

Device Modeling Report

COMPONENTS: RESISTOR
PART NUMBER: ERF10AJ431
MANUFACTURER: MATSUSHITA



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

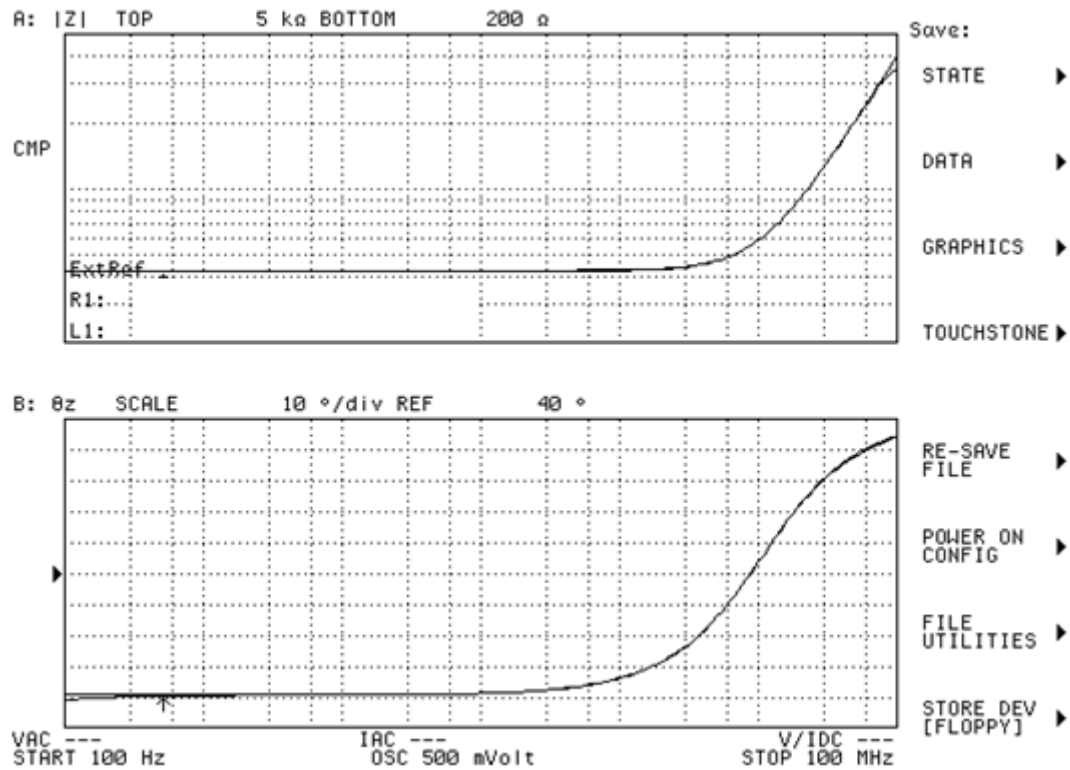
Optimization of Simulation

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

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

Attention

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



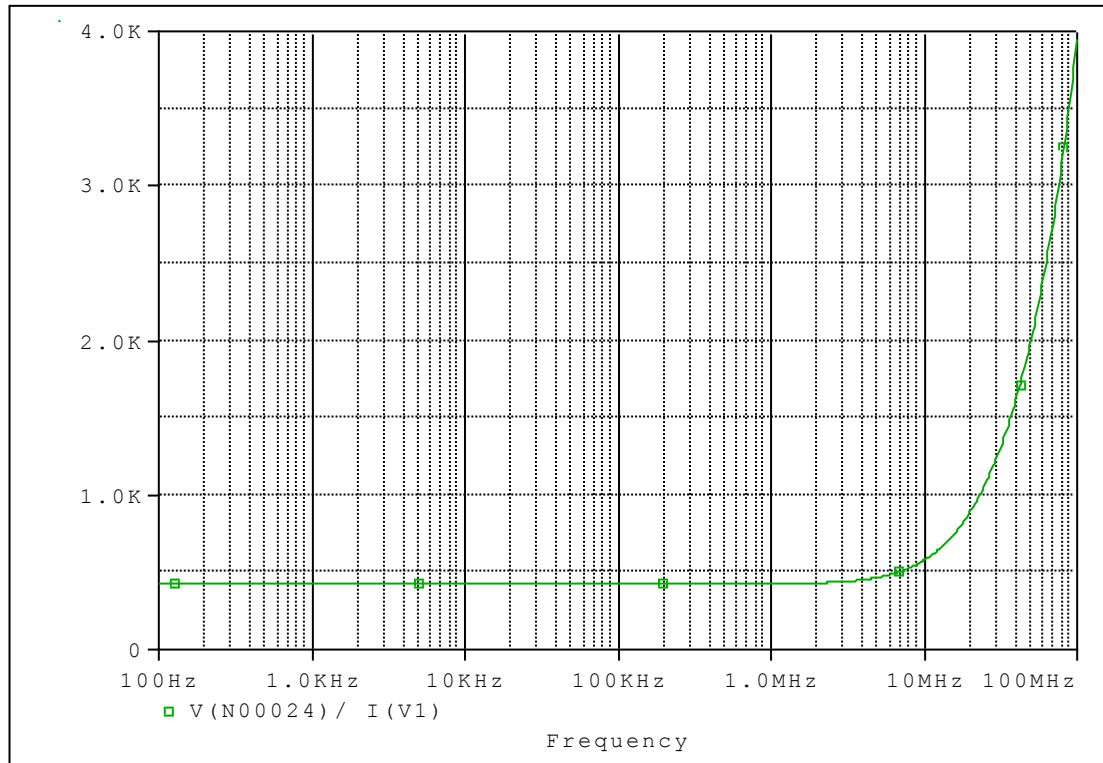
Measurement		
R1		
L1		
C1		

Equivalent circuit

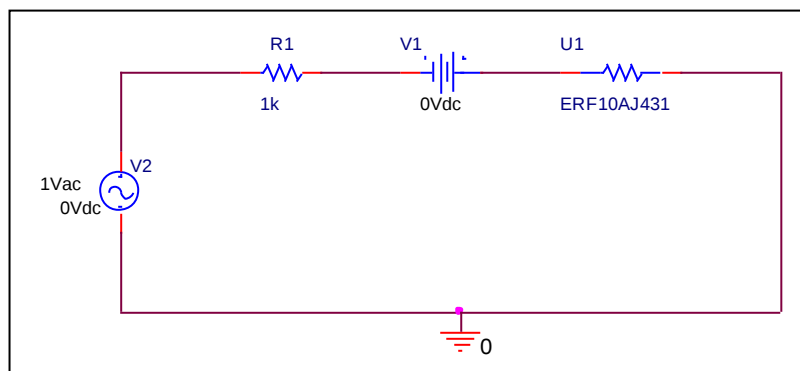


Frequency vs. $|Z|$ Characteristic

Circuit simulation result



Evaluation Circuit



Simulation Result

Frequency(HZ)	Z (ohm) Measurement	Z (ohm) Circuit Simulation	%Error
100	420.966	421.111	0.034
1K	421.014	423.934	0.694
10K	420.836	423.933	0.736
100K	420.989	423.951	0.704
1M	423.094	425.746	0.627
10M	578.052	577.752	0.052