

Device Modeling Report

COMPONENTS: RESISTOR
PART NUMBER: ERF5AJ4R7
THERMAL: TA=120(degree)
MANUFACTURER: MATSUSHITA



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

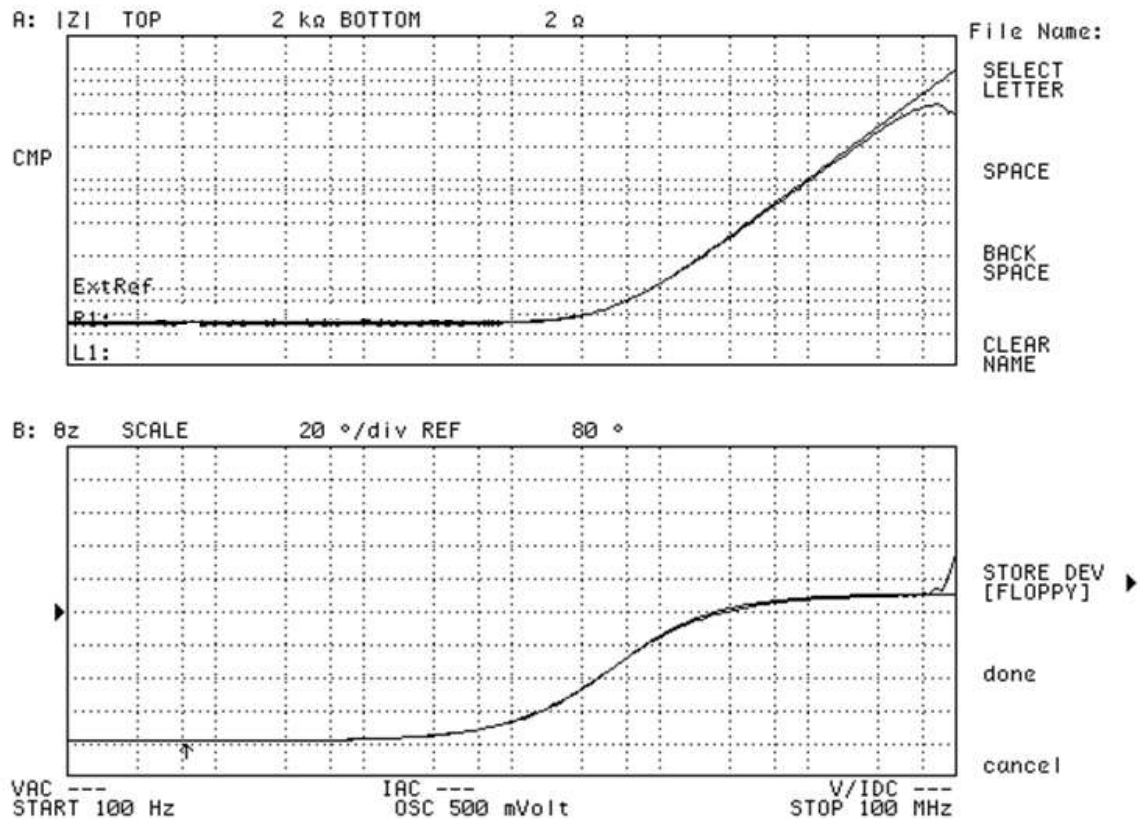
Optimization of Simulation

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

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

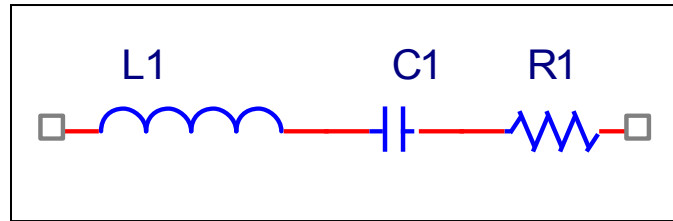
Attention

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



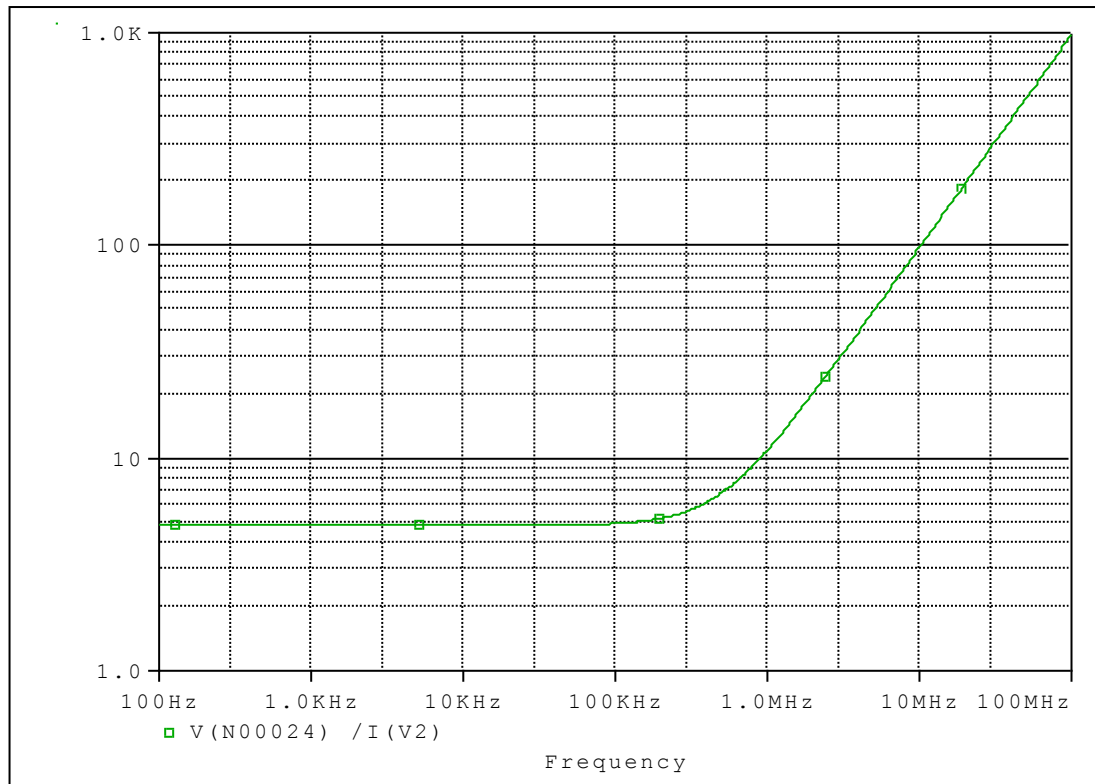
Measurement		
R1		
L1		
C1		

Equivalent circuit

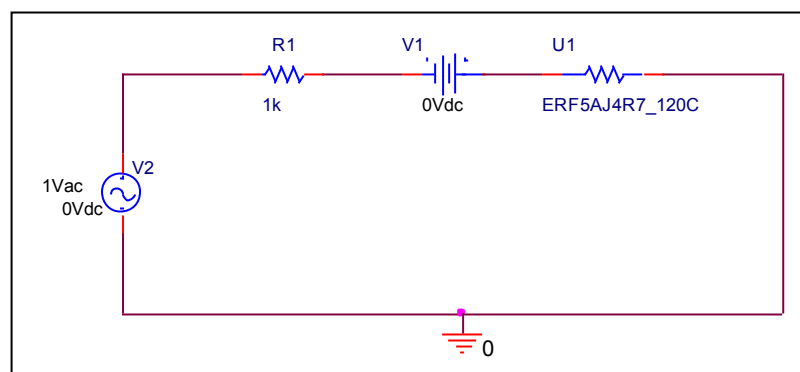


Frequency vs. $|Z|$ Characteristic

Circuit simulation result



Evaluation Circuit



Simulation Result

Frequency(HZ)	 Z (ohm) Measurement	 Z (ohm) Circuit Simulation	%Error
100	4.718	4.828	2.319
1K	4.720	4.828	2.274
10K	4.721	4.829	2.276
100K	4.836	4.925	1.855
1M	11.237	10.898	3.014
10M	94.814	97.827	3.178