

Device Modeling Report

COMPONENTS: RESISTOR
PART NUMBER: ERF5AJ510
THERMAL:TA=120(degree)
MANUFACTURER: MATSUSHITA



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

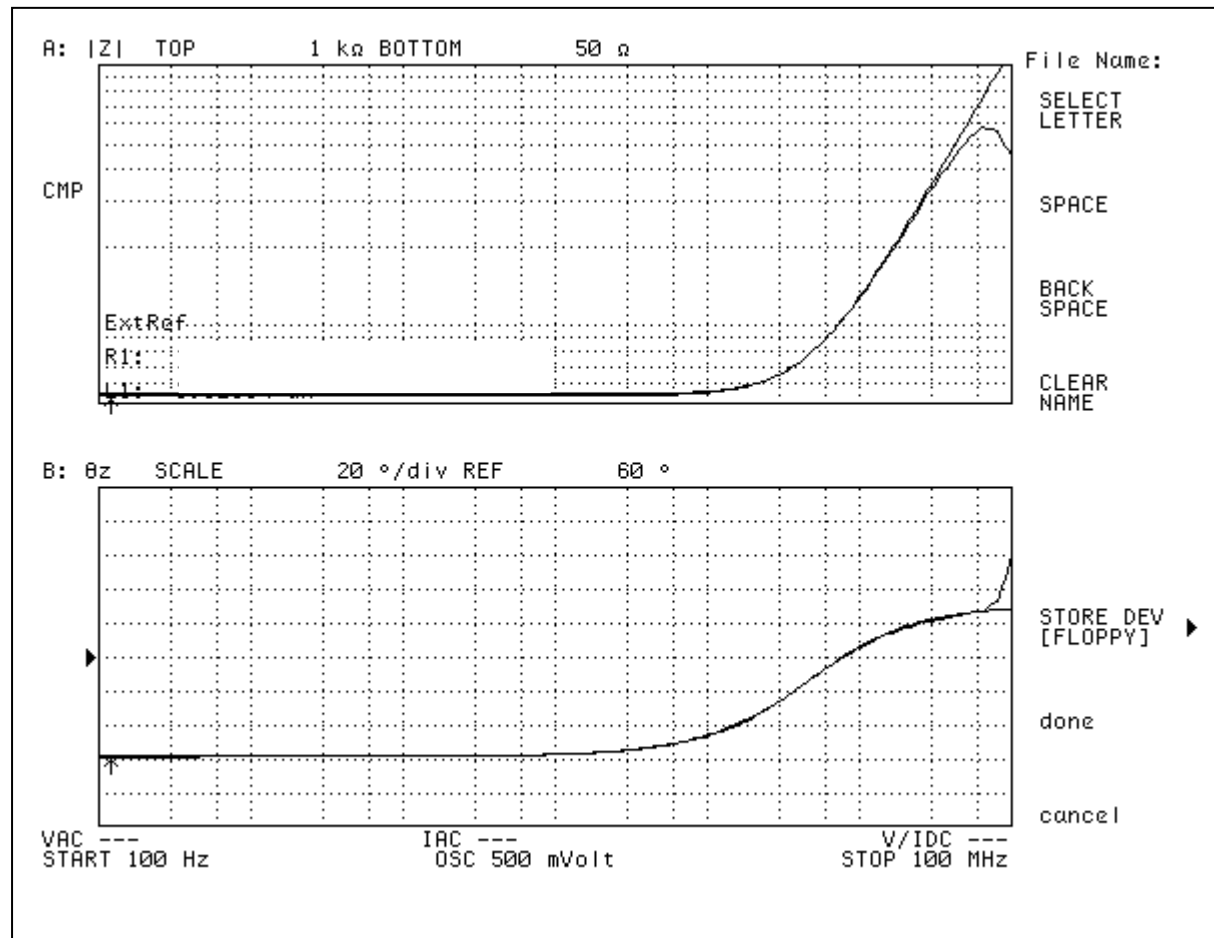
Optimization of Simulation

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

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

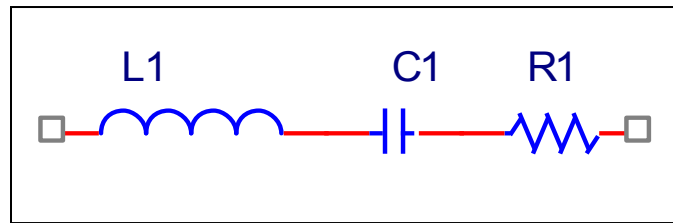
Attention

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



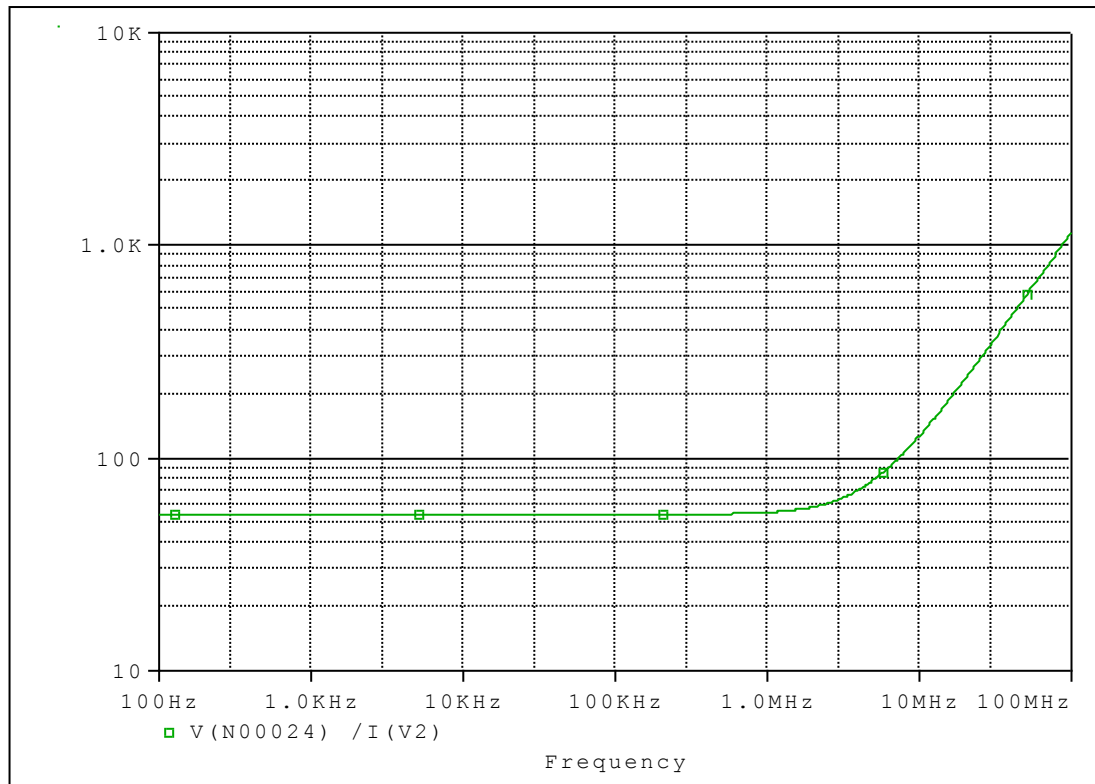
Measurement		
R1		
L1		
C1		

Equivalent circuit

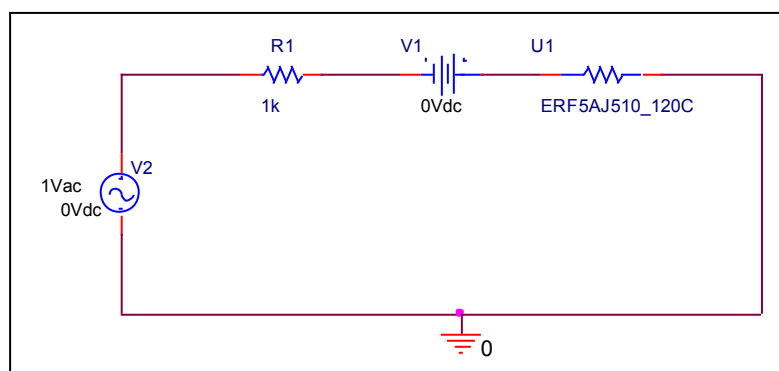


Frequency vs. $|Z|$ Characteristic

Circuit simulation result



Evaluation Circuit



Simulation Result

Frequency(HZ)	 Z (ohm) Measurement	 Z (ohm) Circuit Simulation	%Error
100	53.524	54.327	1.501
1K	53.556	54.326	1.437
10K	53.567	54.326	1.416
100K	53.574	54.339	1.427
1M	55.272	55.529	0.465
10M	128.842	127.150	1.313