

Device Modeling Report

COMPONENTS: RESISTOR
PART NUMBER: ERF10AK2R0
MANUFACTURER: MATSUSHITA



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

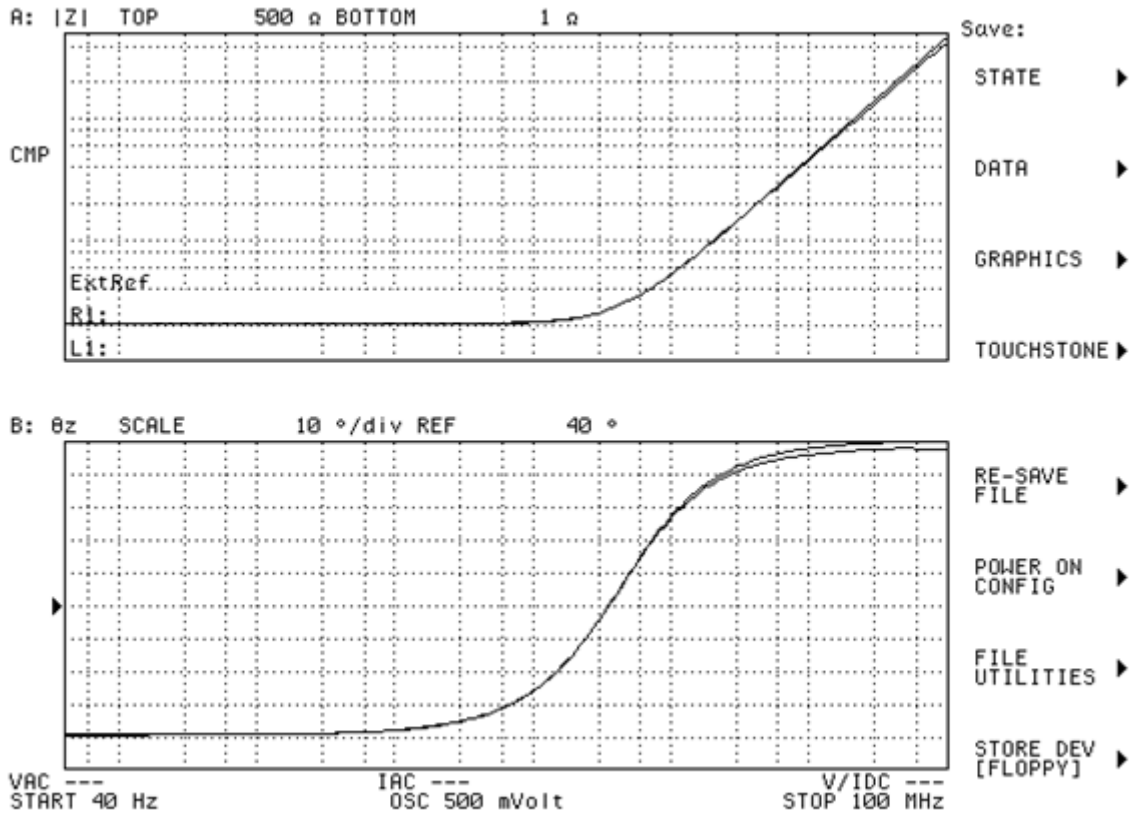
Optimization of Simulation

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

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

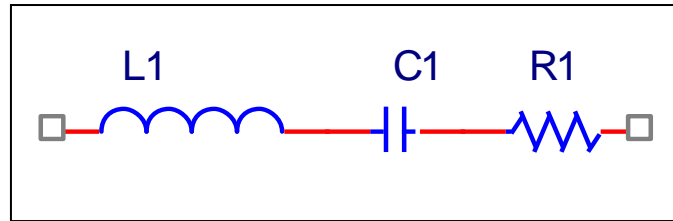
Attention

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



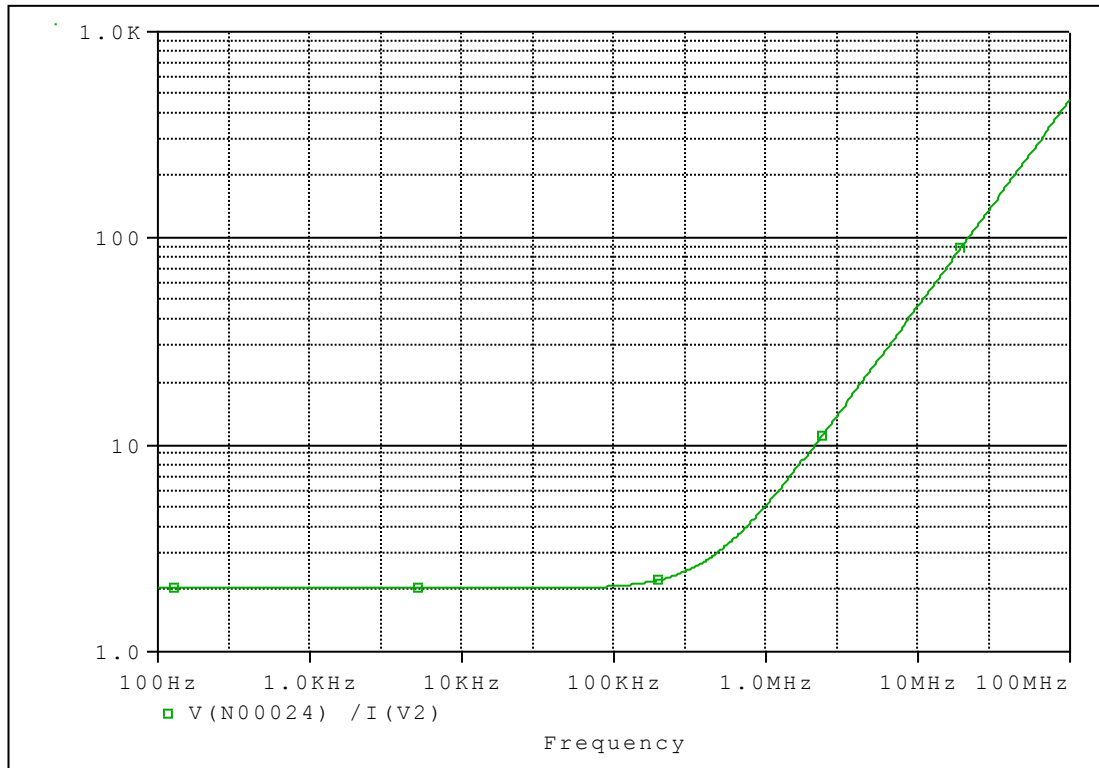
Measurement		
R1		
L1		
C1		

Equivalent circuit

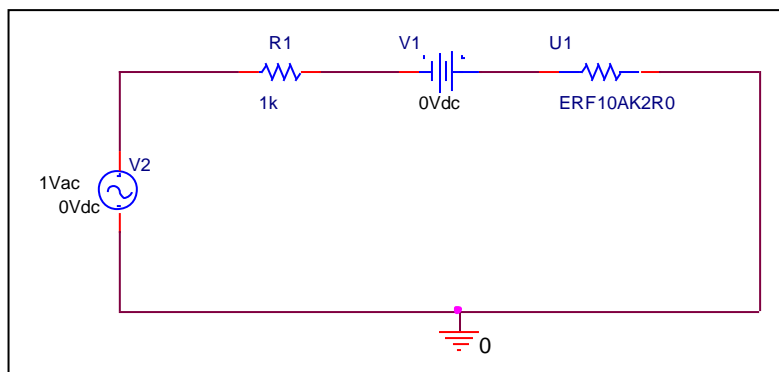


Frequency vs. |Z| Characteristic

Circuit simulation result



Evaluation Circuit



Simulation Result

Frequency(HZ)	 Z (ohm) Measurement	 Z (ohm) Circuit Simulation	%Error
100	1.997	2.020	1.126
1K	1.997	2.020	1.172
10K	1.998	2.020	1.121
100K	2.056	2.074	0.861
1M	5.097	5.108	0.218
10M	45.018	46.963	4.321
100M	1.997	2.020	1.126