

Device Modeling Report

COMPONENTS: RESISTOR
PART NUMBER: ERF5AJ221
THERMAL:TA=120(degree)
MANUFACTURER: MATSUSHITA



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

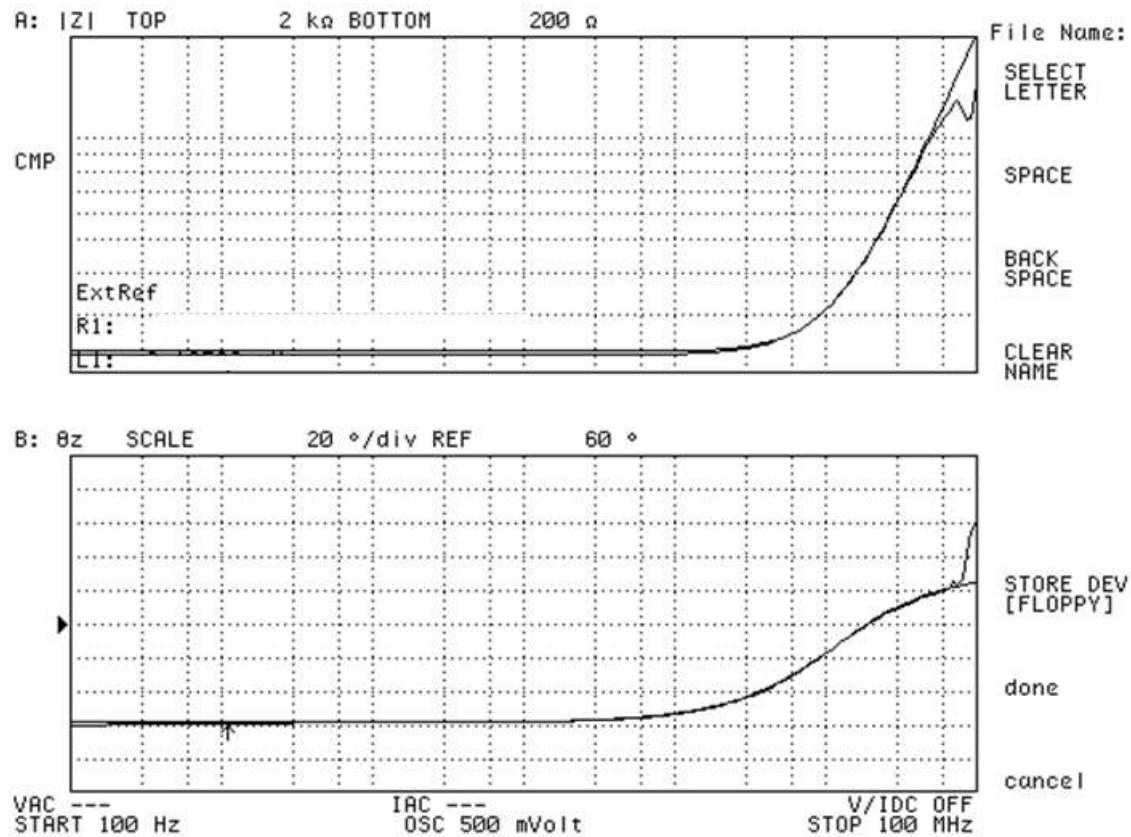
Optimization of Simulation

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

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

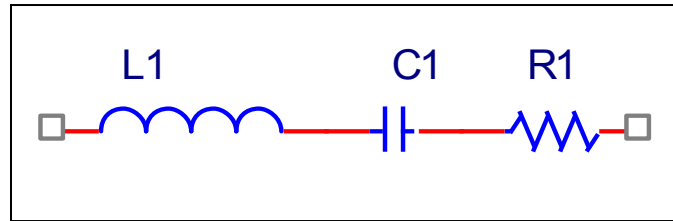
Attention

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



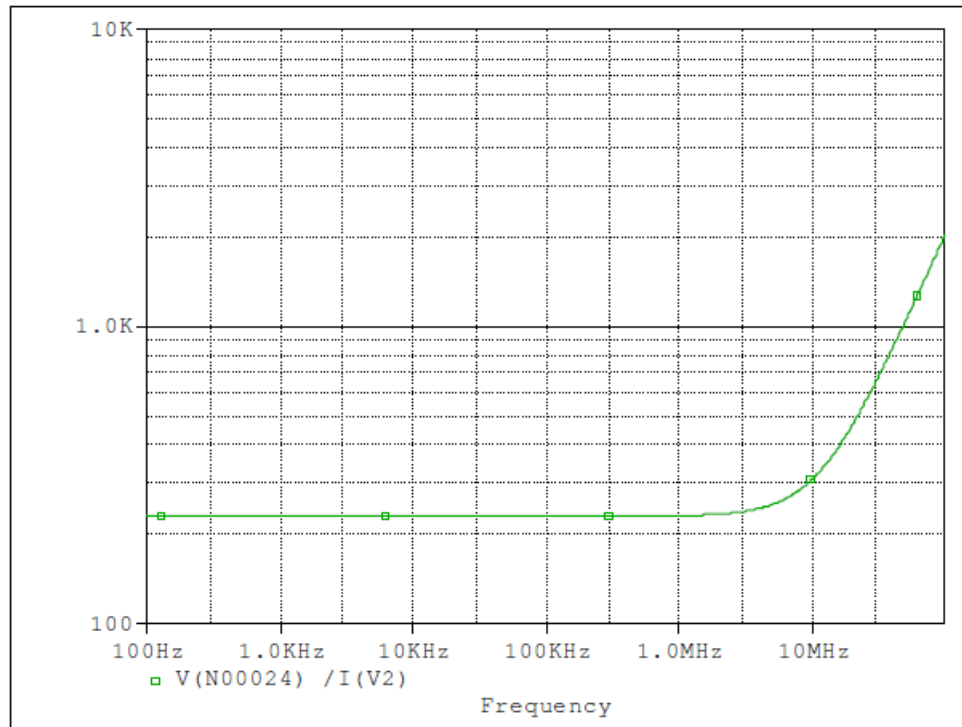
Measurement		
R1		
L1		
C1		

Equivalent circuit

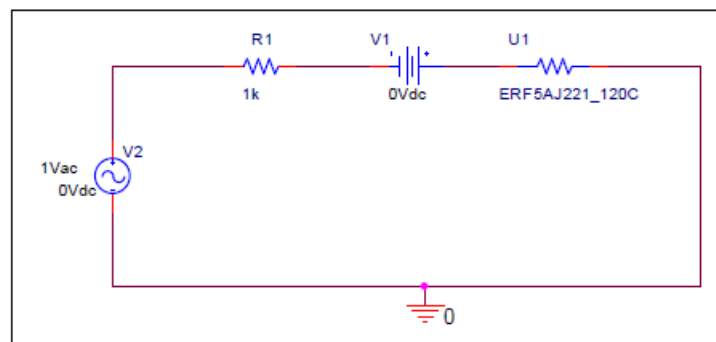


Frequency vs. $|Z|$ Characteristic

Circuit simulation result



Evaluation Circuit



Simulation Result

Frequency(HZ)	 Z (ohm) Measurement	 Z (ohm) Circuit Simulation	%Error
100	224.311	229.407	2.272
1K	224.367	229.399	2.243
10K	224.169	229.399	2.333
100K	224.343	229.408	2.258
1M	226.088	230.273	1.851
10M	308.130	304.622	1.138