

Device Modeling Report

COMPONENTS: RESISTOR
PART NUMBER: ERF5AJ151
THERMAL: TA=80(degree)
MANUFACTURER: MATSUSHITA



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

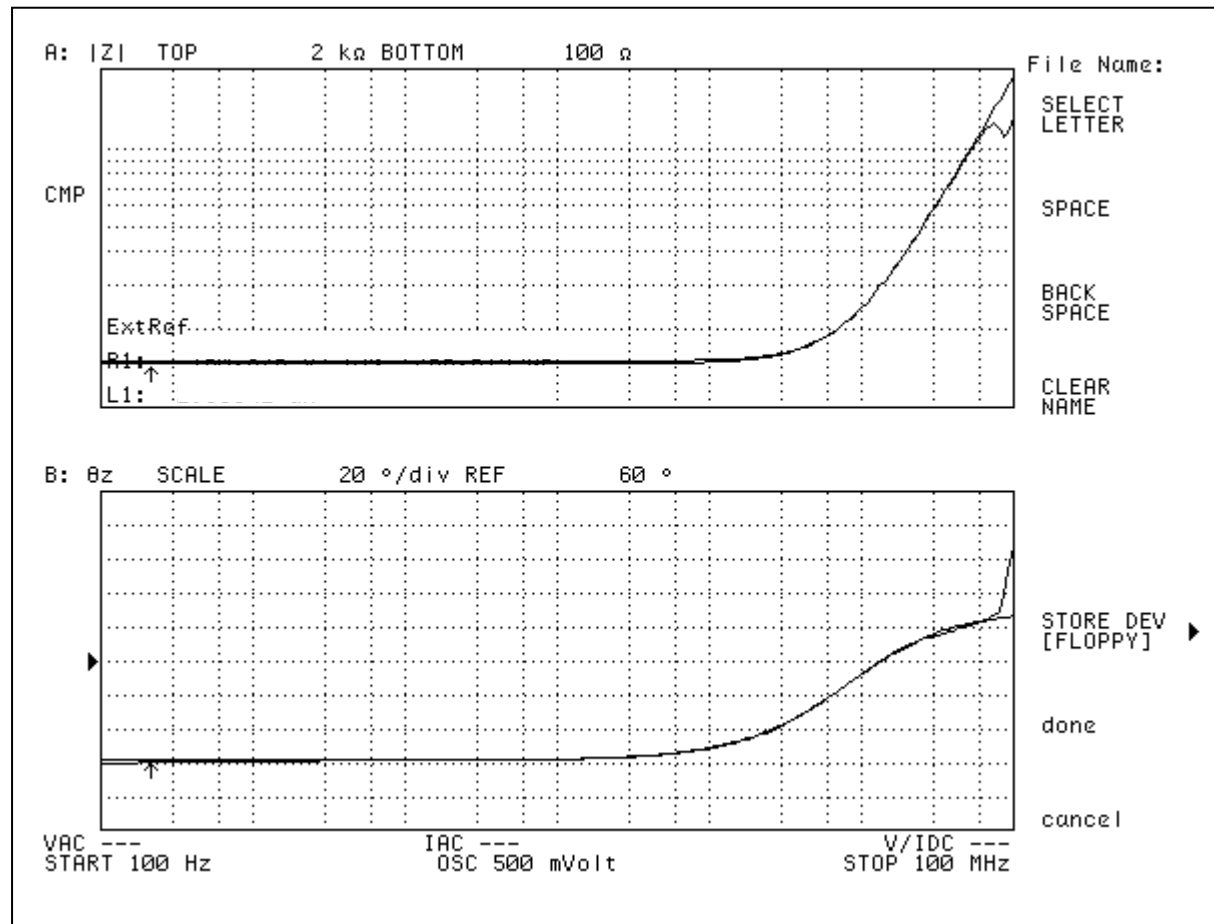
Optimization of Simulation

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

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

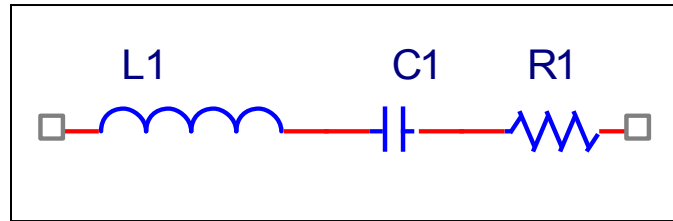
Attention

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



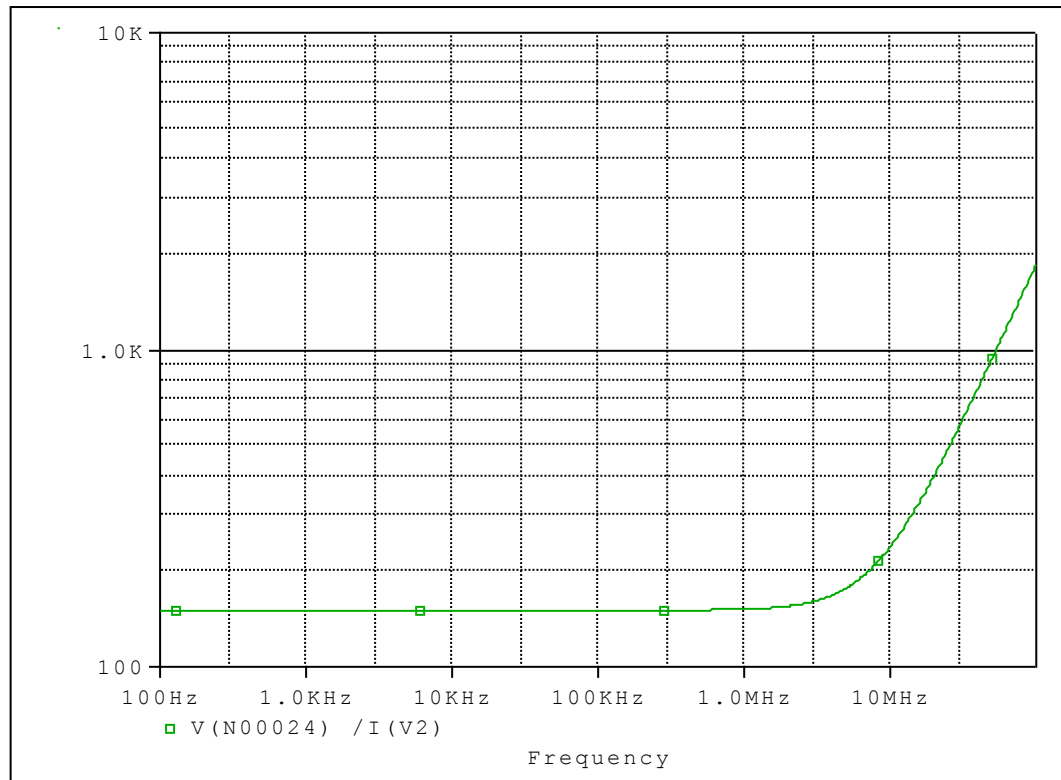
Measurement		
R1		
L1		
C1		

Equivalent circuit

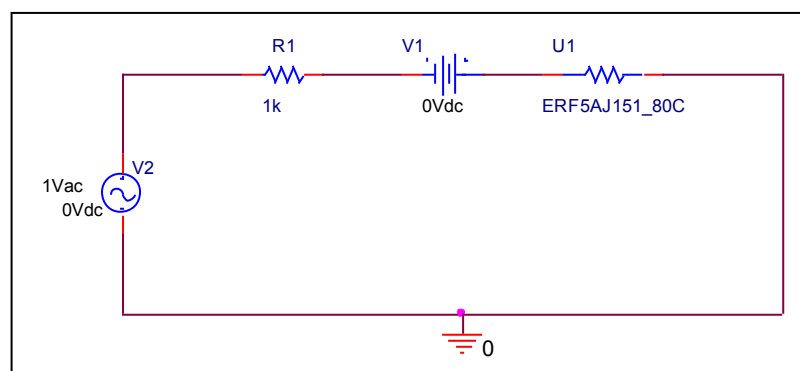


Frequency vs. $|Z|$ Characteristic

Circuit simulation result



Evaluation Circuit



Simulation Result

Frequency(HZ)	 Z (ohm) Measurement	 Z (ohm) Circuit Simulation	%Error
100	147.236	150.995	2.553
1K	147.272	150.877	2.448
10K	147.285	150.876	2.438
100K	147.262	150.887	2.461
1M	149.263	152.015	1.844
10M	243.012	239.310	1.523