

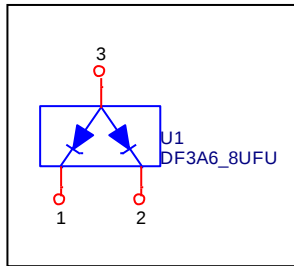
Device Modeling Report

COMPONENTS: Zener Diode
PART NUMBER: DF3A6.8UFU
MANUFACTURER: TOSHIBA

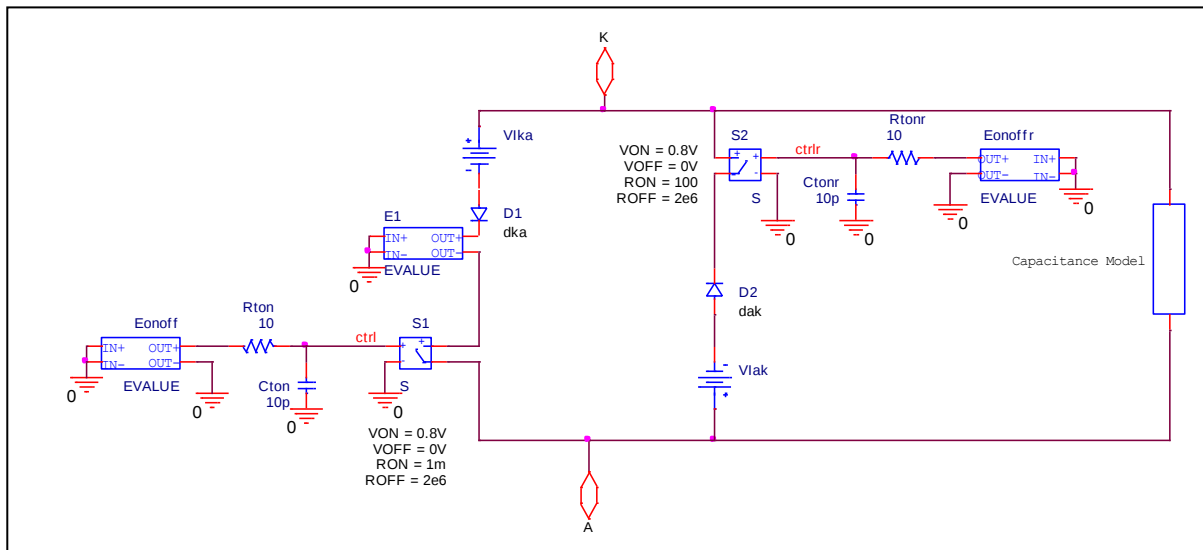


Bee Technologies Inc.

Circuit Configuration



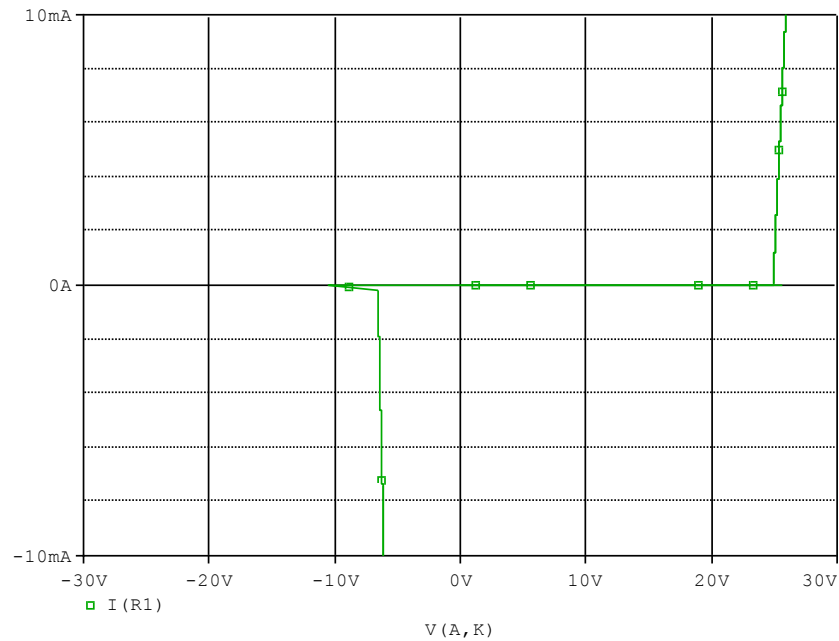
Equivalent circuit



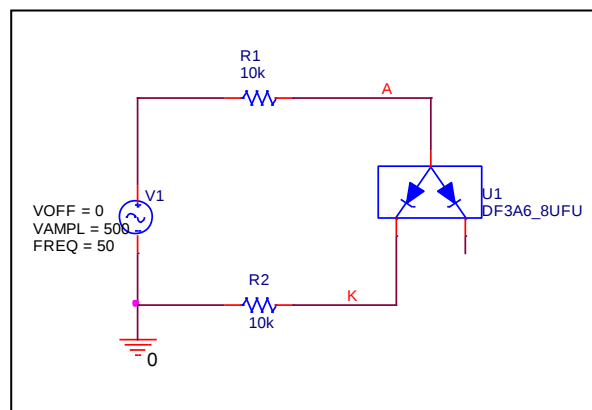
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
TT	Transit Time

Forward-Reverse Voltage Characteristic

Circuit Simulation Result



Evaluation Circuit



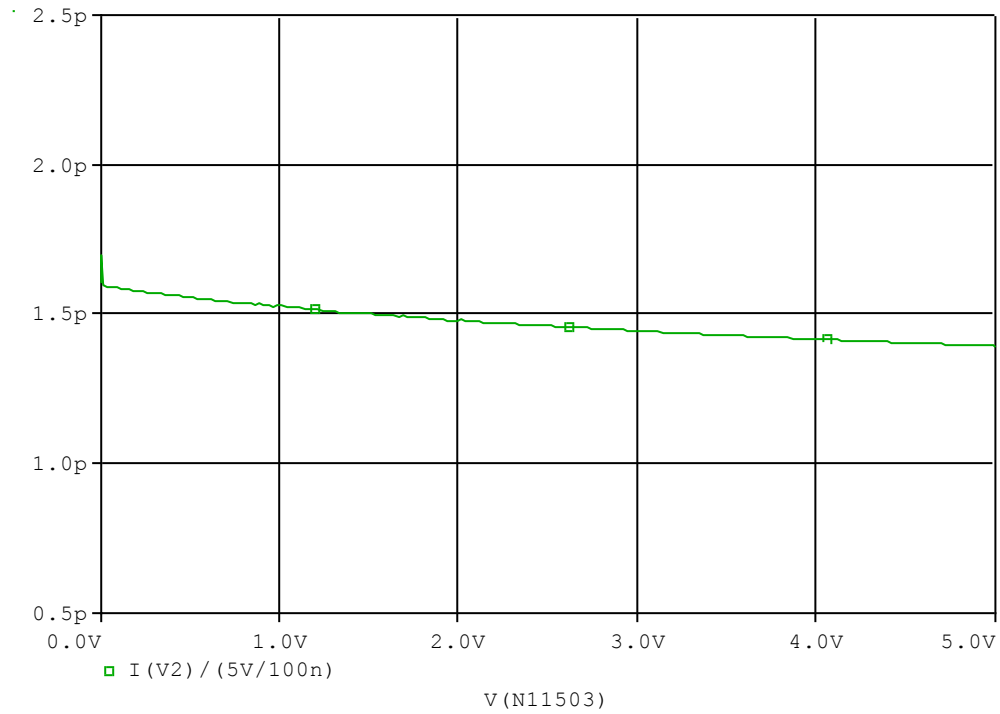
Compare Measurement vs. Simulation

Condition: $I_R = 1mA$, $I_F = 1mA$

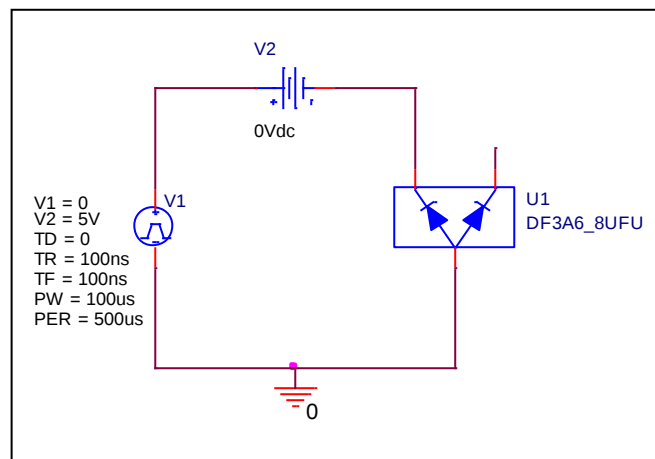
		Measurement	Simulation	%Error
V_R	V	6.800	6.521	-4.11
V_F	V	25.000	25.001	0.00

Capacitance Characteristic

Circuit Simulation Result

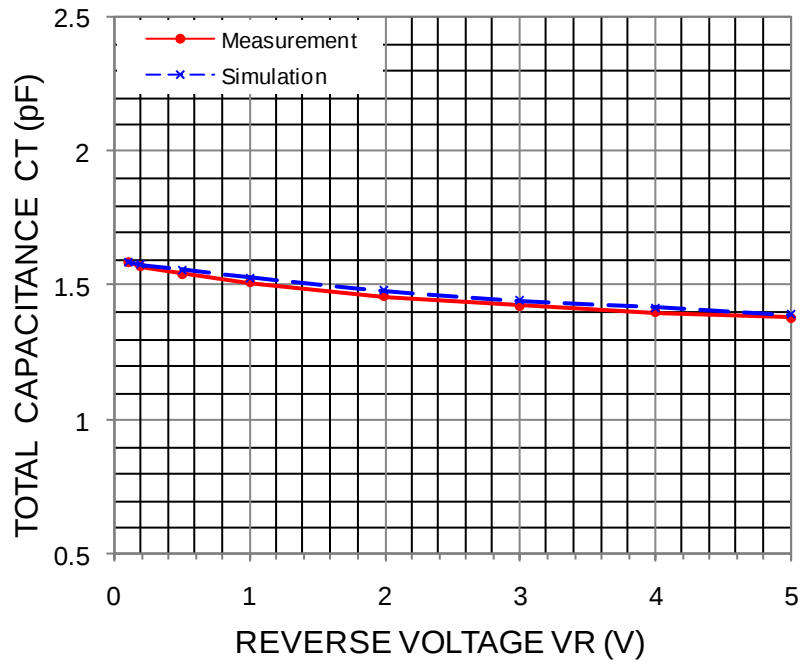


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

V_R (V)	C_T (pF)		%Error
	Measurement	Simulation	
0.1	1.590	1.587	-0.19
0.2	1.570	1.578	0.52
0.5	1.545	1.558	0.83
1	1.510	1.527	1.13
2	1.460	1.480	1.36
3	1.425	1.445	1.38
4	1.400	1.416	1.16
5	1.380	1.393	0.93