

Device Modeling Report

COMPONENTS: RESISTOR
PART NUMBER: ERF5AJ4R7
THERMAL:TA=80(degree)
MANUFACTURER: MATSUSHITA



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

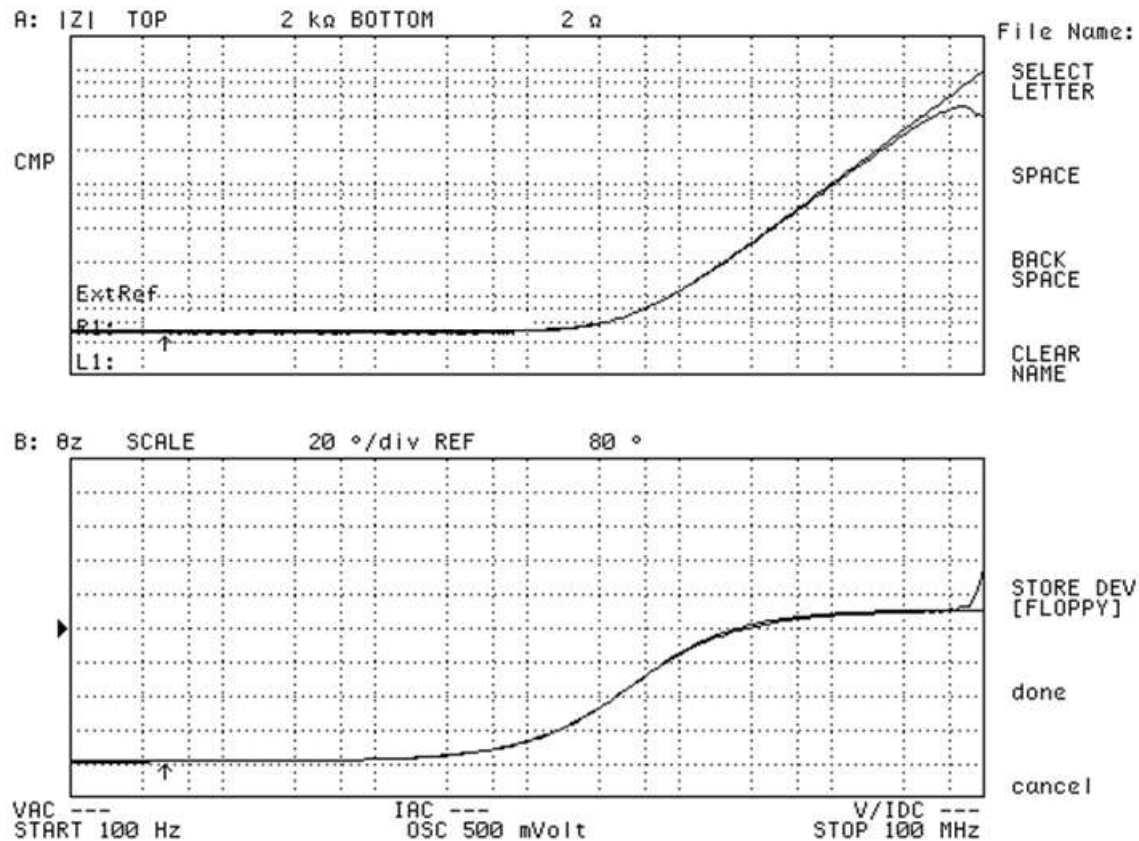
Optimization of Simulation

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

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

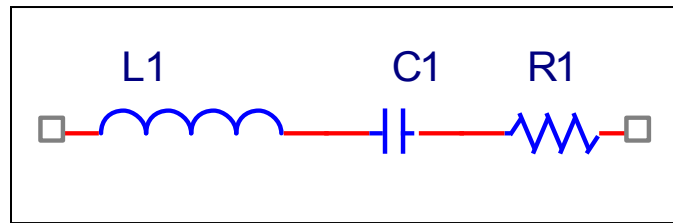
Attention

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



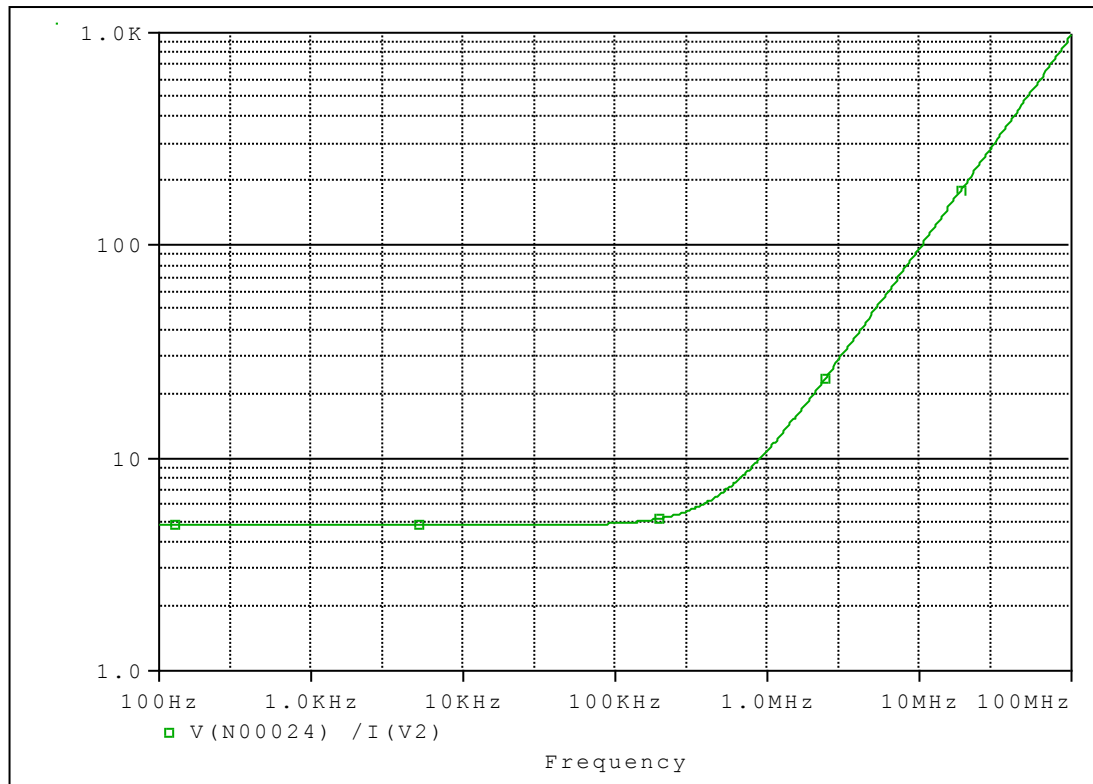
Measurement		
R1		
L1		
C1		

Equivalent circuit

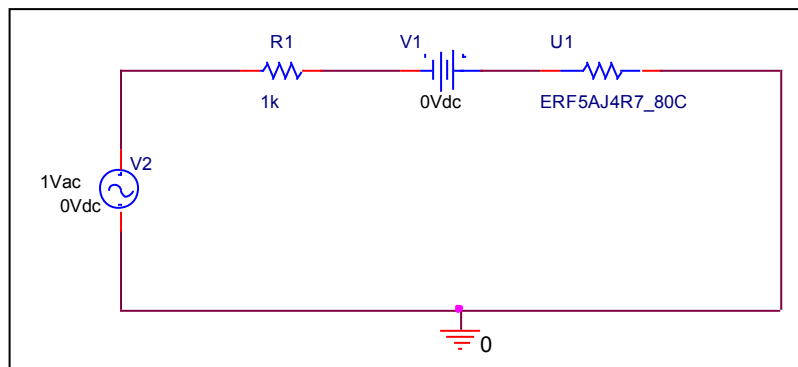


Frequency vs. $|Z|$ Characteristic

Circuit simulation result



Evaluation Circuit



Simulation Result

Frequency(HZ)	 Z (ohm) Measurement	 Z (ohm) Circuit Simulation	%Error
100	4.726	4.833	2.268
1K	4.726	4.833	2.280
10K	4.731	4.833	2.175
100K	4.842	4.930	1.816
1M	11.219	10.845	3.333
10M	94.690	97.202	2.652