

Device Modeling Report

COMPONENTS: RESISTOR
PART NUMBER: ERF5AKR47
THERMAL:TA=150(degree)
MANUFACTURER: MATSUSHITA



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

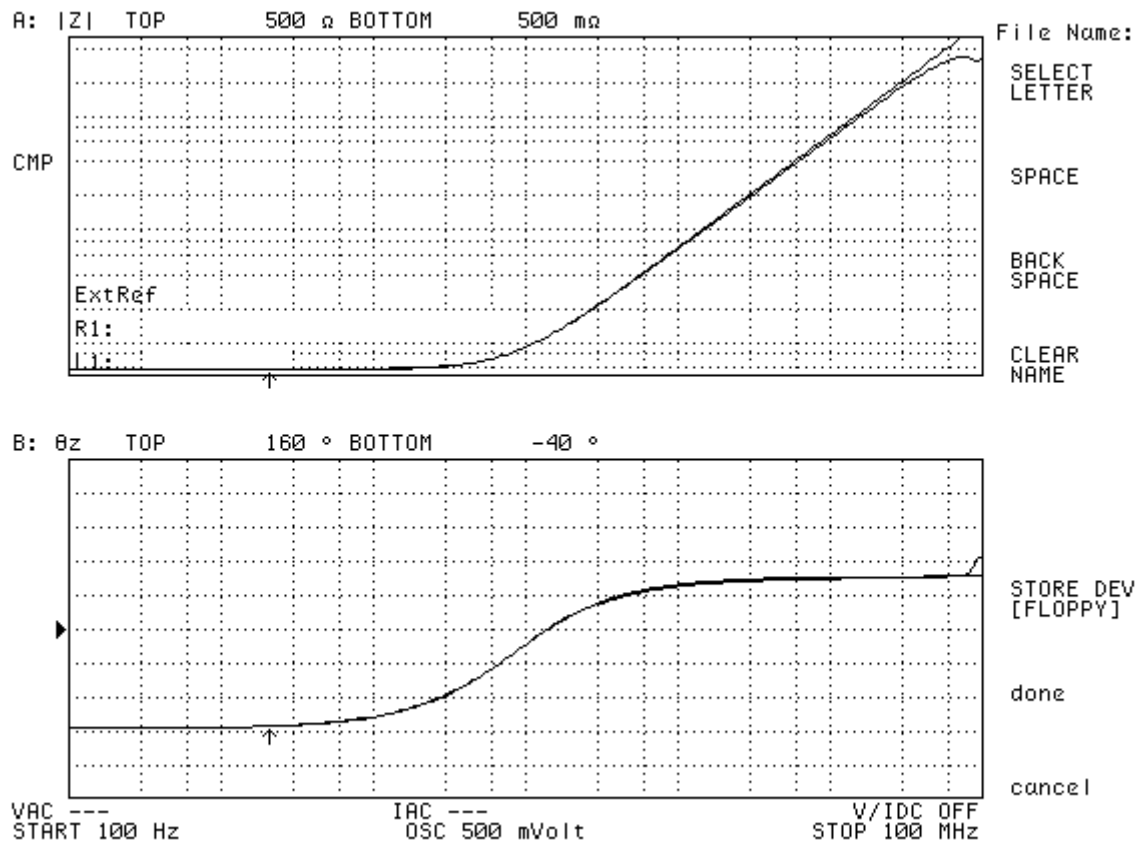
Optimization of Simulation

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

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

Attention

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



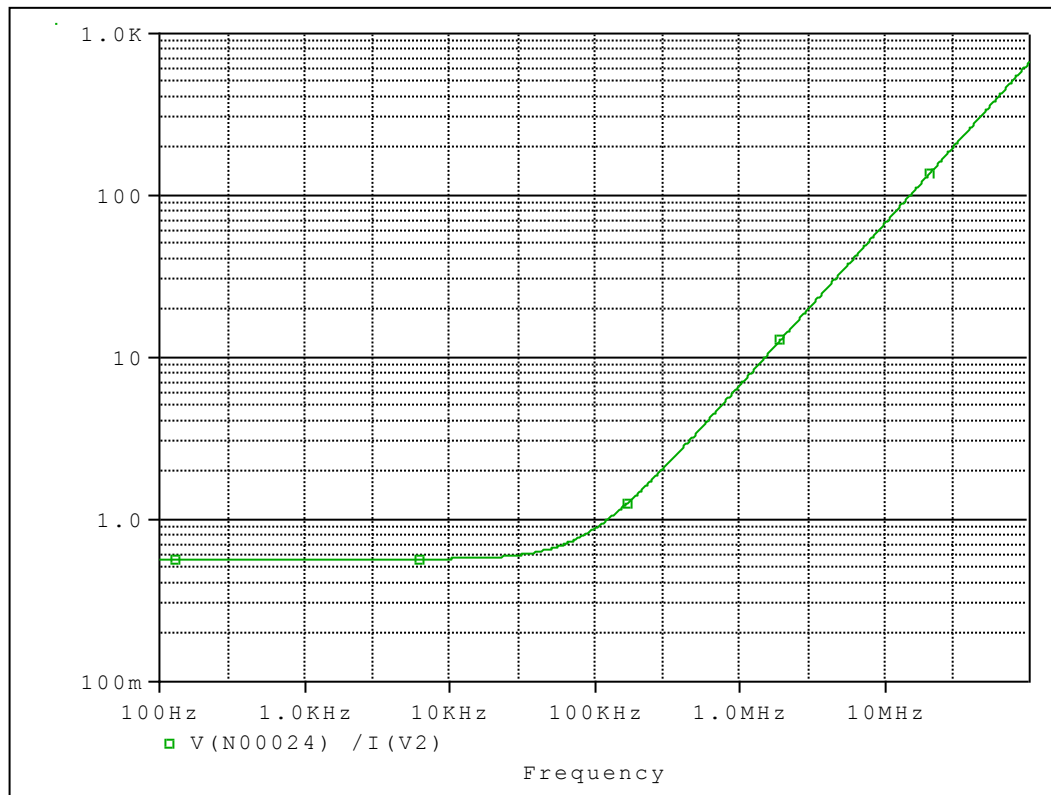
Measurement		
R1		
L1		
C1		

Equivalent circuit

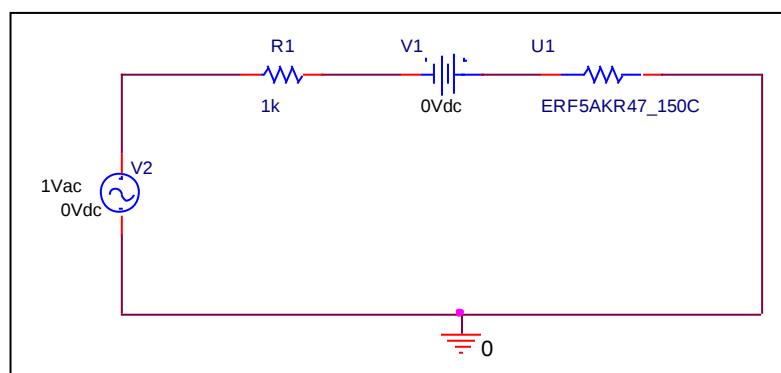


Frequency vs. $|Z|$ Characteristic

Circuit simulation result



Evaluation Circuit



Simulation Result

Frequency(HZ)	 Z (ohm) Measurement	 Z (ohm) Circuit Simulation	%Error
100	558.867	570.189	2.026
1K	558.101	570.228	2.173
10K	564.568	574.101	1.689
100K	877.294	879.060	0.201
1M	6.860	6.715	2.119
10M	64.588	66.908	3.593