

Device Modeling Report

COMPONENTS: RESISTOR
PART NUMBER: ERF5AKR47
THERMAL: TA=80(degree)
MANUFACTURER: MATSUSHITA



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

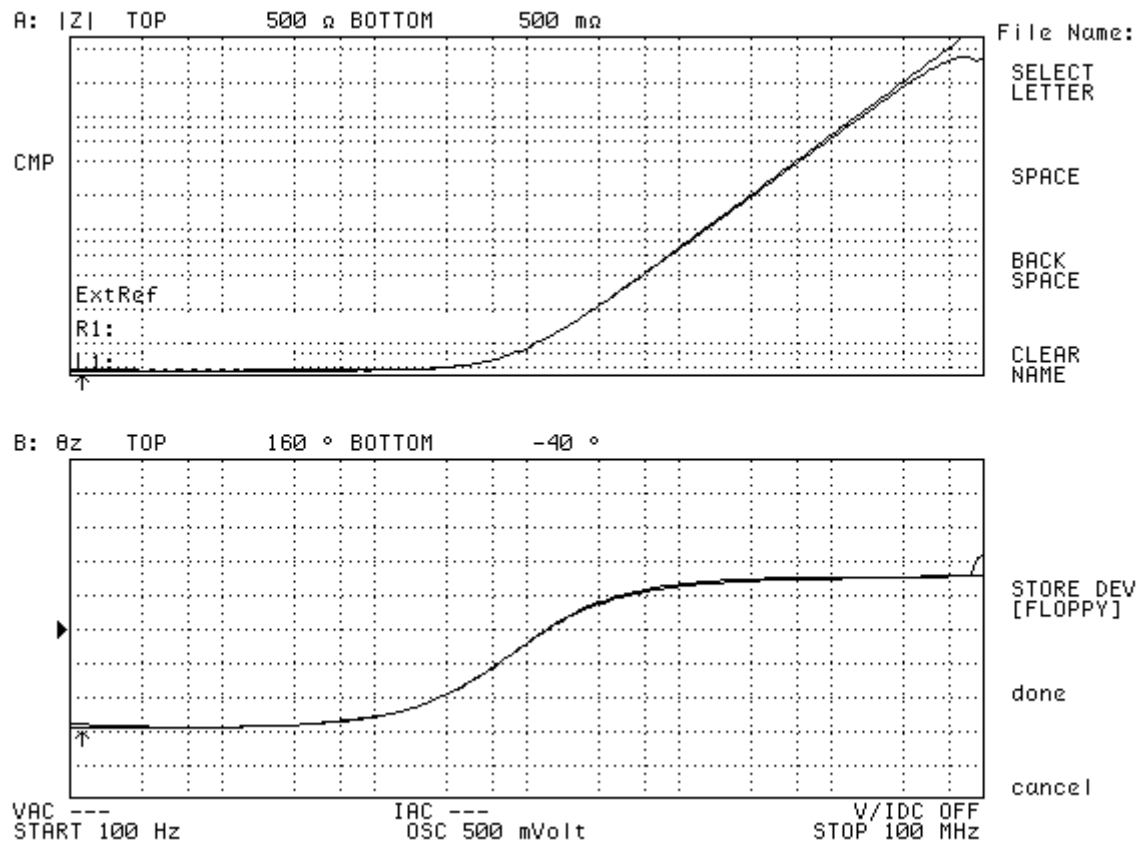
Optimization of Simulation

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)



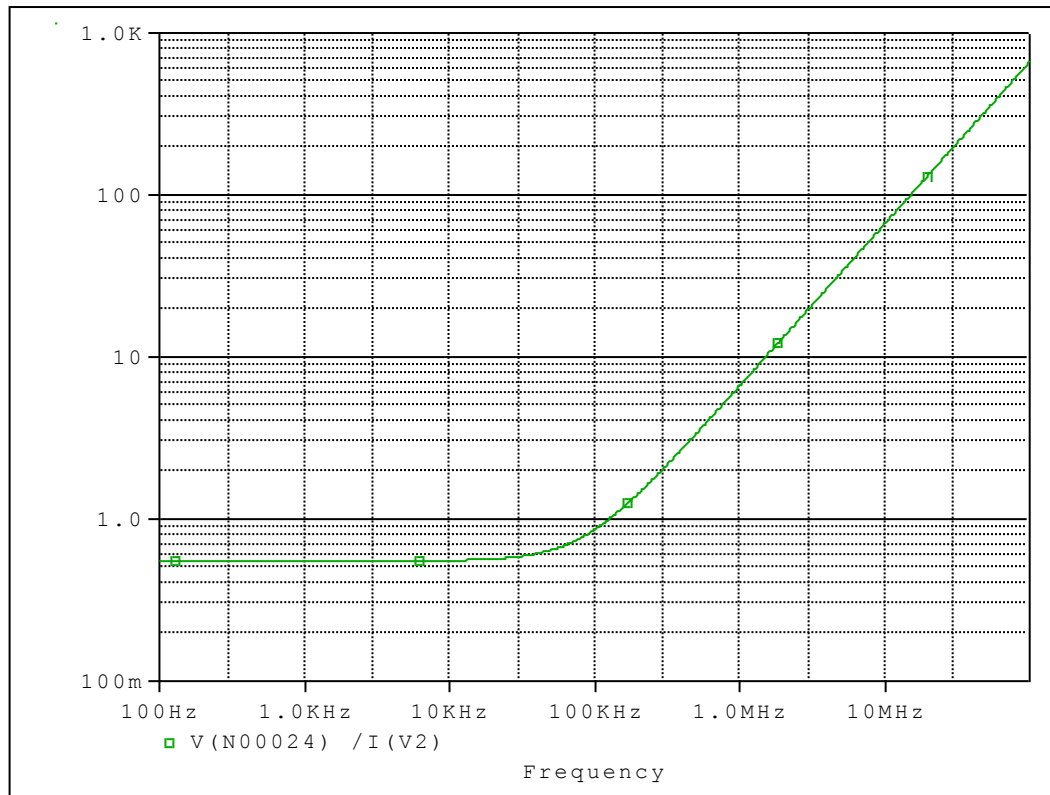
Measurement		
R1		
L1		
C1		

Equivalent circuit

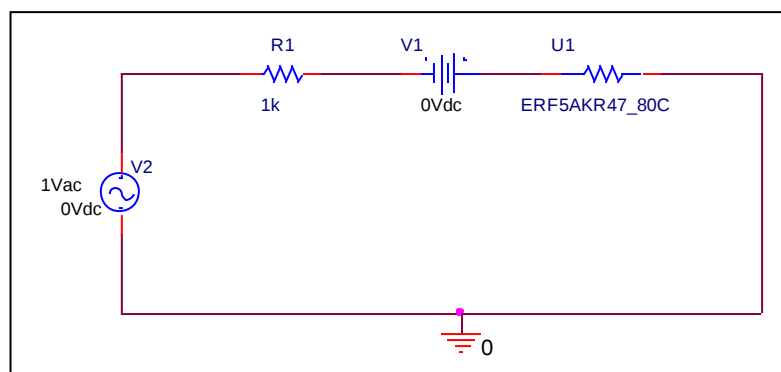


Frequency vs. |Z| Characteristic

Circuit simulation result



Evaluation Circuit



Simulation Result

Frequency(HZ)	Z (ohm) Measurement	Z (ohm) Circuit Simulation	%Error
100	550.785	551.797	0.184
1K	551.896	551.836	0.011
10K	559.085	555.756	0.595
100K	870.514	861.985	0.980
1M	6.783	6.645	2.024
10M	63.846	66.225	3.726