

Device Modeling Report

COMPONENTS: RESISTOR
PART NUMBER: ERF5AKR15
THERMAL: TA=150(degree)
MANUFACTURER: MATSUSHITA



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

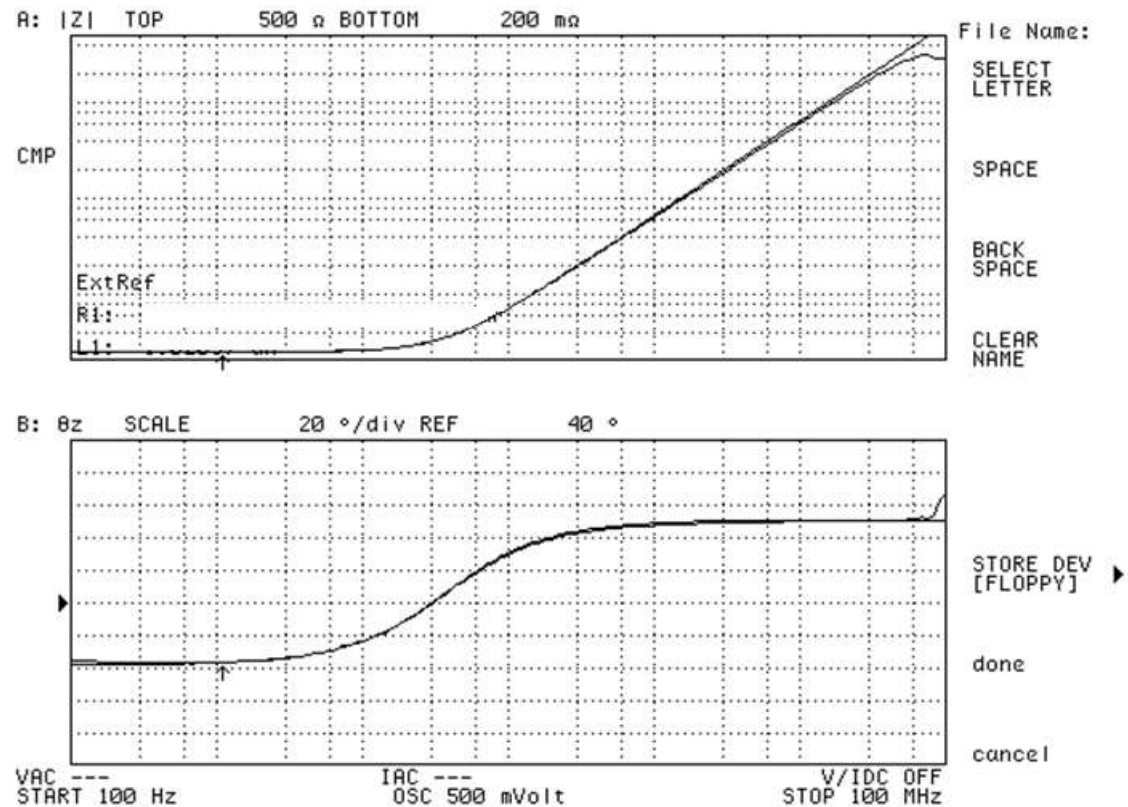
Optimization of Simulation

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

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

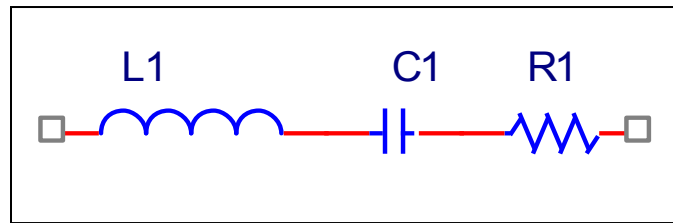
Attention

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



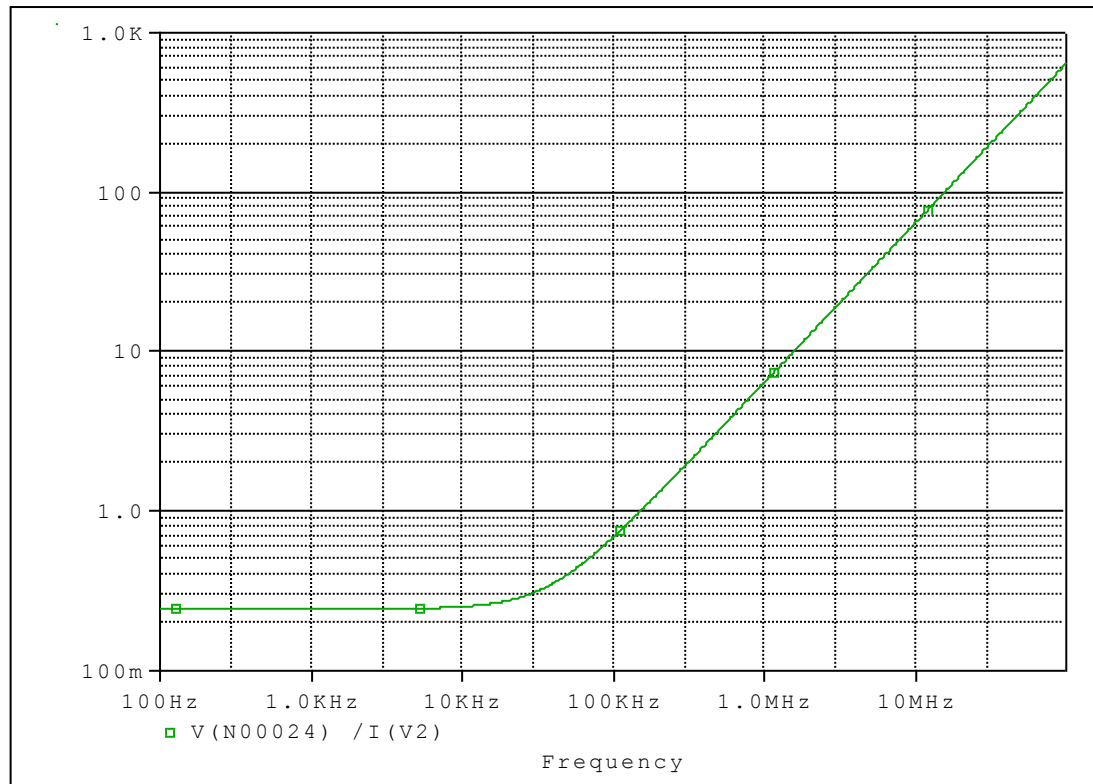
Measurement		
R1		
L1		
C1		

Equivalent circuit

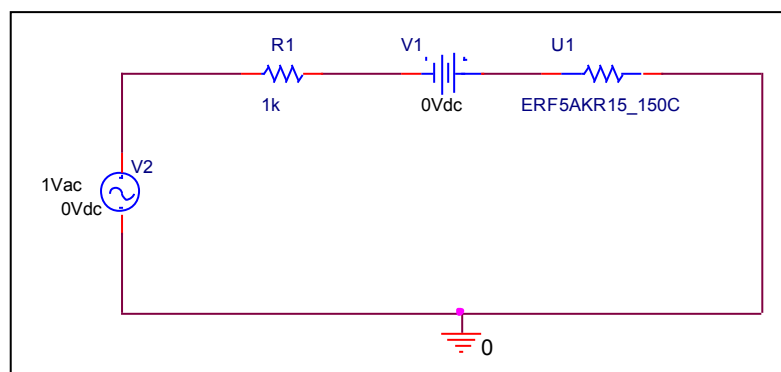


Frequency vs. $|Z|$ Characteristic

Circuit simulation result



Evaluation Circuit



Simulation Result

Frequency(HZ)	 Z (ohm) Measurement	 Z (ohm) Circuit Simulation	%Error
100	242.760	247.774	2.065
1K	242.065	244.021	0.808
10K	257.424	252.036	2.093
100K	673.407	686.008	1.871
1M	6.374	6.416	0.653
10M	60.115	64.112	6.649