

# Device Modeling Report

COMPONENTS: CAPACITOR/ ELECTROLYTIC  
PART NUMBER: 200MXP100MK2229  
MANUFACTURER: Rubycon  
THERMAL: Ta= 40C (degree)



**Bee Technologies Inc.**

## Theory: Auto Balancing Bridge Method

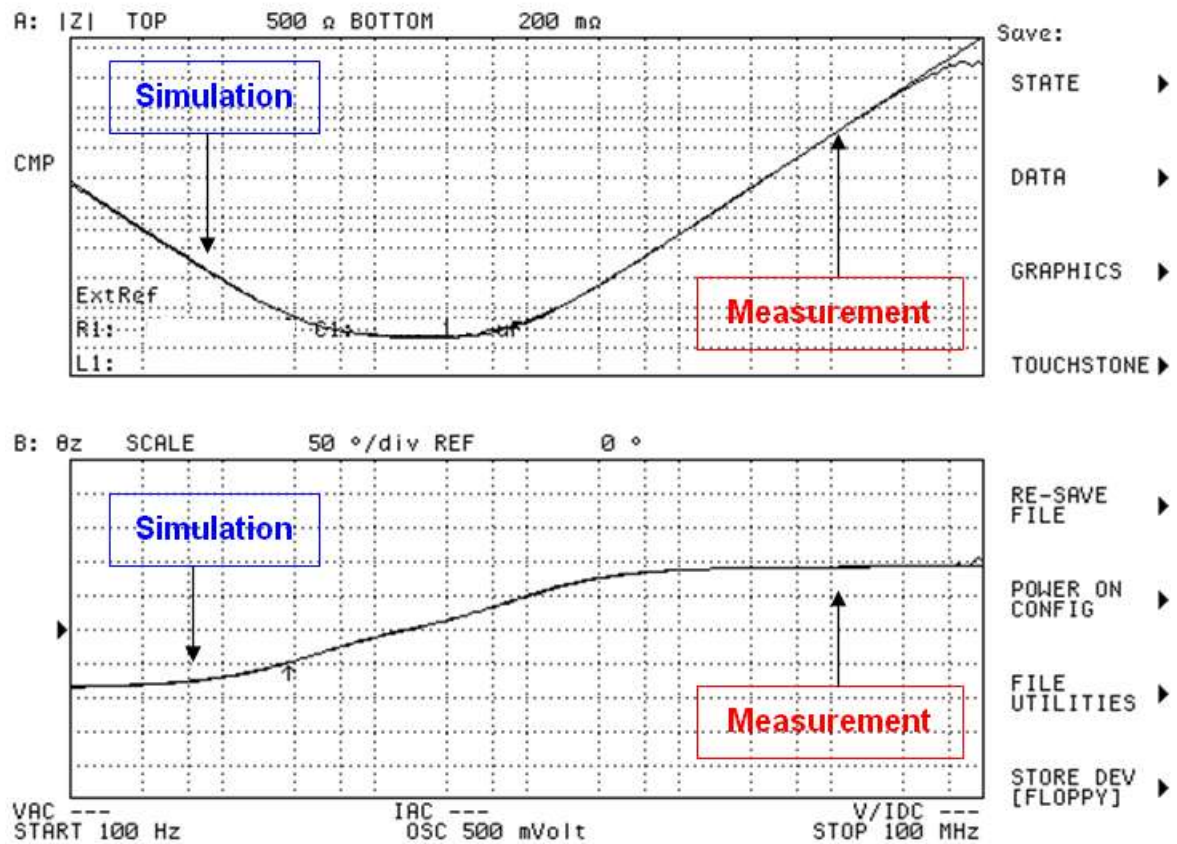
### Optimization of Simulation

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

Frequency vs.  $|Z|$  and Frequency vs.  $\theta z$  Characteristic

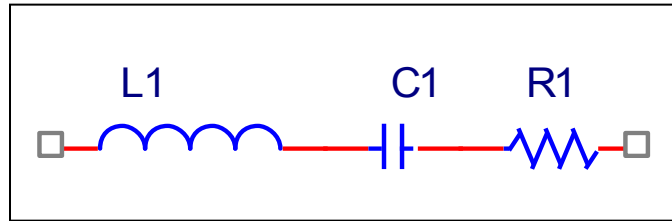
Attention)

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



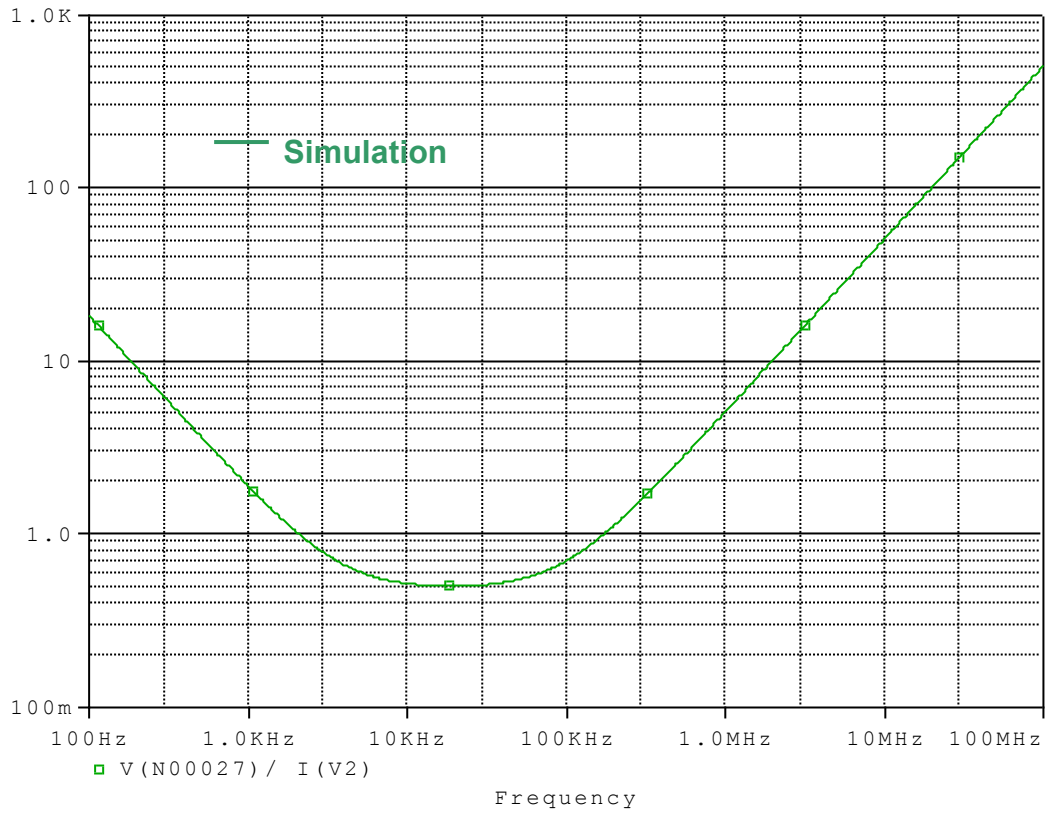
	Measurement	
R1		
C1		
L1		

Equivalent circuit

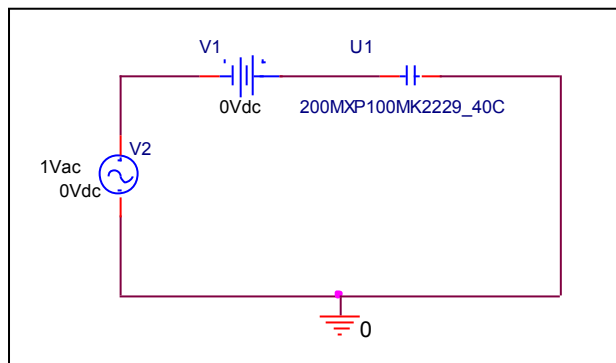


# Frequency vs. IZI Characteristic

## Circuit Simulation result



## Evaluation Circuit



Simulation result

Frequency (Hz)	IZI ( $\Omega$ )		% Error
	Measurement	Simulation	
100	17.381	18.424	5.998
1K	1.775	1.904	7.281
10K	508.795	520.597	2.320
100K	678.151	703.576	3.749
1M	5.826	5.124	- 12.048
10M	52.326	51.010	- 2.515