Device Modeling Report

COMPONENTS:
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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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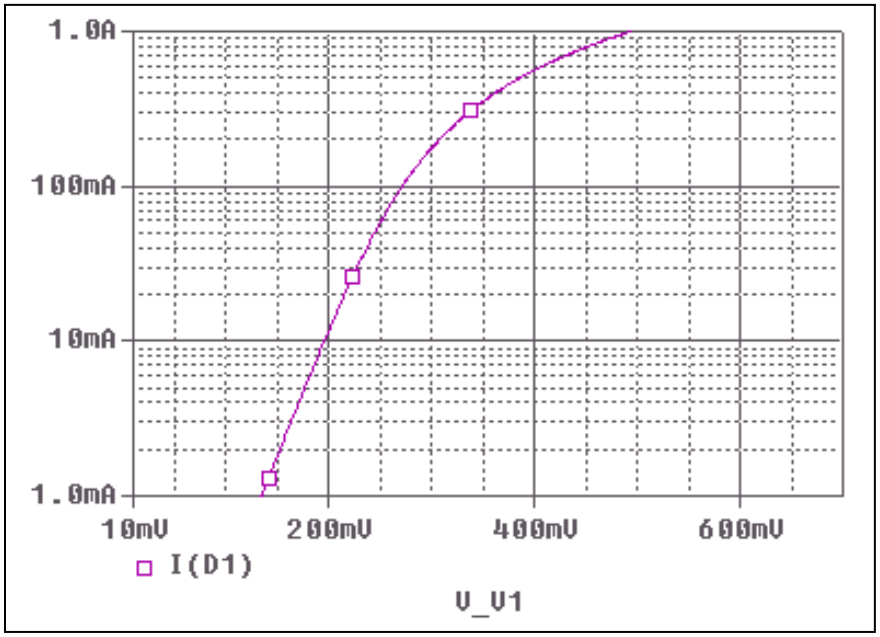
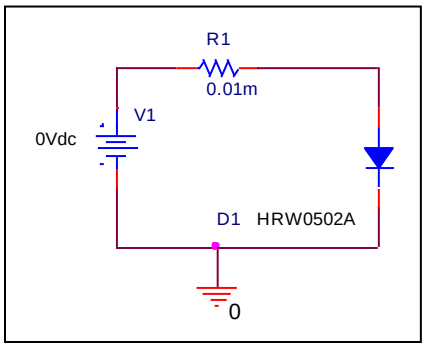
Forward Current Characteristic

Circuit Simulation Result



Evaluation Circuit



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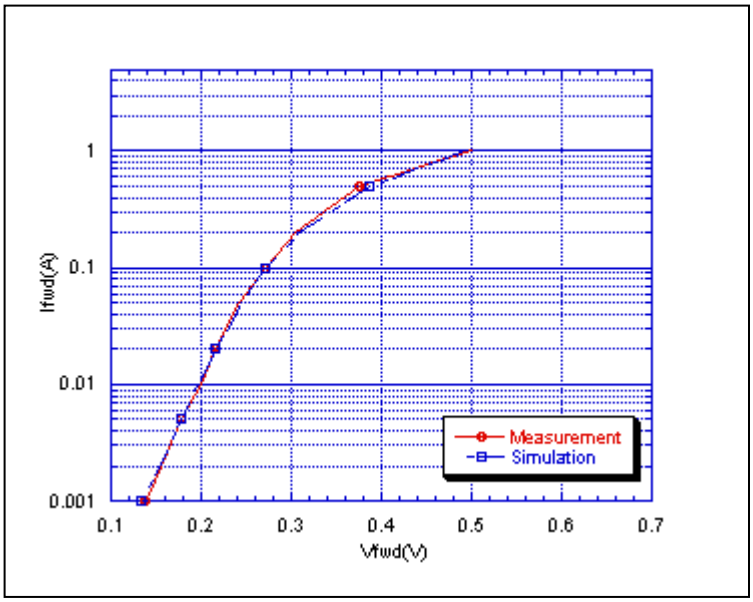
Comparison Graph

Circuit Simulation Result



Simulation Result

Ifwd(A)	Vfwd(V) Measurement	Vfwd(V) Simulation	%Error
0.001	0.138	0.135	-2.54
0.01	0.199	0.196	-1.71
0.02	0.215	0.215	0.19
0.05	0.243	0.245	0.62
0.1	0.270	0.272	0.56
0.2	0.305	0.308	0.98
0.5	0.376	0.386	2.58
1	0.500	0.494	-1.28

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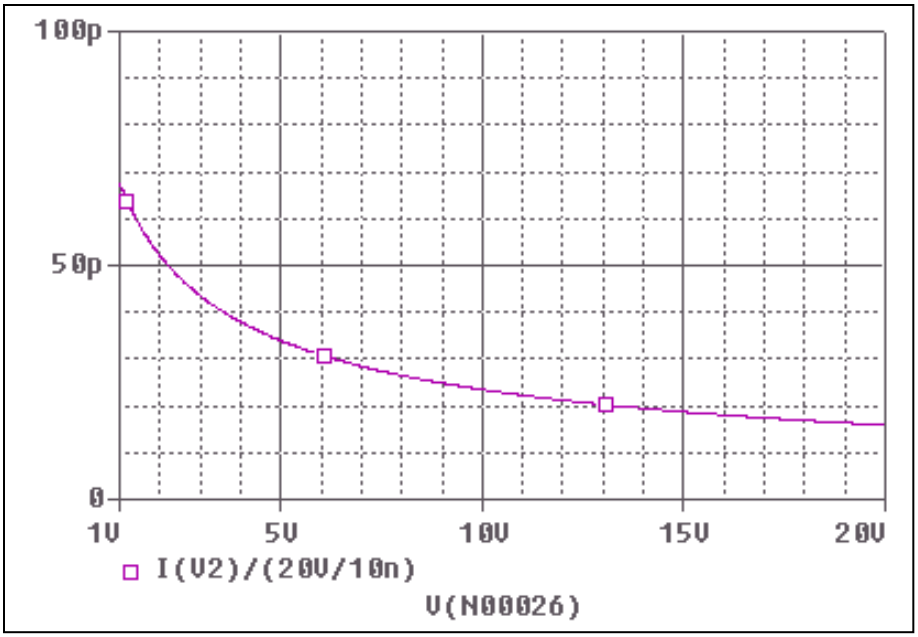
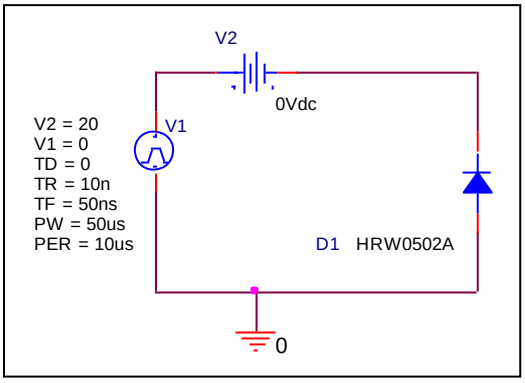
Junction Capacitance Characteristic

Circuit Simulation Result



Evaluation Circuit



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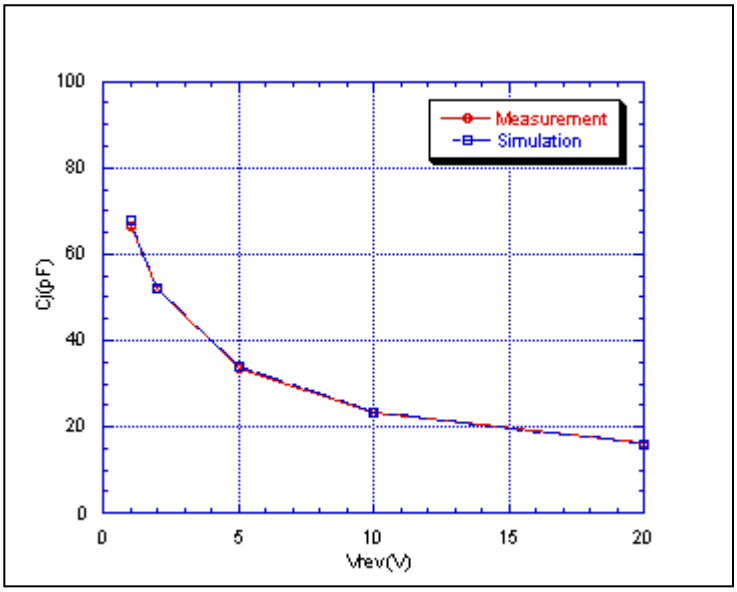
Comparison Graph

Circuit Simulation Result



Simulation Result

Vrev(V)	Cj(pF) Measurement	Cj(pF) Simulation	%Error
1	66.500	67.600	1.65
2	52.000	52.100	0.19
5	33.500	33.900	1.19
10	23.500	23.400	-0.43
20	16.000	15.900	-0.62

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