

# Device Modeling Report

COMPONENTS:  
DIODE/ SCHOOTKY RECTIFIER / STANDARD  
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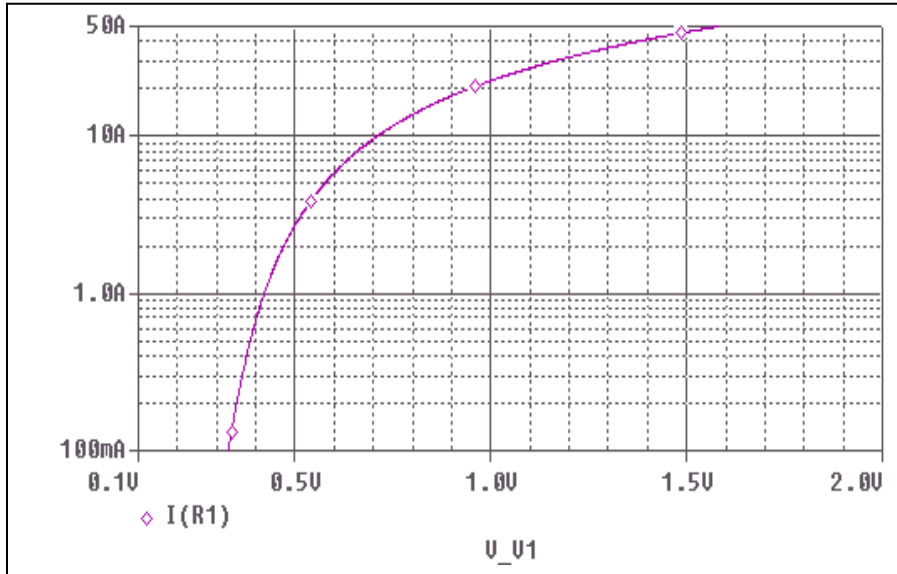


**Bee Technologies Inc.**

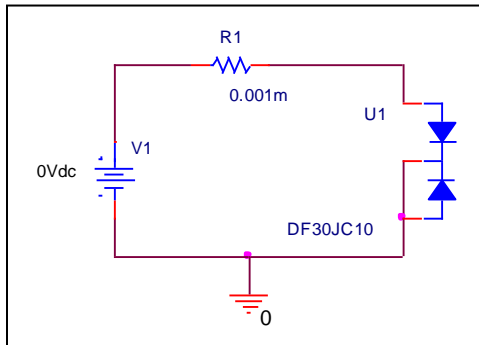
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a positive value)
IBV	Reverse Breakdown Current(a positive value)
TT	Transit Time
EG	Energy-band Gap

# Forward Current Characteristic

## Circuit Simulation Result

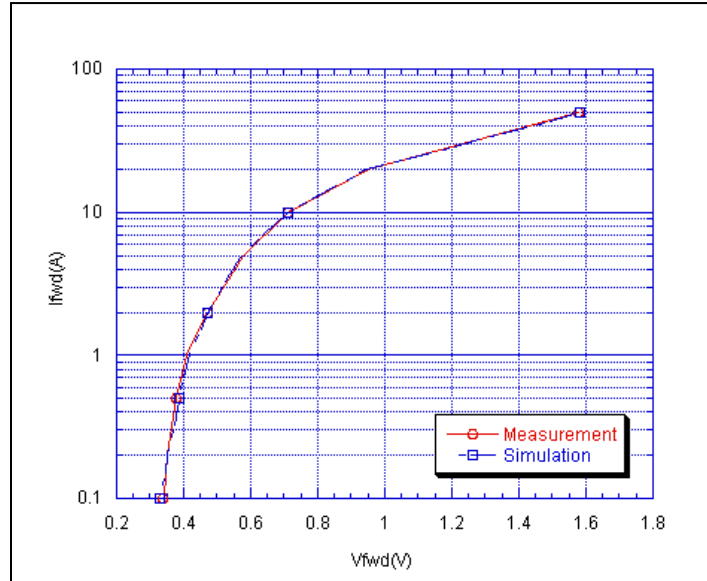


## Evaluation Circuit



# Comparison Graph

## Circuit Simulation Result

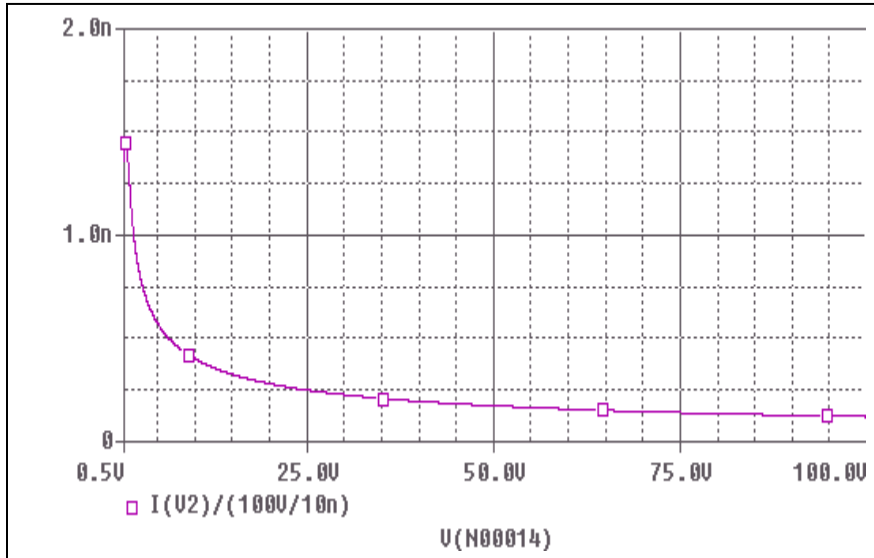


## Simulation Result

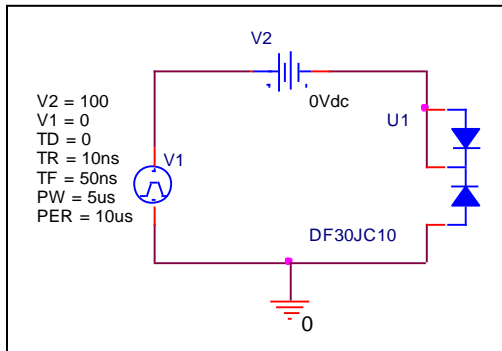
Ifwd(A)	Vfwd(V) Measurement	Vfwd(V) Simulation	%Error
0.1	0.340	0.330	-3.00
0.2	0.350	0.351	0.26
0.5	0.380	0.386	1.50
1	0.410	0.417	1.71
2	0.470	0.471	0.28
5	0.580	0.575	-0.86
10	0.710	0.710	-0.04
20	0.950	0.943	-0.71
50	1.580	1.583	0.19

# Junction Capacitance Characteristic

## Circuit Simulation Result

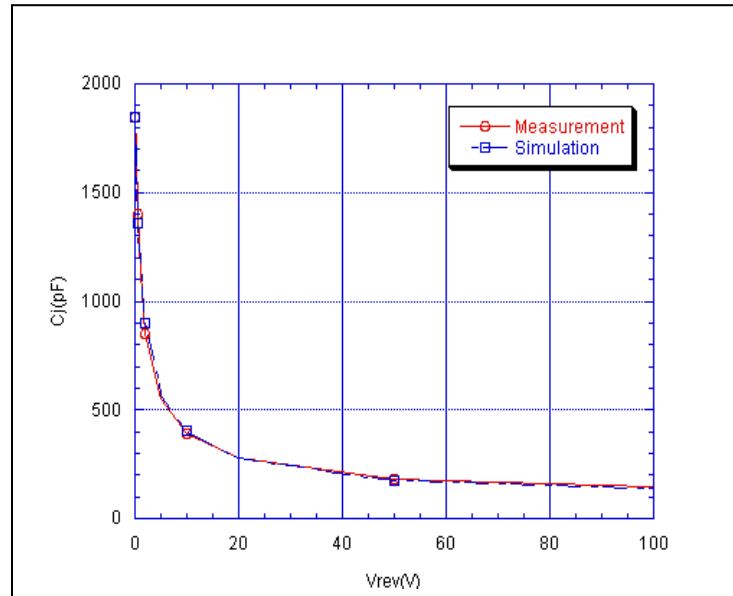


## Evaluation Circuit



# Comparison Graph

## Circuit Simulation Result



## Simulation Result

Vrev(V)	Cj(pF) Measurement	Cj(pF) Simulation	%Error
0.1	1870.00	1850.00	-1.07
0.2	1720.00	1700.00	-1.16
0.5	1400.00	1359.00	-2.93
1	1180.00	1198.00	1.53
2	875.00	900.00	2.86
5	550.00	563.30	2.42
10	390.00	401.40	2.92
20	282.00	280.00	-0.71
50	180.00	174.20	-3.22
100	140.00	135.00	-3.57