Device Modeling Report

COMPONENTS: CAPACITOR/CERAMIC
PART NUMBER: ECKATS332ME
MANUFACTURER: PANASONIC
REMARK: TA=25C

Bee Technologies Inc.

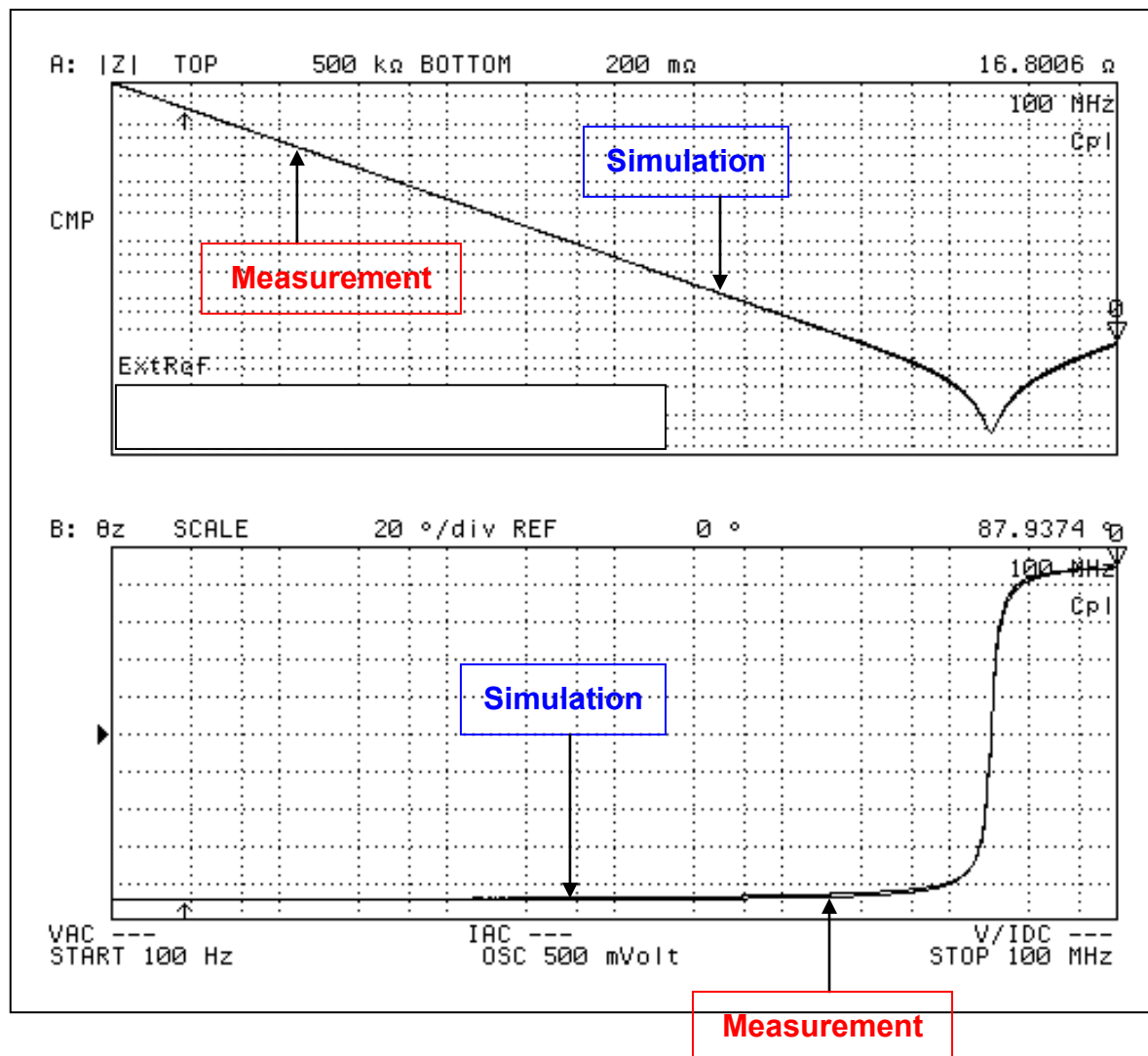**Theory: Auto Balancing Bridge Method**

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

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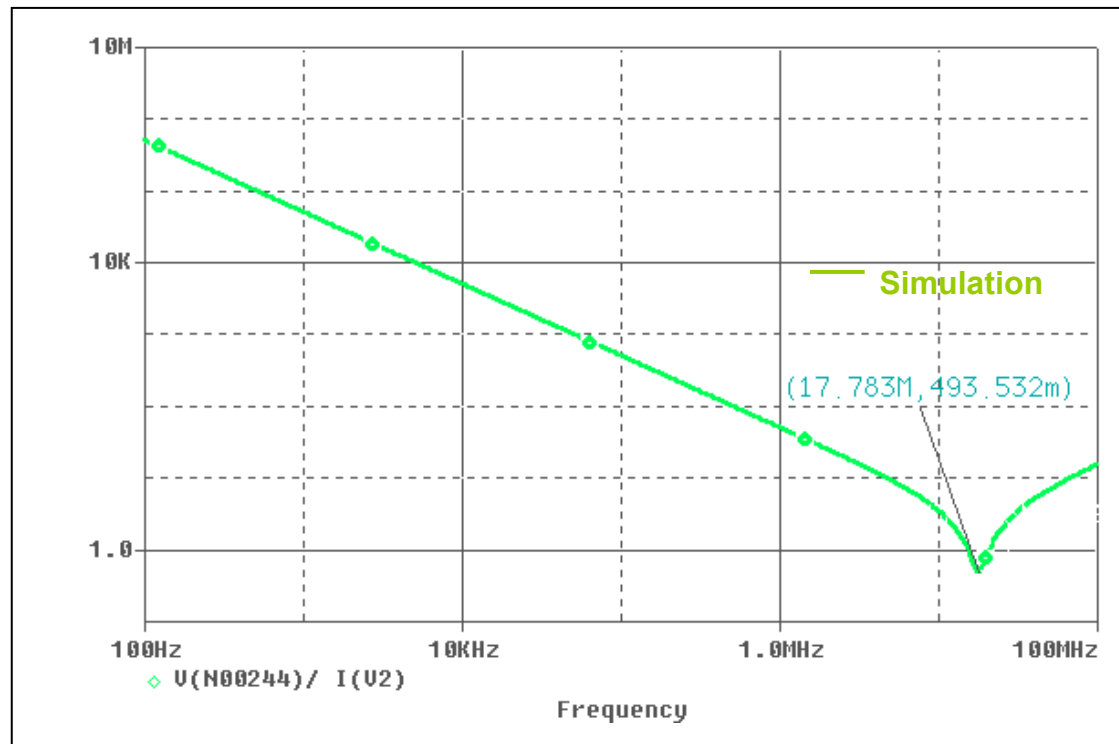*Please use SPICE MODEL within the range from 100Hz to 100M(Hz)*

A: |Z| TOP   500 kΩ BOTTOM   200 mΩ   16.8006 Ω
                                                          100 MHz
                                                          Cpl
CMP   **Simulation**

         Measurement

ExtRef

B: θz   SCALE   20 °/div REF   0 °   87.9374 °
                                                    100 MHz
                                                    Cpl

                      Simulation

VAC ---   IAC ---   V/IDC ---
START 100 Hz   OSC 500 mVolt   STOP 100 MHz

                              Measurement

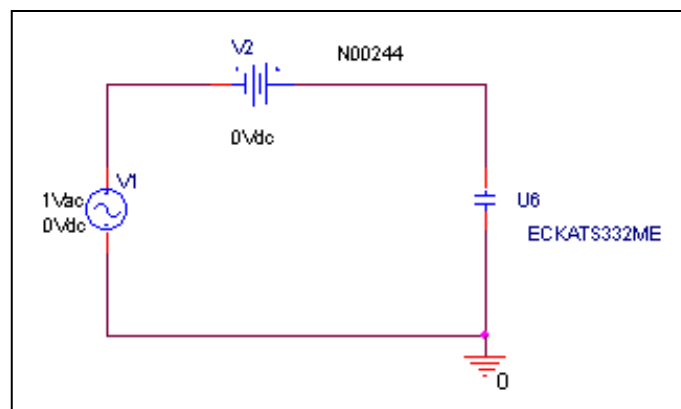| L1	
C1	
R1	

Equivalent circuit

L1   C1   R1

Frequency vs. IZI Characteristic

Circuit Simulation result

Evaluation Circuit

Simulation result

Frequency (Hz)	IZI (ohm) :Measurement	IZI (ohm) :Simulation	% Error
100	502.18K	509.345K	1.4268
1K	50.4859K	50.935K	0.8896
10K	5.07541K	5.0935K	0.3564
100K	512.541	509.329	0.6267
1M	52.3785	50.779	3.0537
10M	3.85648	3.5469	8.0275
100M	16.8006	15.305	8.9021

	Measurement	Simulation	%Error
FSRF(Hz)	18.09255M	17.783M	1.7109
IZI (ohm)	491.568m	493.532m	0.3995