# **Device Modeling Report**

COMPONENTS: CAPACITOR/ ELECTROLYTIC PART NUMBER: UUG0J103MNR1MS MANUFACTURER: Nichicon REMARK: TA=60C



Bee Technologies Inc.

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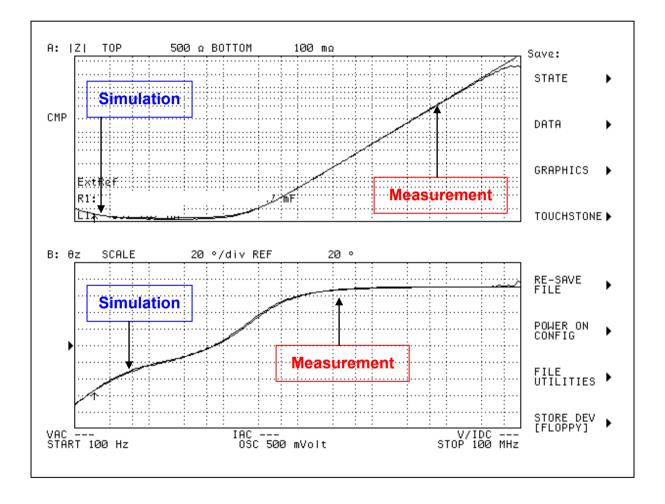
#### Theory: Auto Balancing Bridge Method

#### **Optimization of Simulation**

Range of adjustment Frequency:100 Hz to100M(Hz) Frequency vs. |Z| and Frequency vs. θz Characteristic

#### Attention)

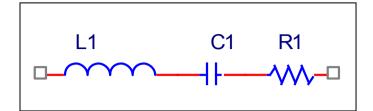
#### Please use SPICE MODEL within the range from 100Hz to 100M(Hz)



	Measurement	
R1		
C1		
L1		

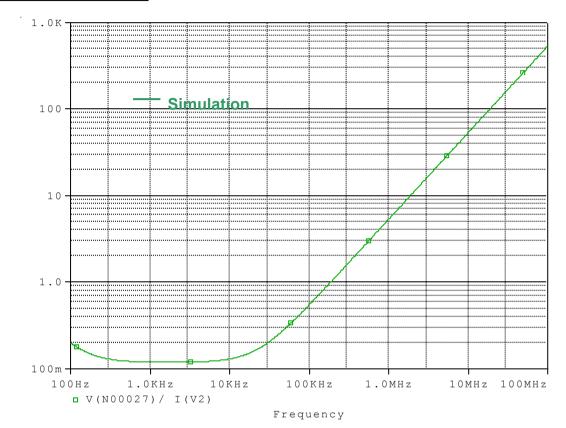
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## Equivalent circuit

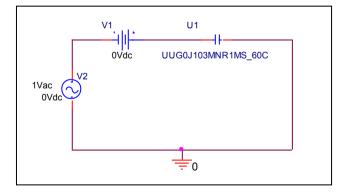


## Frequency vs. IZI Characteristic

### Circuit Simulation result



Evaluation Circuit



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## Simulation result

Frequency (Hz)	ΙΖΙ (Ω)		% Error
	Measurement	Simulation	70 LITOI
100	200.532m	198.935m	- 0.796
1K	114.901m	119.633m	4.118
10K	124.501m	129.966m	4.390
100K	550.839m	547.823m	- 0.548
1M	5.523	5.350	- 3.140
10M	52.696	53.487	1.501