

Device Modeling Report

COMPONENTS: RESISTOR
PART NUMBER: ERF10AK5R1
THERMAL: TA=80 (degree)
MANUFACTURER: MATSUSHITA



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

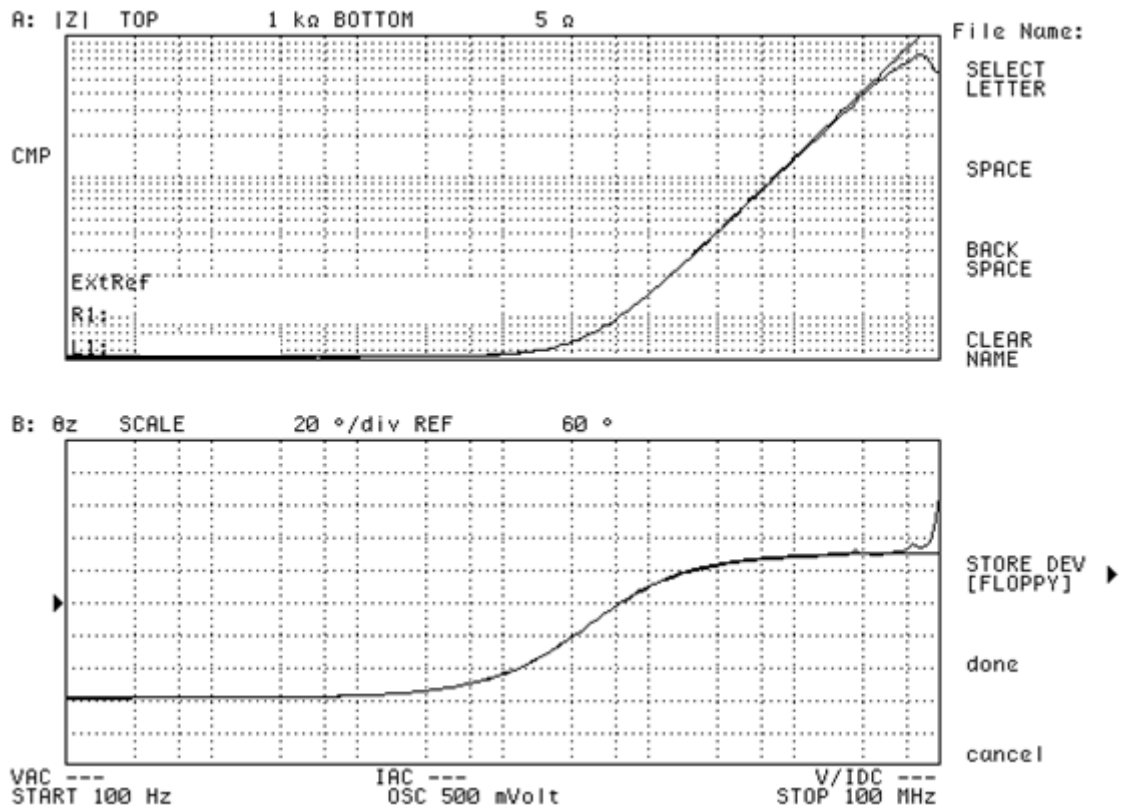
Optimization of Simulation

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)



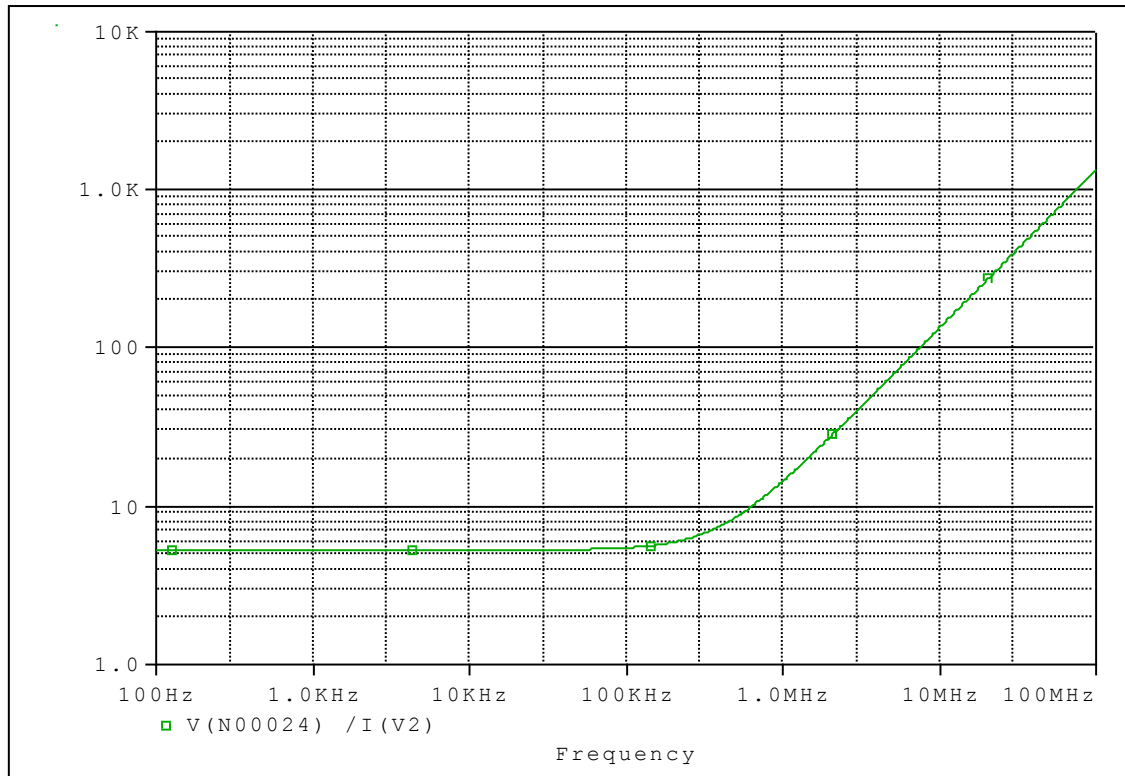
Measurement		
R1		
L1		
C1		

Equivalent circuit

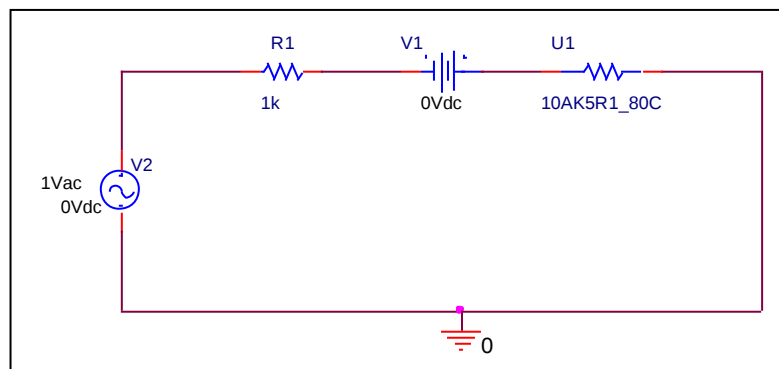


Frequency vs. $|Z|$ Characteristic

Circuit simulation result



Evaluation Circuit



Simulation Result

Frequency(HZ)	Z (ohm) Measurement	Z (ohm) Circuit Simulation	%Error
100	5.251	5.298	0.886
1K	5.251	5.297	0.884
10K	5.249	5.299	0.954
100K	5.433	5.464	0.576
1M	14.924	14.410	3.444
10M	132.664	134.419	1.323