Device Modeling Report

COMPONENTS:
DIODE/ SCHOOTTKY RECTIFIER/ STANDARD
PART NUMBER: 11DQ10
MANUFACTURER: NIEC

Bee Technologies Inc.

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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

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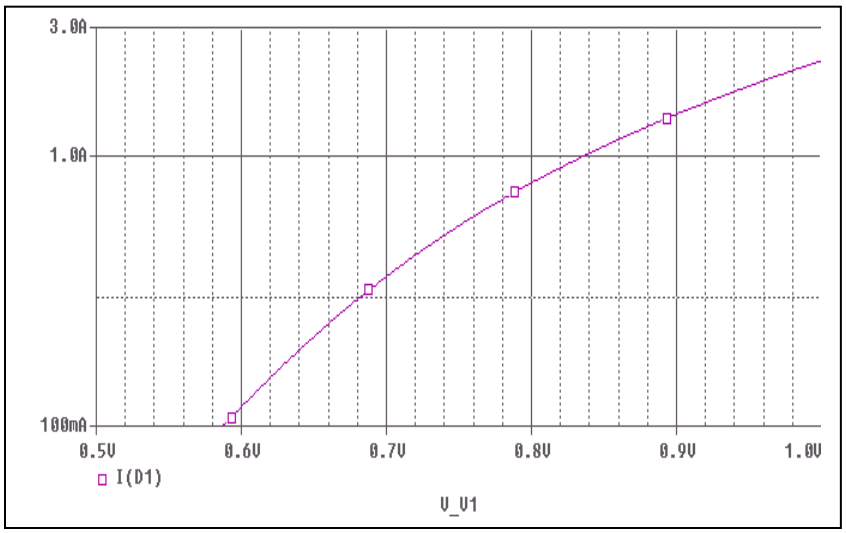
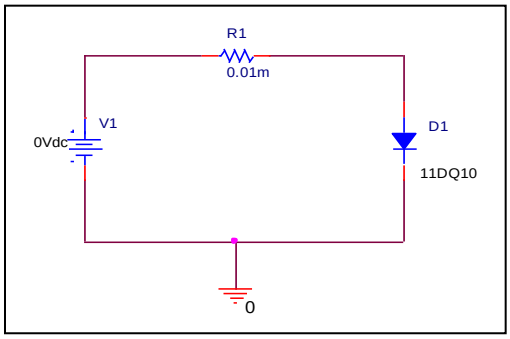
Forward Current Characteristic

Circuit Simulation Result



Evaluation Circuit



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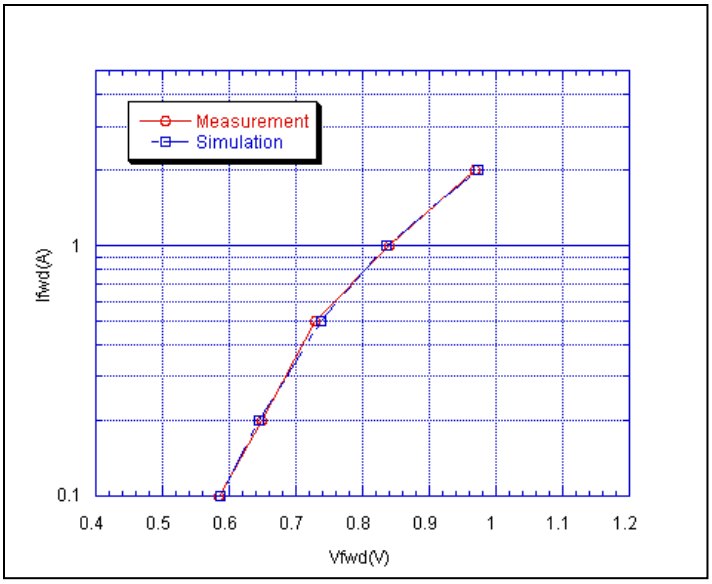
Comparison Graph

Circuit Simulation Result



Simulation Result

Ifwd(A)	Vfwd(V) Measurement	Vfwd(V) Simulation	%Error
0.1	0.59	0.59	0.34
0.2	0.65	0.64	-0.92
0.5	0.73	0.74	0.96
1	0.84	0.84	-0.48
2	0.97	0.97	0.41

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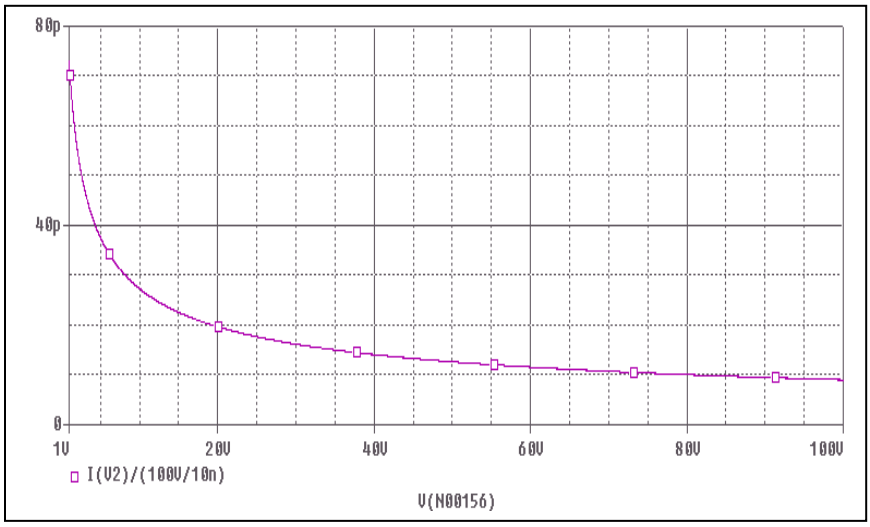
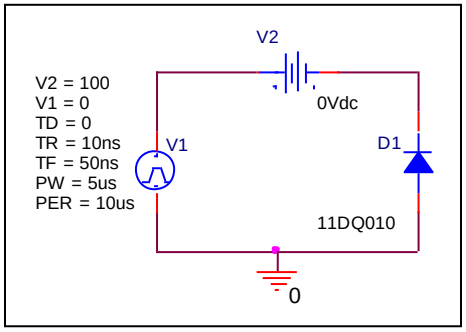
Junction Capacitance Characteristic

Circuit Simulation Result



Evaluation Circuit



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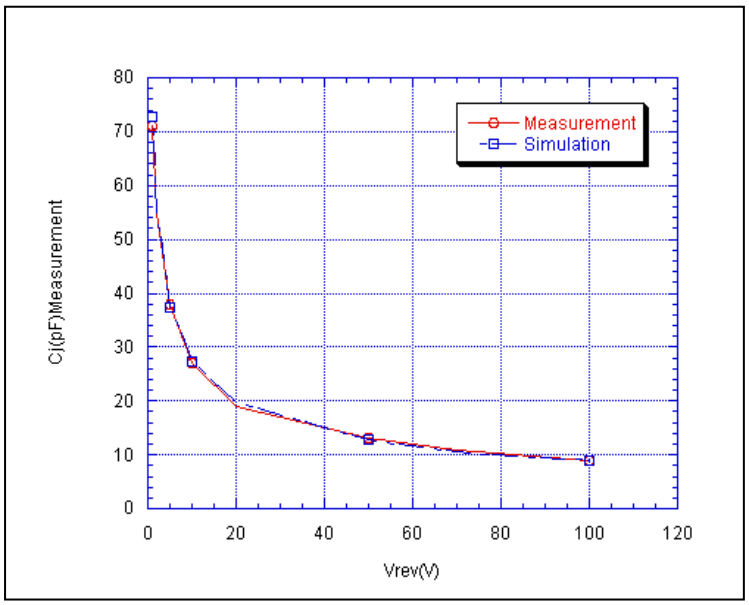
Comparison Graph

Circuit Simulation Result



Simulation Result

Vrev(V)	Cj(pF) Measurement	Cj(pF) Measurement	%Error
1	71.00	72.85	2.61
2	55.00	55.77	1.41
5	38.00	37.47	-1.39
10	27.00	27.26	0.97
20	19.00	19.70	3.66
50	13.00	12.73	-2.05
100	9.00	9.07	0.74

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