

Device Modeling Report

COMPONENTS: RESISTOR
PART NUMBER: ERF10AJ271
THERMAL:TA=120(degree)
MANUFACTURER: MATSUSHITA



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

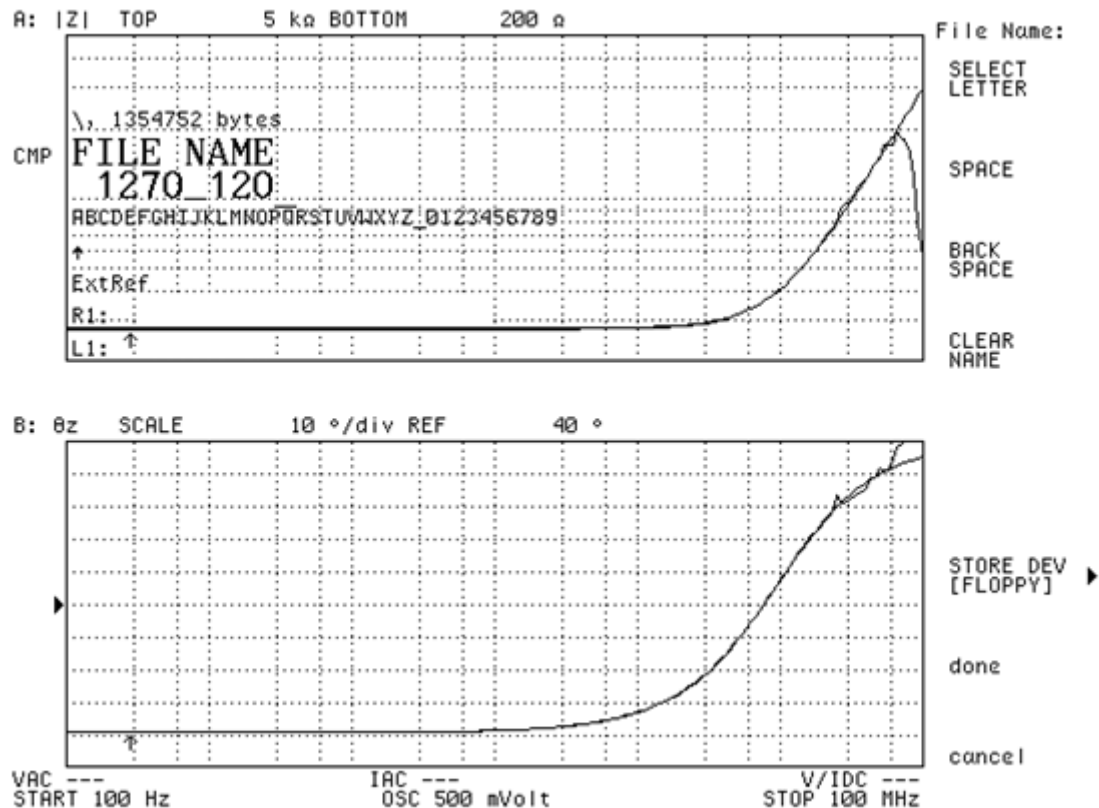
Optimization of Simulation

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

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

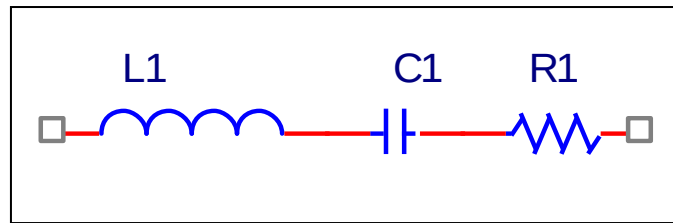
Attention

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



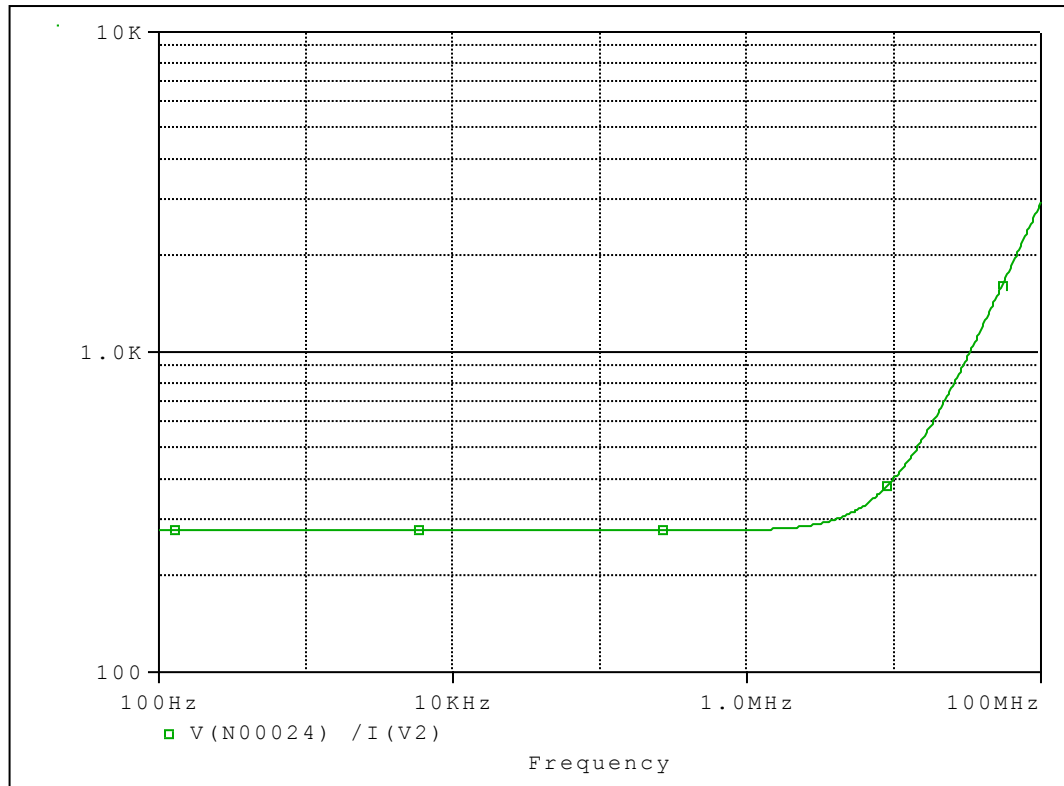
Measurement		
R1		
L1		
C1		

Equivalent circuit

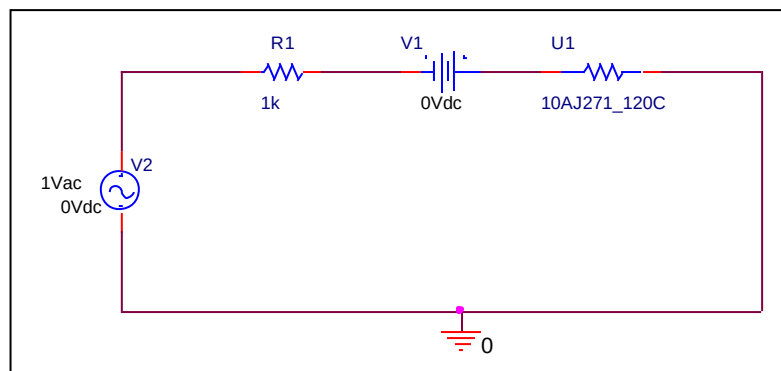


Frequency vs. |Z| Characteristic

Circuit simulation result



Evaluation Circuit



Simulation Result

Frequency(HZ)	 Z (ohm) Measurement	 Z (ohm) Circuit Simulation	%Error
100	273.883	276.338	0.896
1K	274.032	276.338	0.842
10K	273.829	276.338	0.916
100K	273.857	277.883	1.470
1M	275.898	277.838	0.703
10M	408.257	402.462	1.419