

Device Modeling Report

COMPONENTS: RESISTOR
PART NUMBER: ERF5AJ220
THERMAL:TA=120(degree)
MANUFACTURER: MATSUSHITA



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

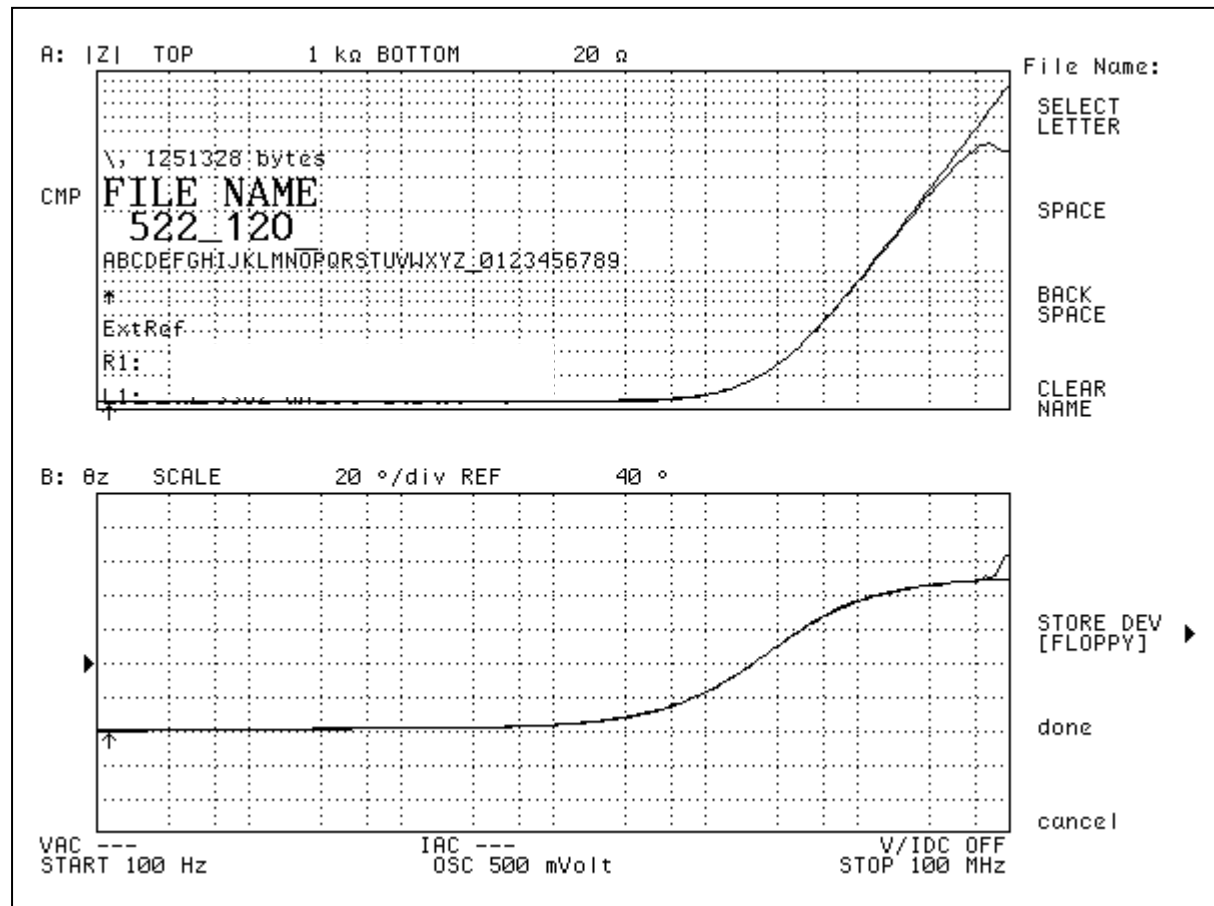
Optimization of Simulation

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

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

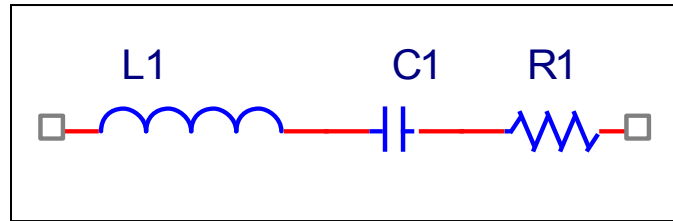
Attention

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



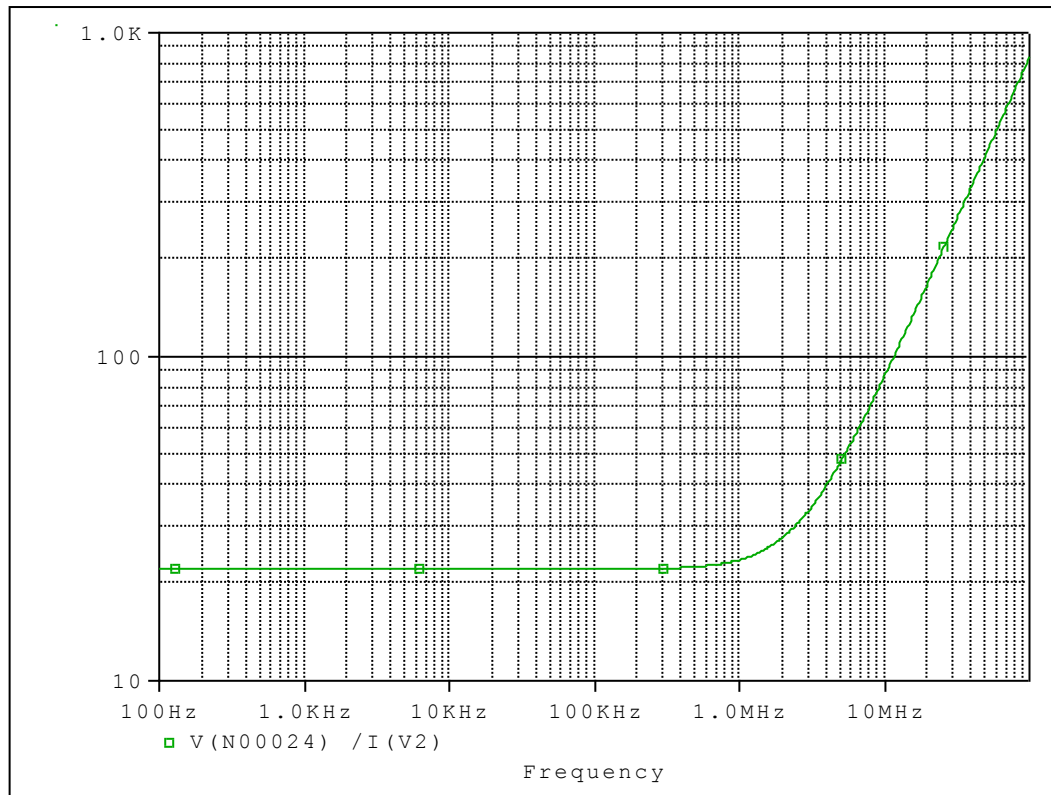
Measurement		
R1		
L1		
C1		

Equivalent circuit

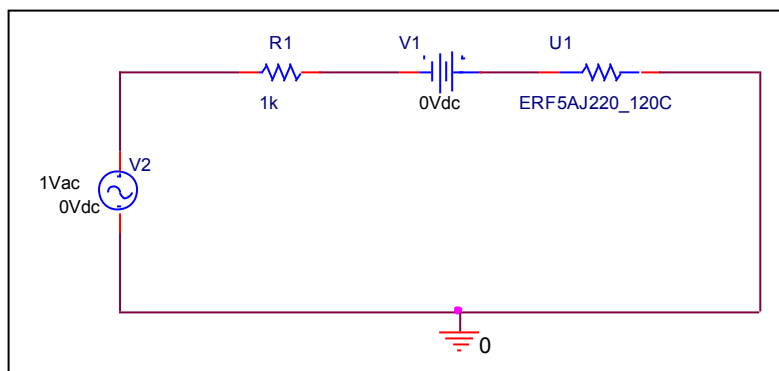


Frequency vs. $|Z|$ Characteristic

Circuit simulation result



Evaluation Circuit



Simulation Result

Frequency(HZ)	Z (ohm) Measurement	Z (ohm) Circuit Simulation	%Error
100	21.728	22.092	1.677
1K	21.729	22.037	1.417
10K	21.727	22.072	1.589
100K	21.754	22.088	1.535
1M	23.675	23.620	0.234
10M	87.389	86.930	0.525