

Device Modeling Report

COMPONENTS: RESISTOR
PART NUMBER: ERF10AK3R0
THERMAL:TA=150(degree)
MANUFACTURER: MATSUSHITA



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

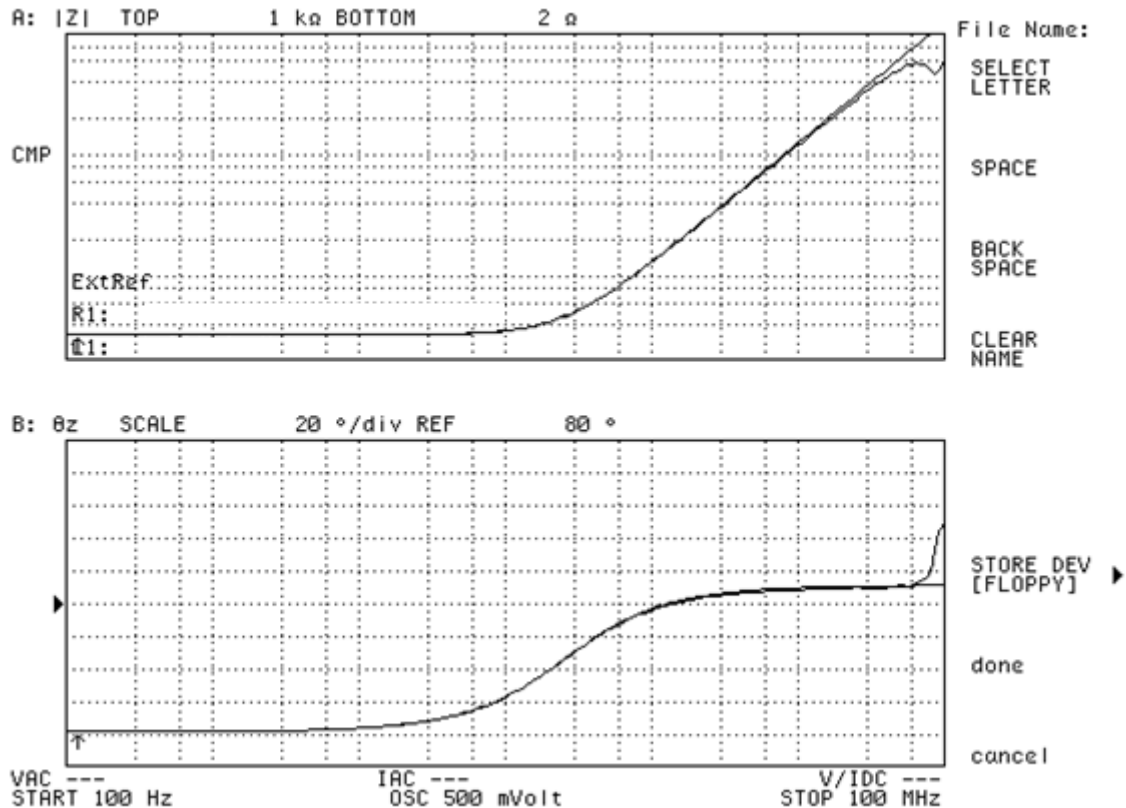
Optimization of Simulation

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

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

Attention

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



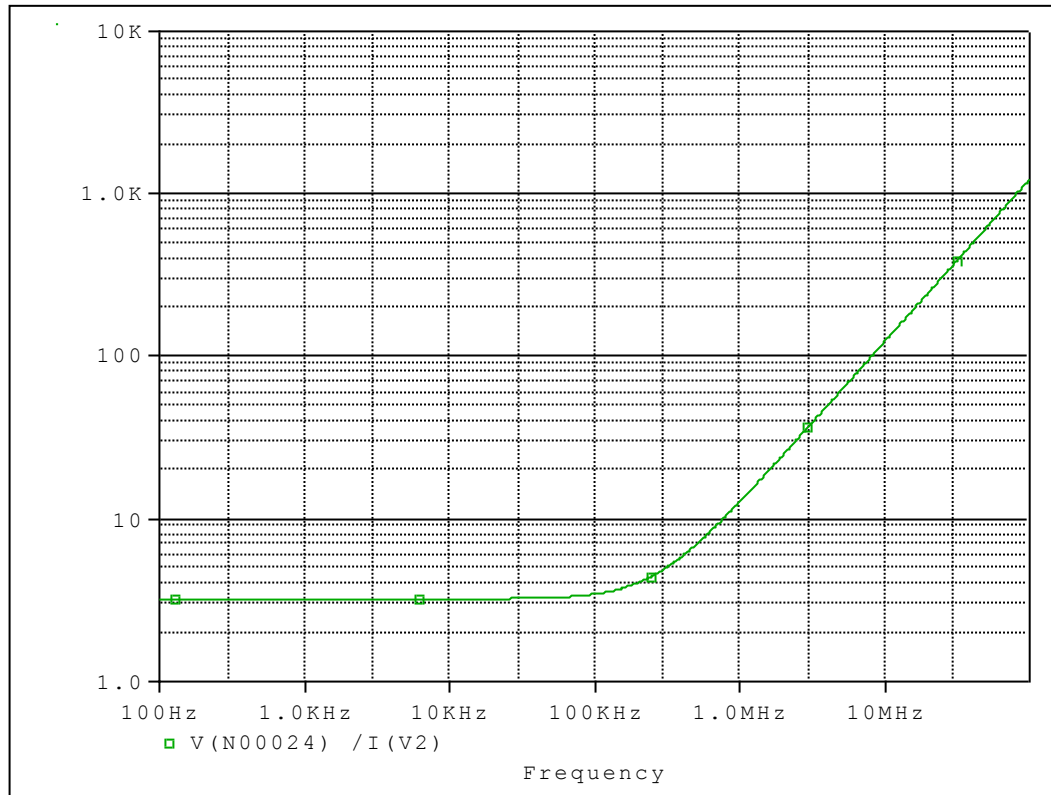
Measurement		
R1		
L1		
C1		

Equivalent circuit

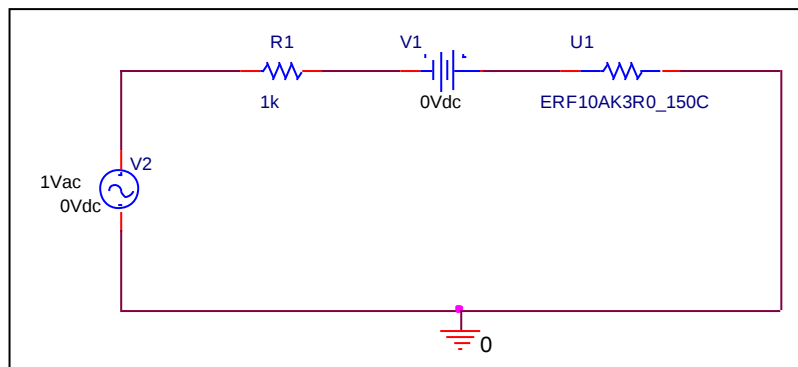


Frequency vs. $|Z|$ Characteristic

Circuit simulation result



Evaluation Circuit



Simulation Result

Frequency(HZ)	Z (ohm) Measurement	Z (ohm) Circuit Simulation	%Error
100	3.199	3.225	0.813
1K	3.200	3.225	0.773
10K	3.205	3.227	0.692
100K	3.439	3.452	0.375
1M	13.174	12.737	3.314
10M	120.473	123.264	2.316