

Device Modeling Report

COMPONENTS: RESISTOR
PART NUMBER: ERF5AK1R0
THERMAL: TA=80(degree)
MANUFACTURER: MATSUSHITA



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

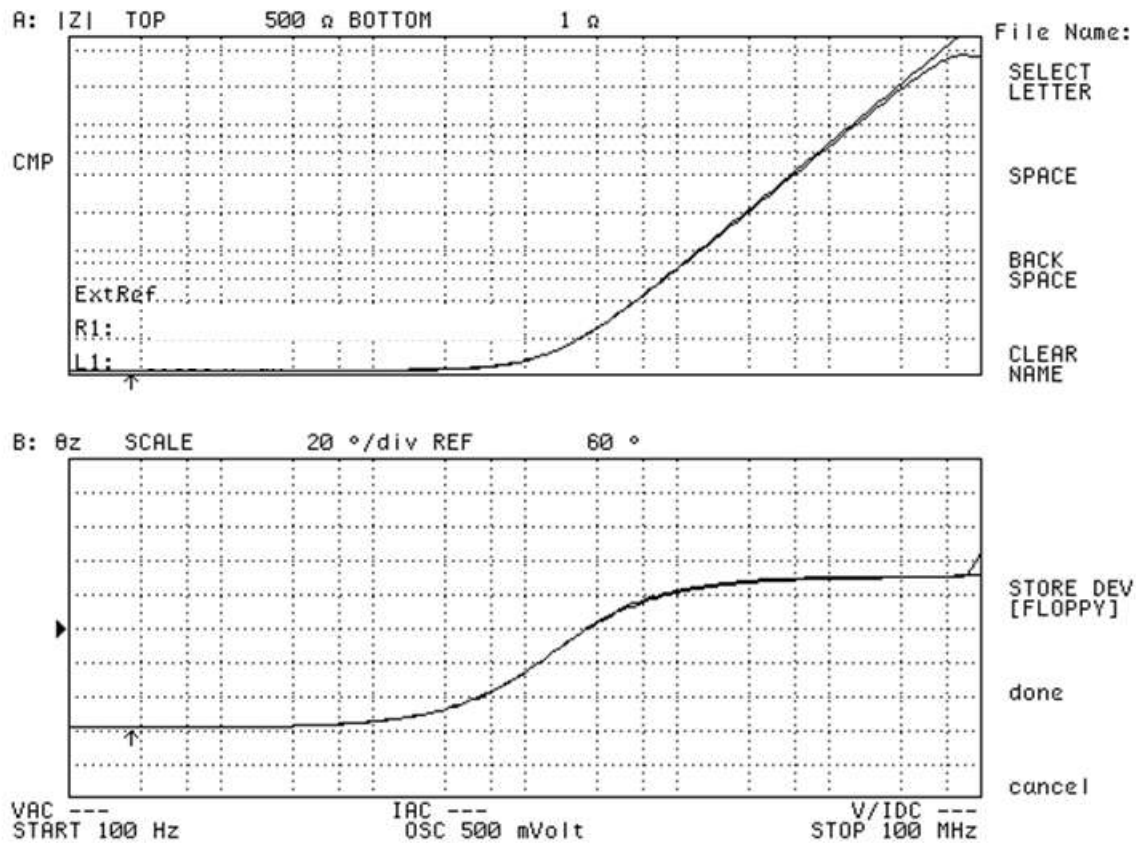
Optimization of Simulation

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

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

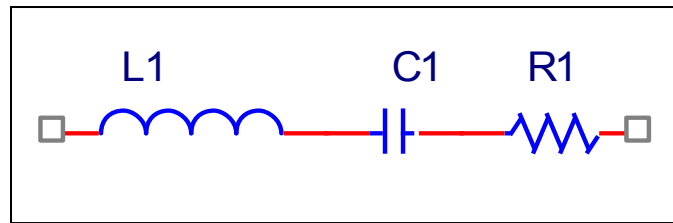
Attention

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



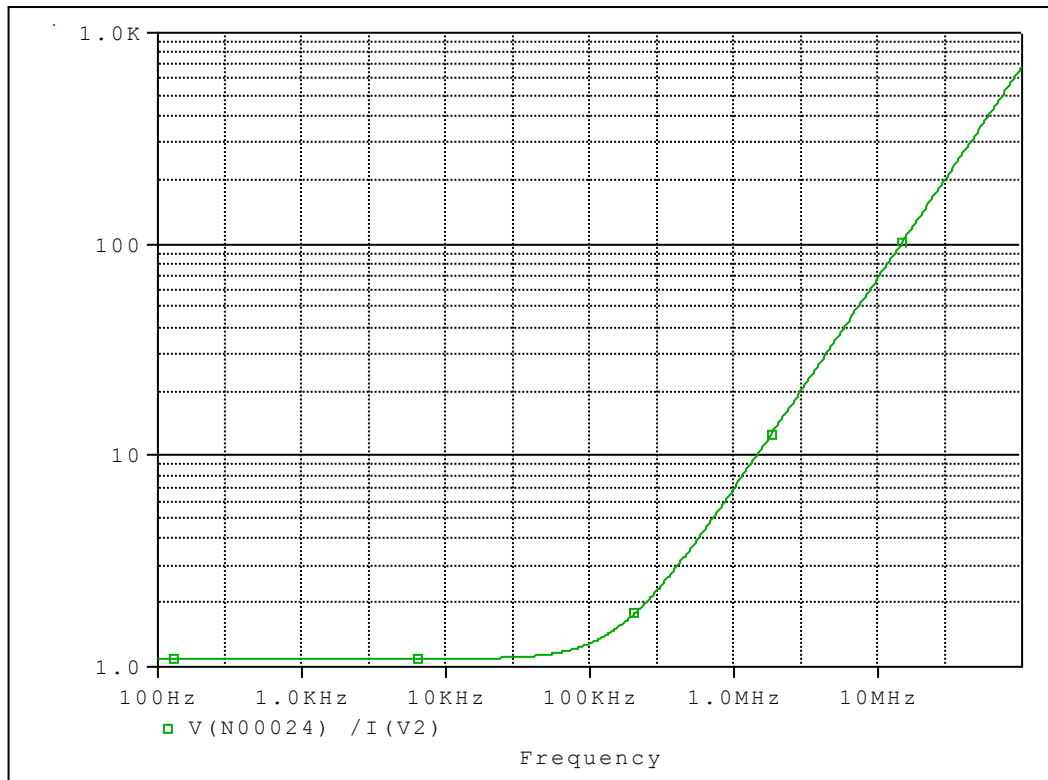
Measurement		
R1		
L1		
C1		

Equivalent circuit

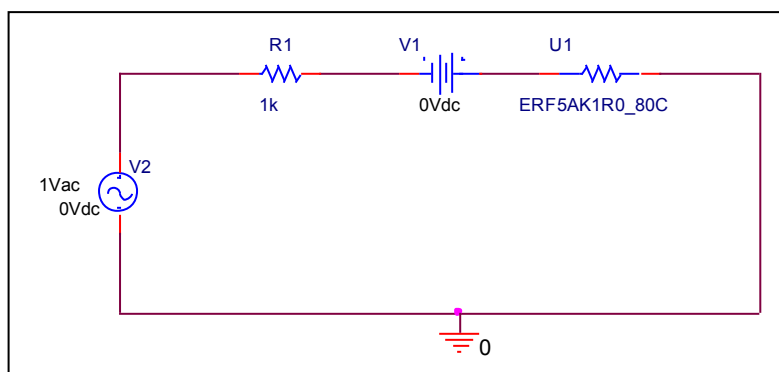


Frequency vs. $|Z|$ Characteristic

Circuit simulation result



Evaluation Circuit



Simulation Result

Frequency(HZ)	 Z (ohm) Measurement	 Z (ohm) Circuit Simulation	%Error
100	1.079	1.090	1.073
1K	1.079	1.090	0.992
10K	1.083	1.092	0.853
100K	1.291	1.292	0.104
1M	7.168	7.019	2.086
10M	66.981	69.342	3.525