# **Device Modeling Report**

COMPONENTS: CAPACITOR/ ELECTROLYTIC

PART NUMBER: LXZ25VB3300ML30

MANUFACTURER: Nippon Chemi-Con Corporation

THERMAL: Ta= 60C (degree)



Bee Technologies Inc.

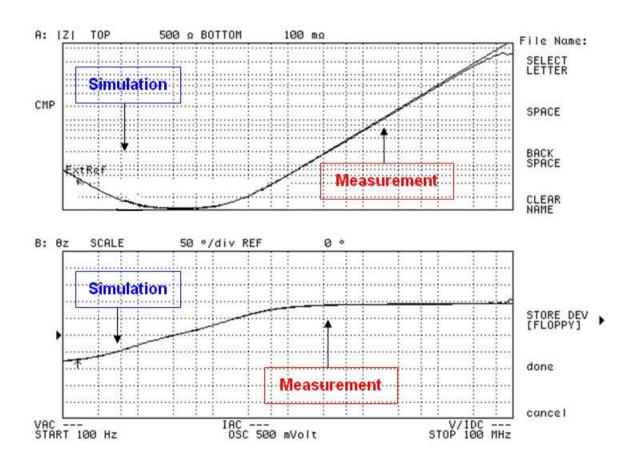
#### **Theory: Auto Balancing Bridge Method**

### Optimization of Simulation

Range of adjustment Frequency:100 Hz to100M(Hz) Frequency vs.|Z| and Frequency vs.  $\theta$ z Characteristic

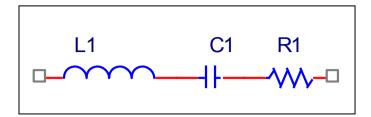
#### Attention)

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



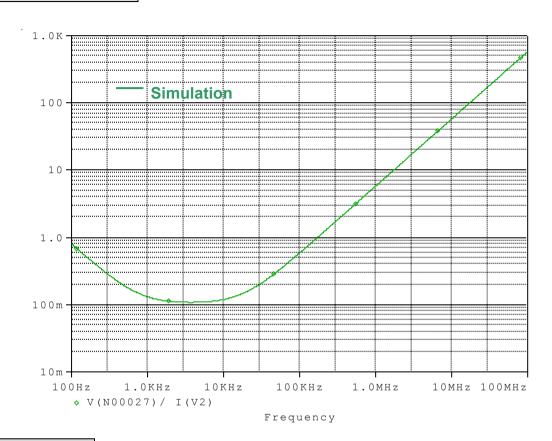
|    | Measurement |  |
|----|-------------|--|
| R1 |             |  |
| C1 |             |  |
| L1 |             |  |

# Equivalent circuit

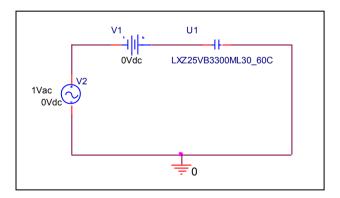


# Frequency vs. IZI Characteristic

## Circuit Simulation result



### **Evaluation Circuit**



## Simulation result

| Frequency (Hz) | ΙΖΙ (Ω)     |            | % Error  |
|----------------|-------------|------------|----------|
|                | Measurement | Simulation | /6 E1101 |
| 100            | 775.417m    | 800.745m   | 3.266    |
| 1K             | 128.840m    | 130.838m   | 1.551    |
| 10K            | 118.084m    | 119.104m   | 0.864    |
| 100K           | 571.905m    | 587.330m   | 2.697    |
| 1M             | 5.702       | 5.782      | 1.406    |
| 10M            | 54.342      | 57.808     | 6.378    |