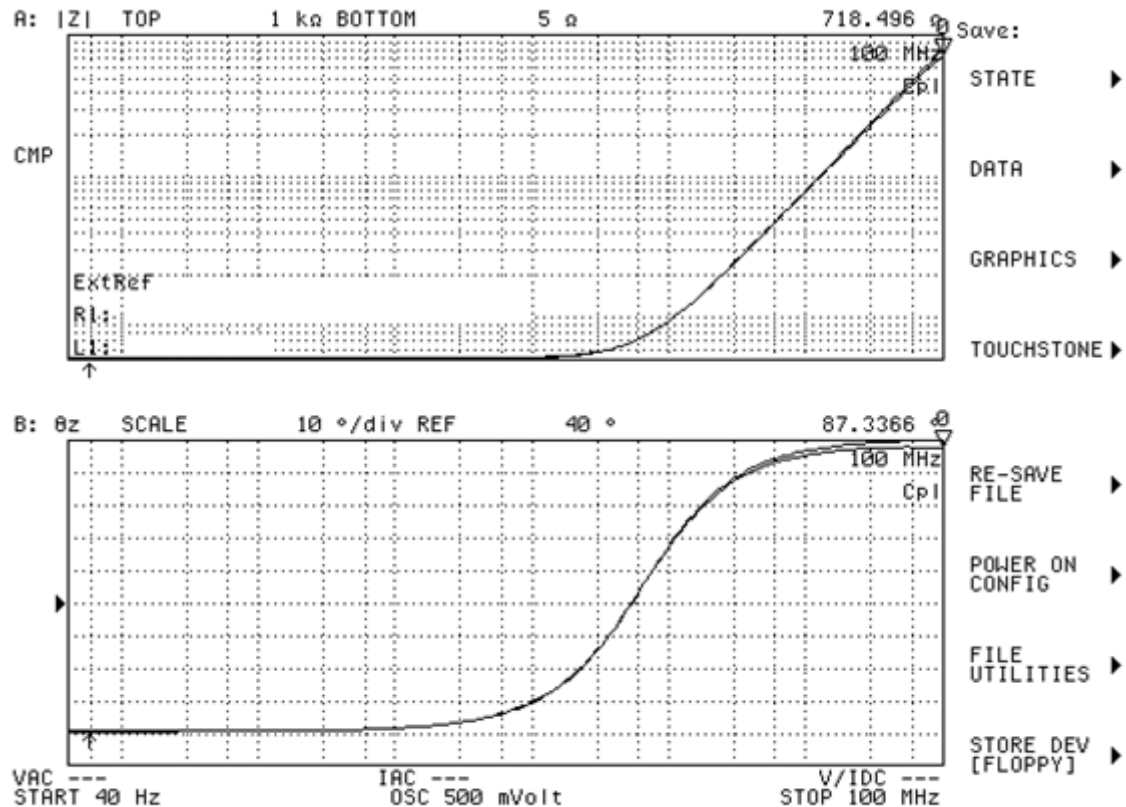
Optimization of Simulation

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

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

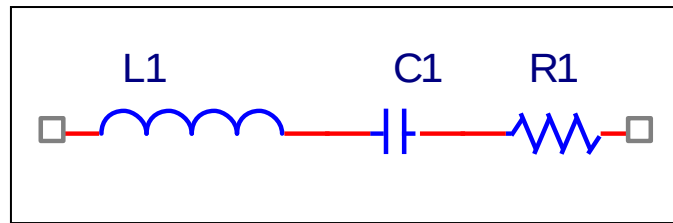
Attention

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



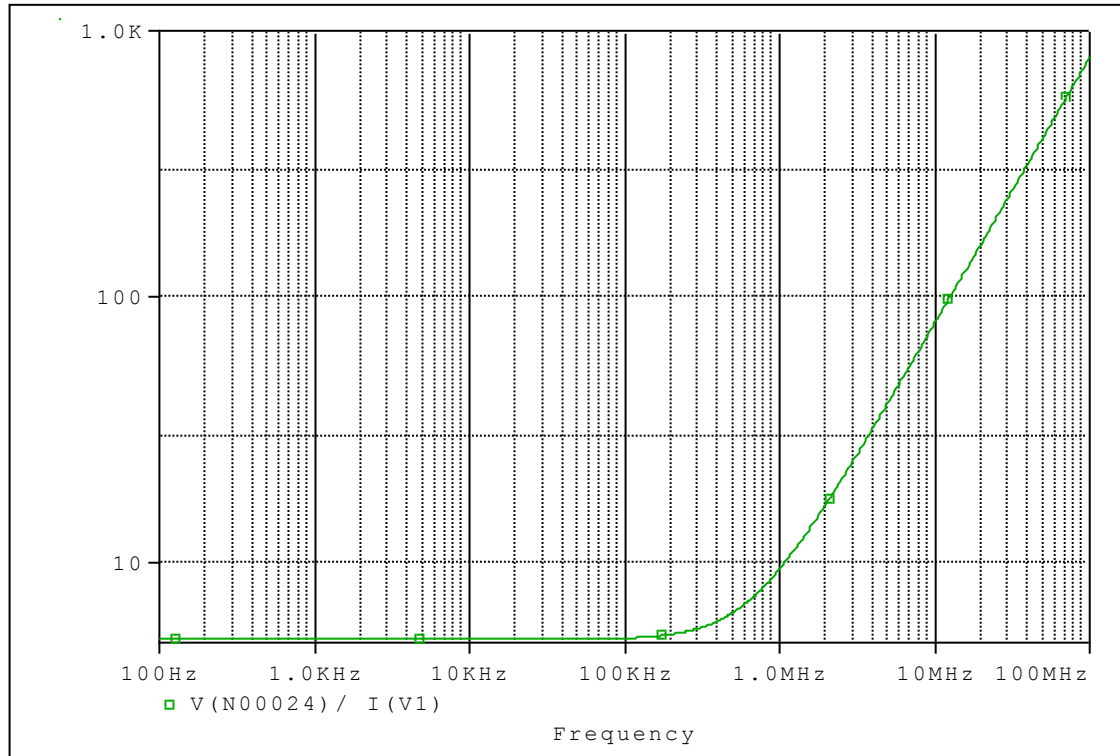
Measurement		
R1		
L1		
C1		

Equivalent circuit

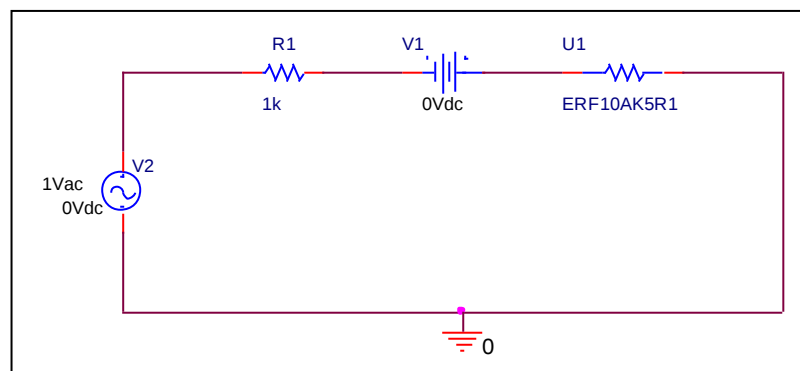


Frequency vs. $|Z|$ Characteristic

Circuit simulation result



Evaluation Circuit



Simulation Result

Frequency(HZ)	Z (ohm) Measurement	Z (ohm) Circuit Simulation	%Error
100	5.080	5.138	1.125
1K	5.081	5.138	1.119
10K	5.082	5.138	1.112
100K	5.150	5.198	0.926
1M	9.441	9.437	0.046
10M	77.525	79.919	3.088