Device Modeling Report

COMPONENTS:
DIODE/ SCHOOTTKY RECTIFIER /STANDARD
PART NUMBER: 21DQ06
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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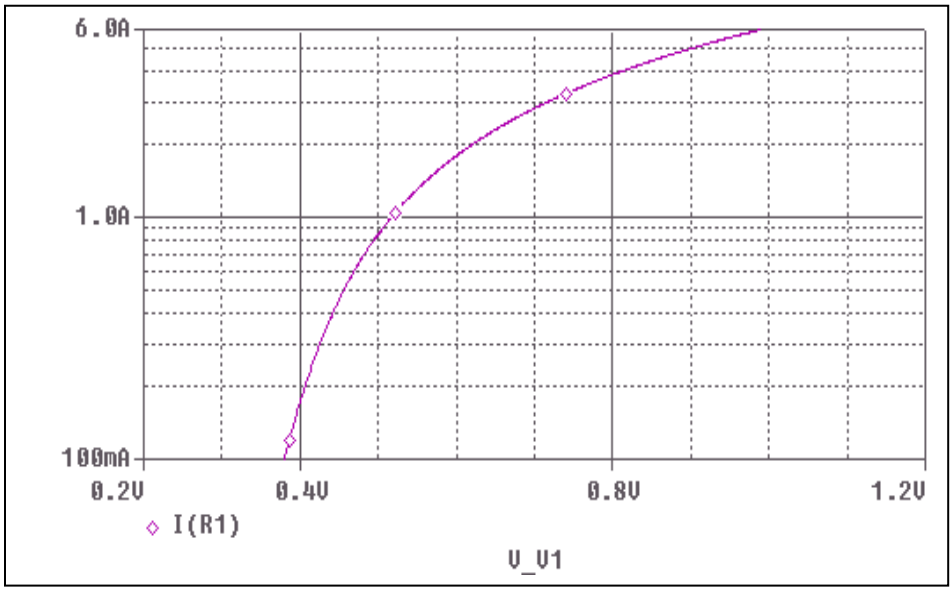
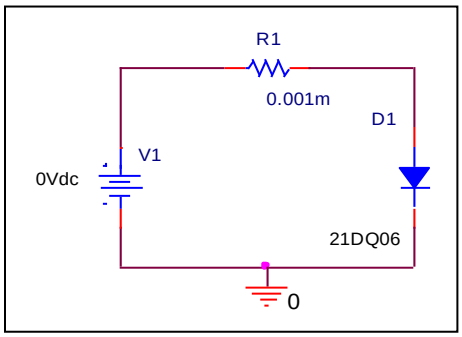
Forward Current Characteristic

Circuit Simulation Result



Evaluation Circuit



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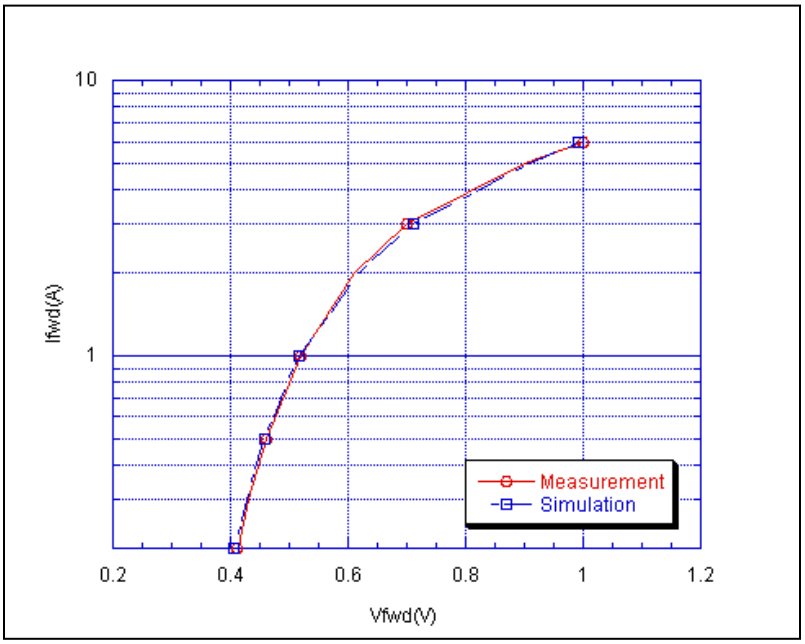
Comparison Graph

Circuit Simulation Result



Simulation Result

Ifwd(A)	Vfwd(V) Measurement	Vfwd(V) Simulation	%Error
0.2	0.410	0.406	-0.98
0.3	0.430	0.428	-0.47
0.5	0.460	0.458	-0.43
1	0.520	0.517	-0.58
2	0.610	0.620	1.64
3	0.700	0.710	1.43
5	0.900	0.907	0.78

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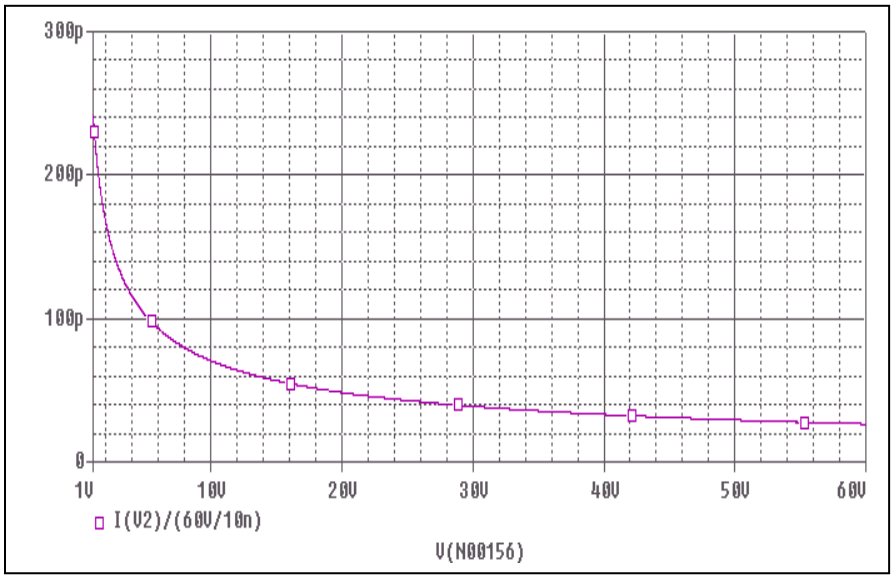
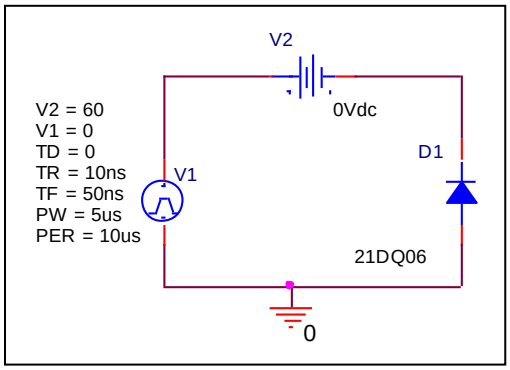
Junction Capacitance Characteristic

Circuit Simulation Result



Evaluation Circuit



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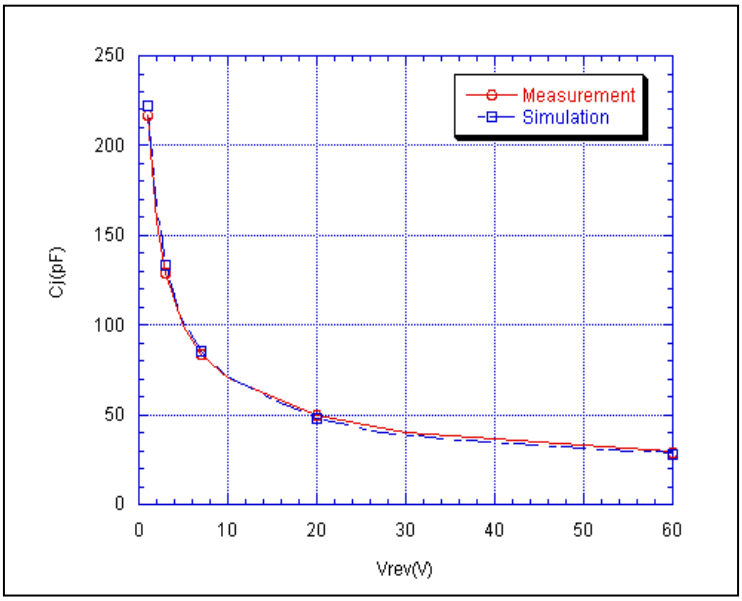
Comparison Graph

Circuit Simulation Result



Simulation Result

Vrev(V)	Cj(pF) Measurement	Cj(pF) Simulation	%Error
1	217.000	221.800	2.21
2	158.000	162.000	2.53
3	129.000	133.700	3.64
5	99.000	101.500	2.53
7	84.000	85.400	1.67
10	71.000	70.300	-0.99
20	50.000	48.300	-3.40
30	40.00	38.70	-3.25

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