

Device Modeling Report

COMPONENTS: RESISTOR
PART NUMBER: ERF5AK1R5
THERMAL: TA=80(degree)
MANUFACTURER: MATSUSHITA



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

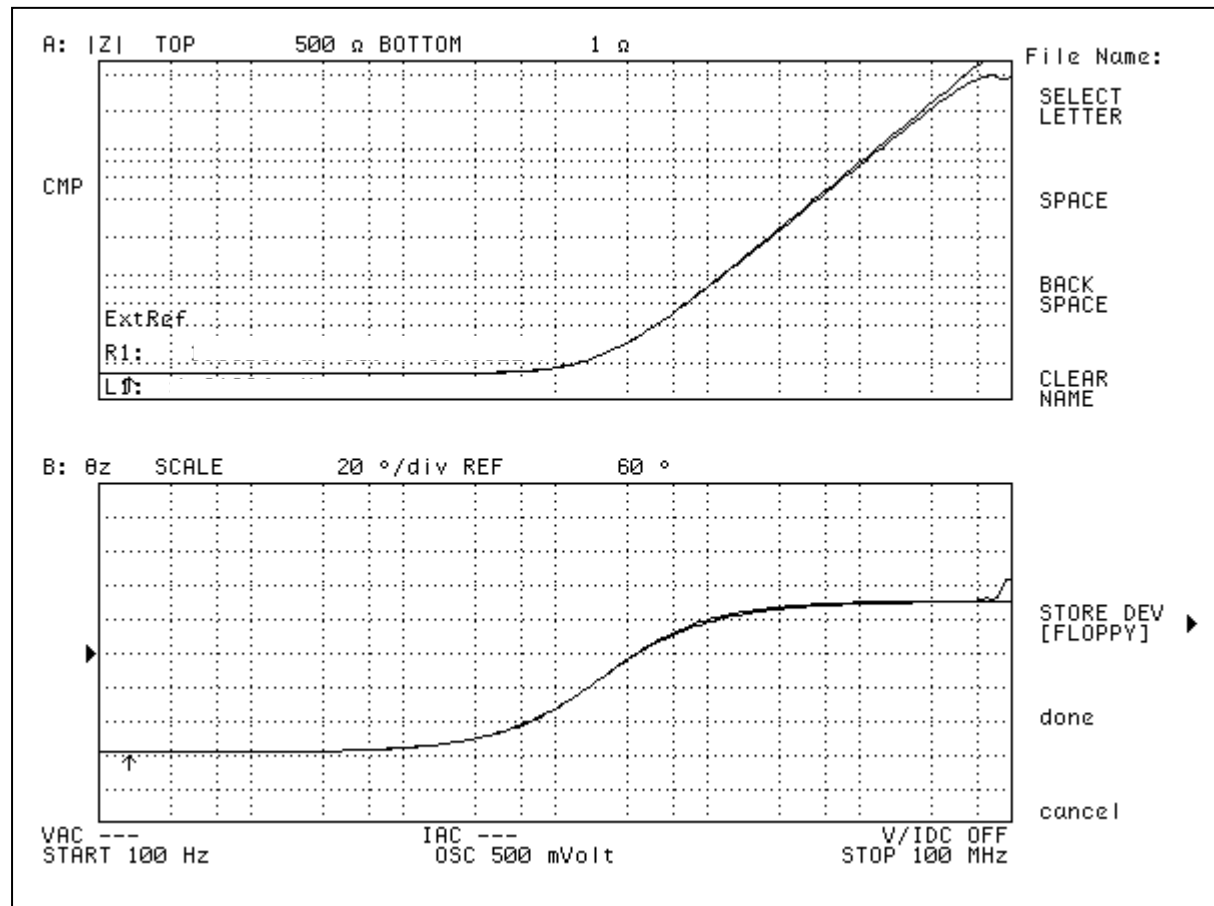
Optimization of Simulation

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

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

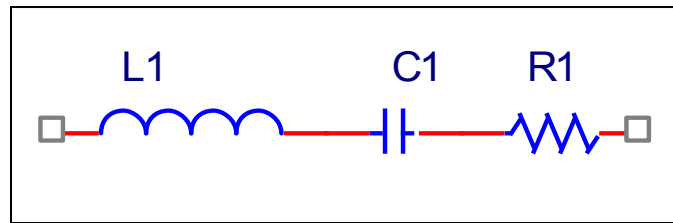
Attention

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



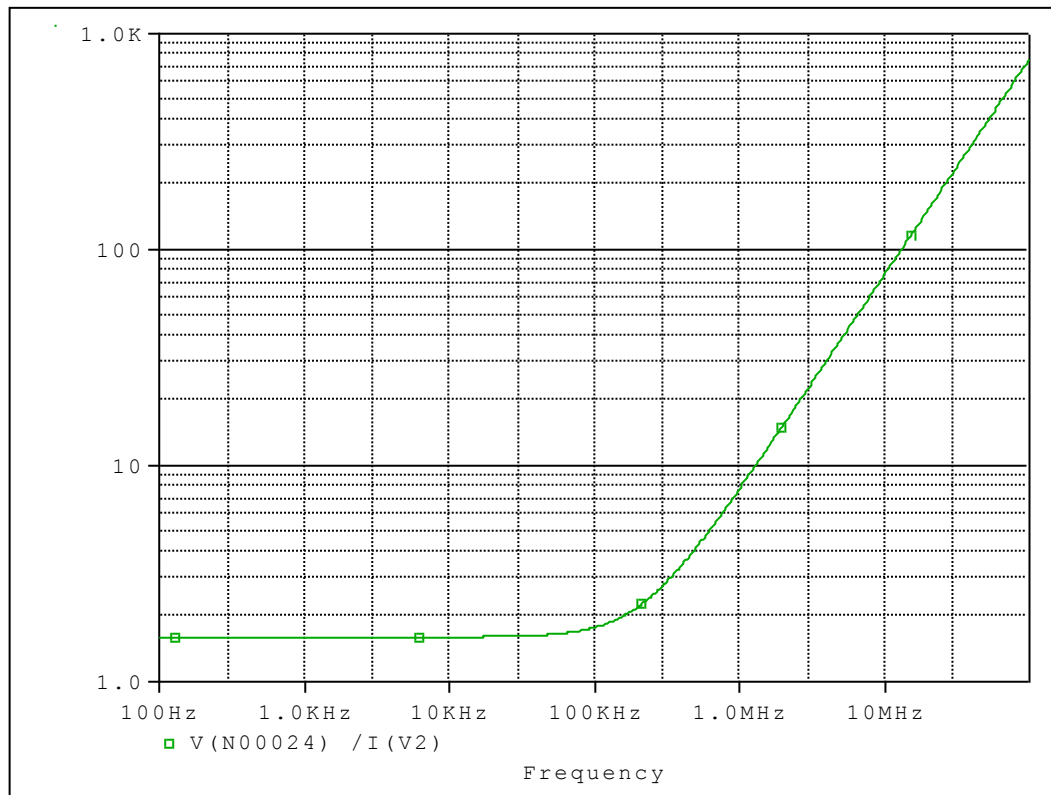
Measurement		
R1		
L1		
C1		

Equivalent circuit

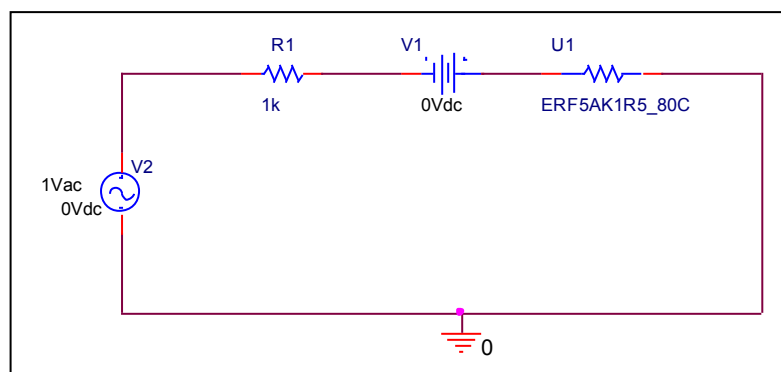


Frequency vs. $|Z|$ Characteristic

Circuit simulation result



Evaluation Circuit



Simulation Result

Frequency(HZ)	 Z (ohm) Measurement	 Z (ohm) Circuit Simulation	%Error
100	1.599	1.610	0.703
1K	1.601	1.610	0.561
10K	1.605	1.612	0.456
100K	1.791	1.783	0.450
1M	8.022	7.814	2.592
10M	74.040	76.480	3.296