

Device Modeling Report

COMPONENTS: RESISTOR
PART NUMBER: ERF5AJ4R7
THERMAL: TA=150(degree)
MANUFACTURER: MATSUSHITA



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

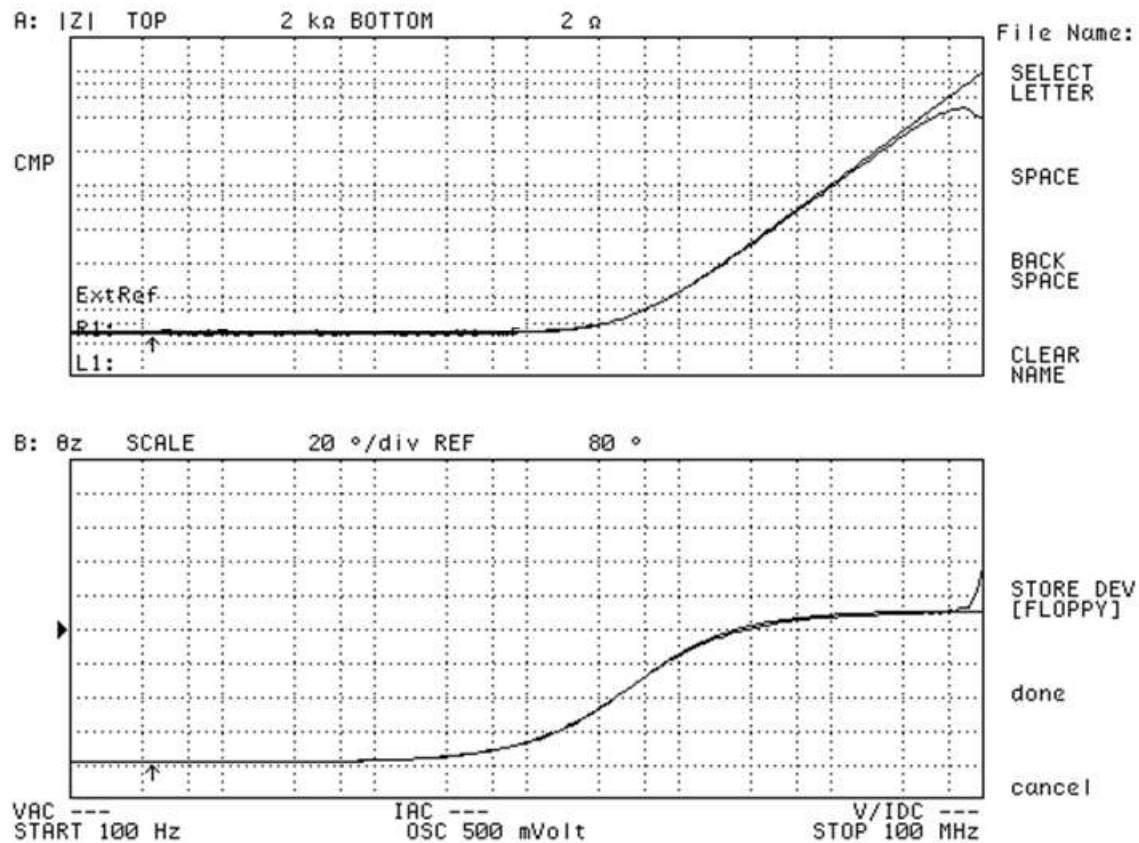
Optimization of Simulation

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

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

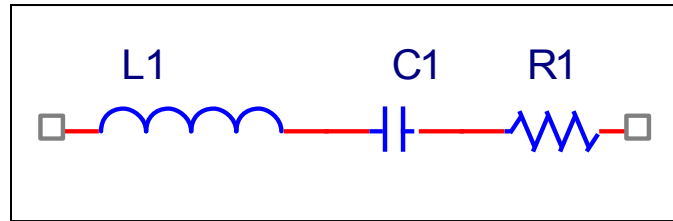
Attention

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



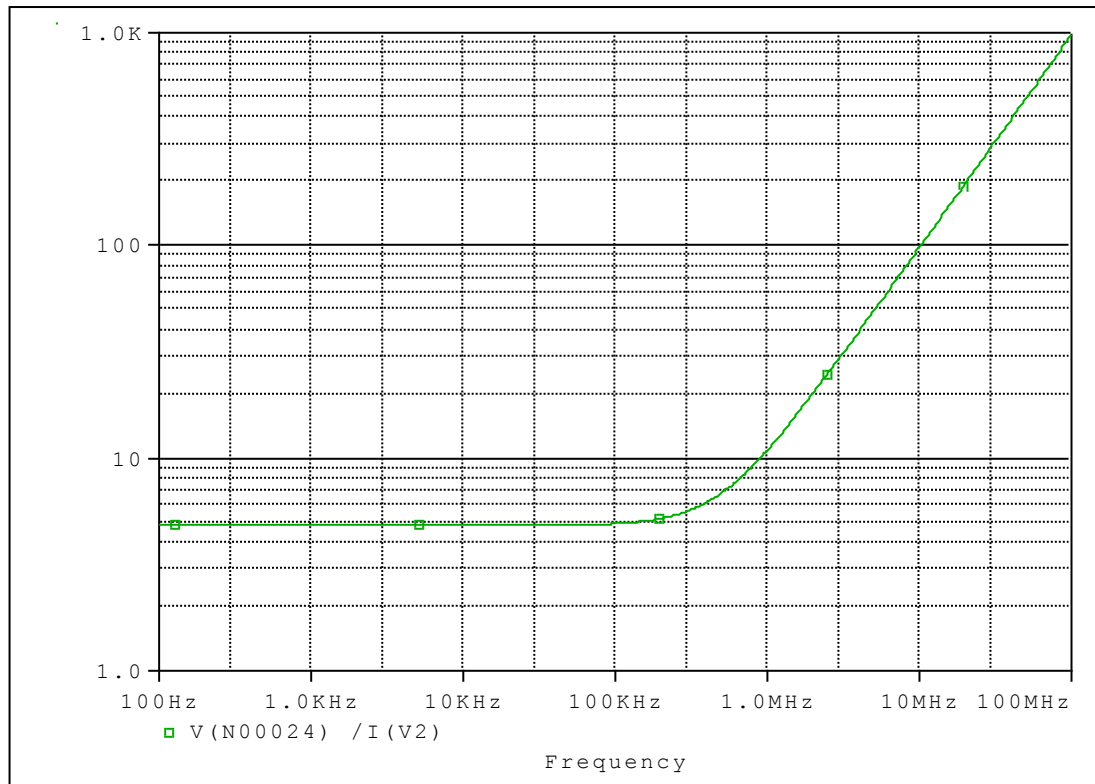
Measurement		
R1		
L1		
C1		

Equivalent circuit

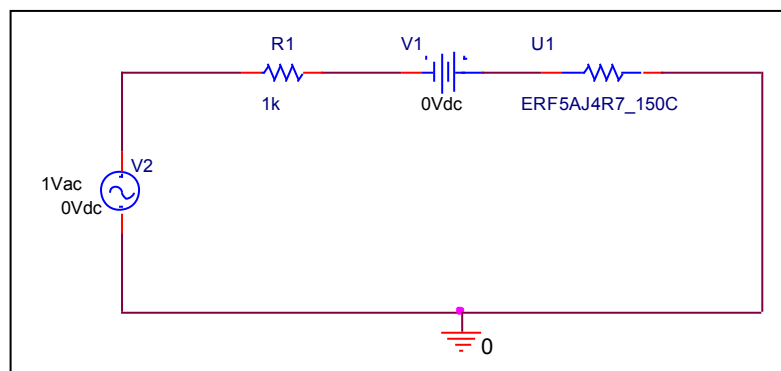


Frequency vs. $|Z|$ Characteristic

Circuit simulation result



Evaluation Circuit



Simulation Result

Frequency(HZ)	 Z (ohm) Measurement	 Z (ohm) Circuit Simulation	%Error
100	4.718	4.825	2.272
1K	4.718	4.825	2.254
10K	4.726	4.826	2.111
100K	4.835	4.923	1.814
1M	11.246	10.899	3.088
10M	94.837	97.853	3.180