

Device Modeling Report

COMPONENTS: CAPACITOR/ ELECTROLYTIC
PART NUMBER: 200MXP100MK2229
MANUFACTURER: Rubycon
THERMAL: Ta= 60C (degree)



Bee Technologies Inc.

Theory: Auto Balancing Bridge Method

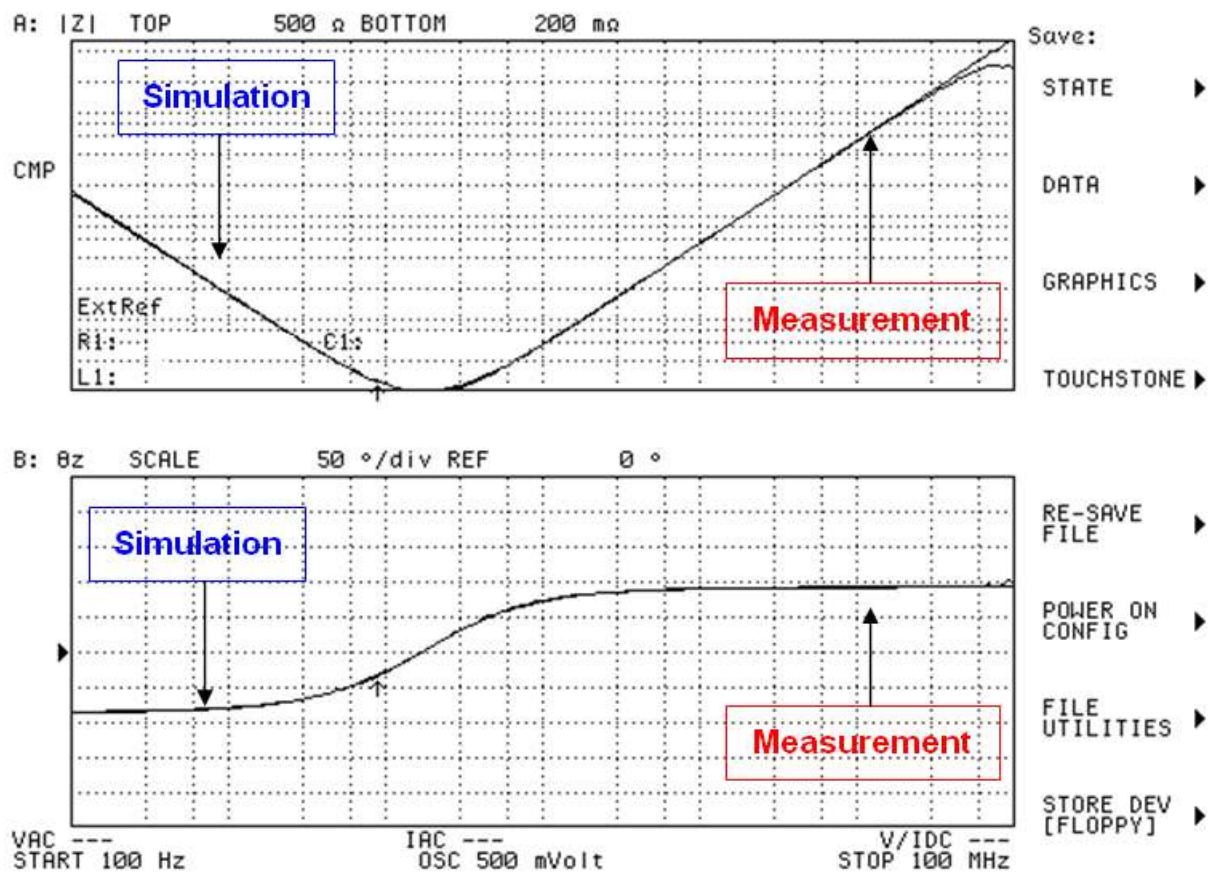
Optimization of Simulation

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

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

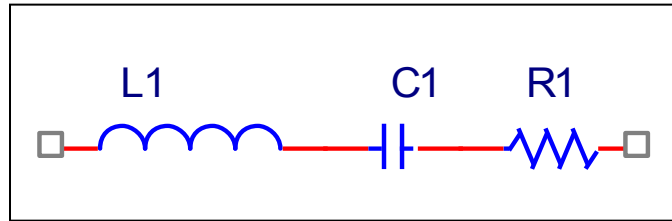
Attention)

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



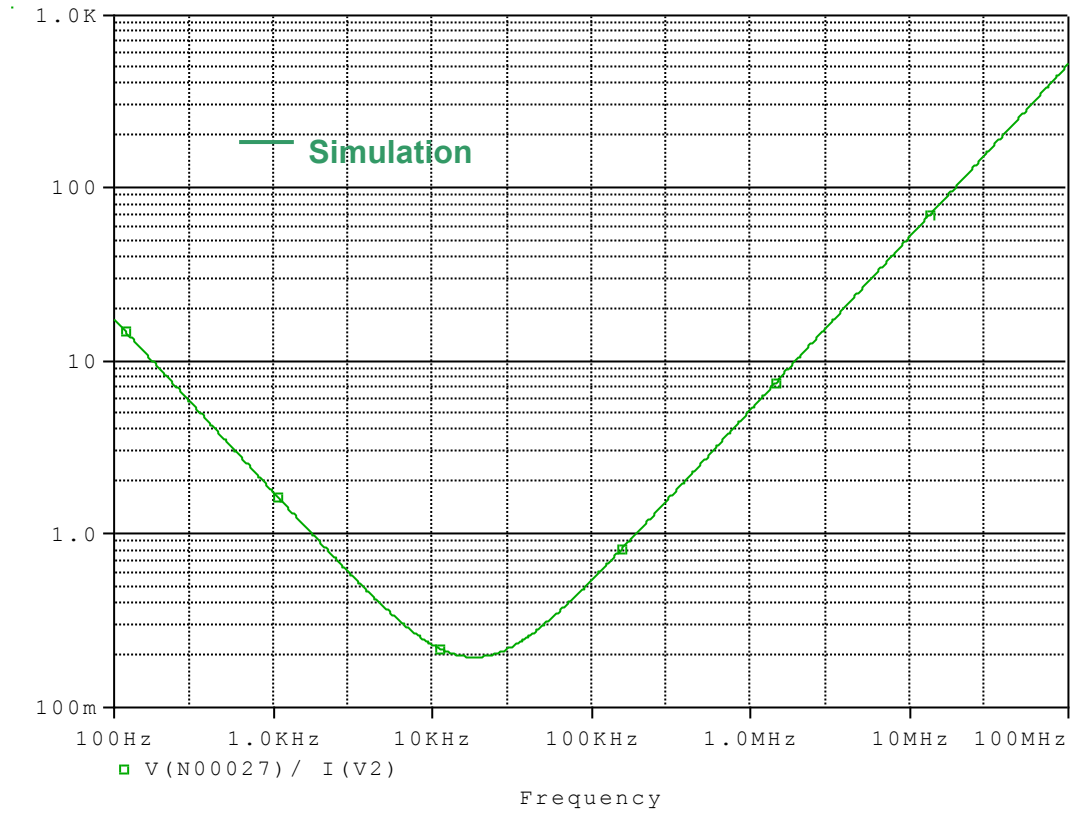
| | Measurement | |
|----|-------------|--|
| R1 | | |
| C1 | | |
| L1 | | |

Equivalent circuit

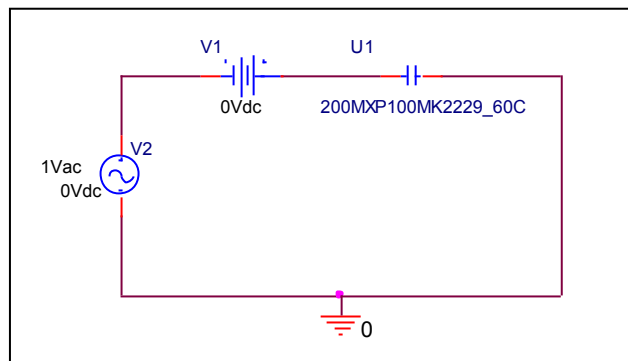


Frequency vs. IZI Characteristic

Circuit Simulation result



Evaluation Circuit



Simulation result

| Frequency (Hz) | IZI (Ω) | | % Error |
|----------------|------------------|------------|---------|
| | Measurement | Simulation | |
| 100 | 16.610 | 17.547 | 5.639 |
| 1K | 1.635 | 1.760 | 7.631 |
| 10K | 225.090m | 231.003m | 2.627 |
| 100K | 549.640m | 541.765m | - 1.433 |
| 1M | 5.501 | 5.230 | - 4.928 |
| 10M | 52.448 | 52.284 | - 0.313 |