

Device Modeling Report

COMPONENTS: RESISTOR
PART NUMBER: ERF5AKR22
THERMAL:TA=80(degree)
MANUFACTURER: MATSUSHITA



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

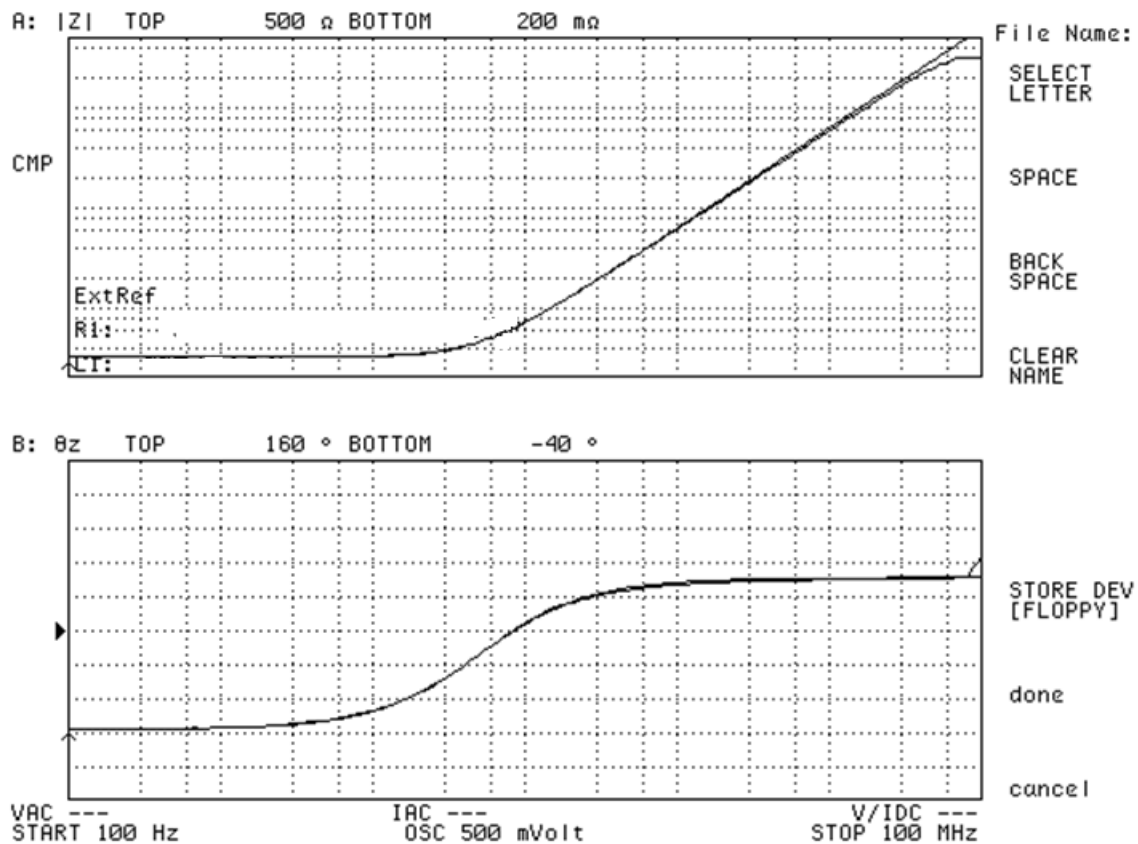
Optimization of Simulation

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

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

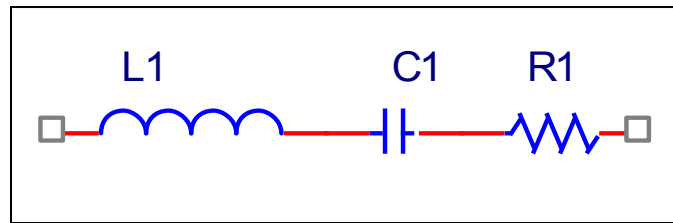
Attention

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



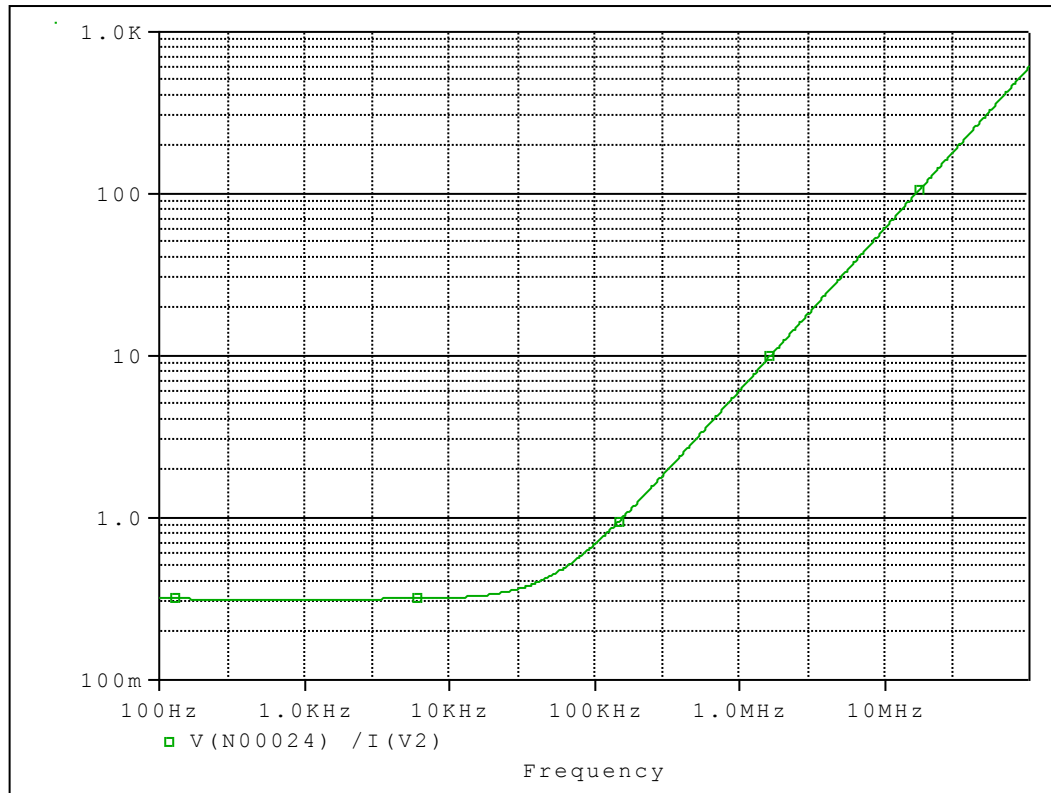
Measurement		
R1		
L1		
C1		

Equivalent circuit

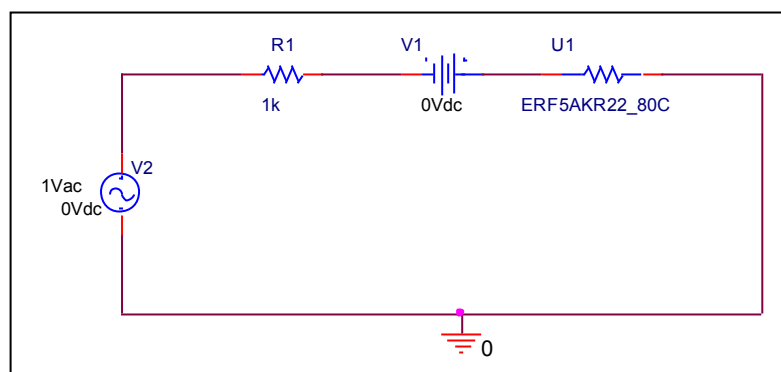


Frequency vs. $|Z|$ Characteristic

Circuit simulation result



Evaluation Circuit



Simulation Result

Frequency(HZ)	 Z (ohm) Measurement	 Z (ohm) Circuit Simulation	%Error
100	311.312	317.383	1.950
1K	311.053	315.611	1.465
10K	318.565	321.355	0.876
10K	672.574	685.775	1.963
1M	6.029	6.097	1.132
10M	57.582	60.888	5.742