

Device Modeling Report

COMPONENTS:
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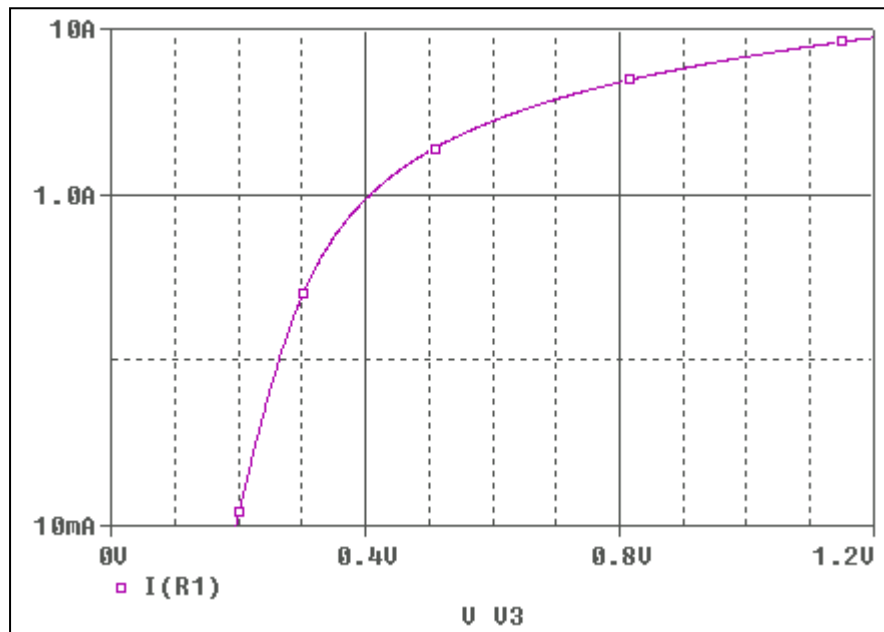


Bee Technologies Inc.

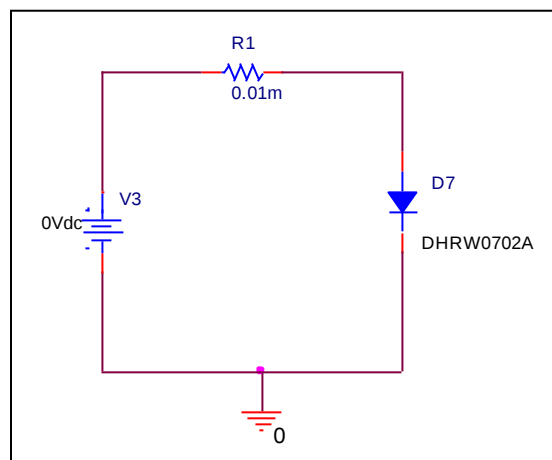
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

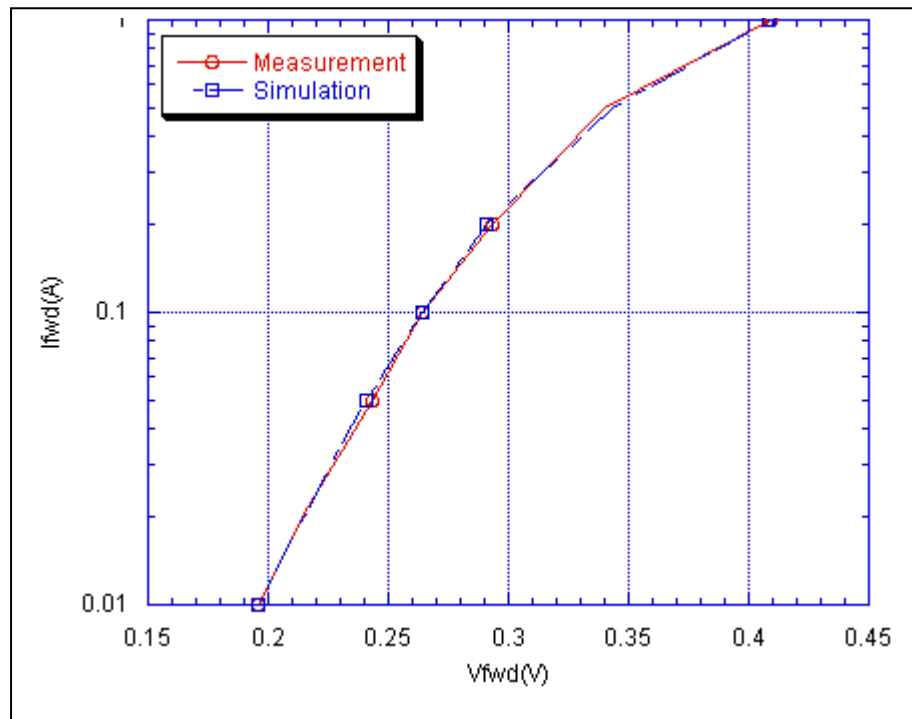


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

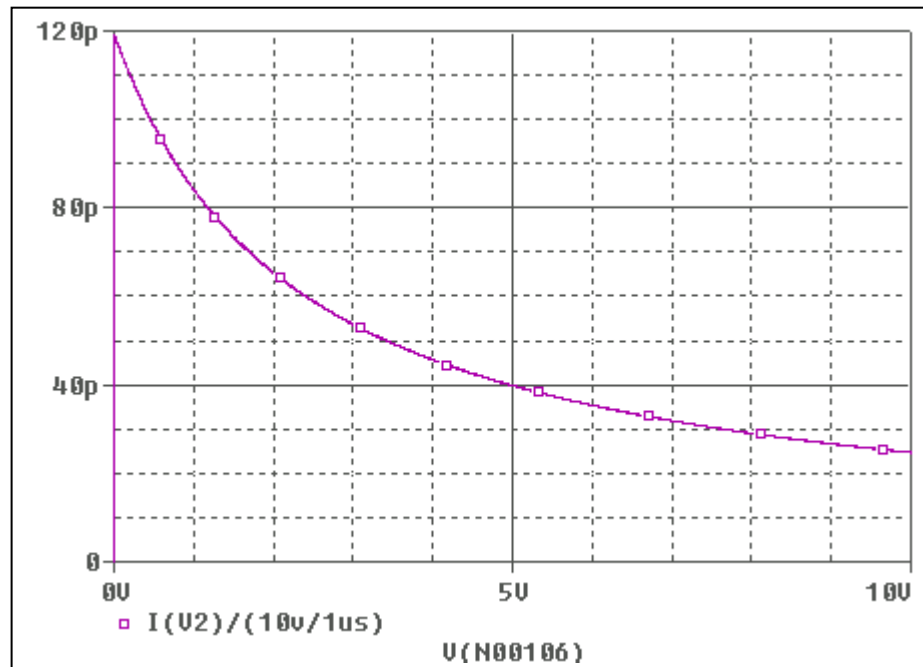


Simulation Result

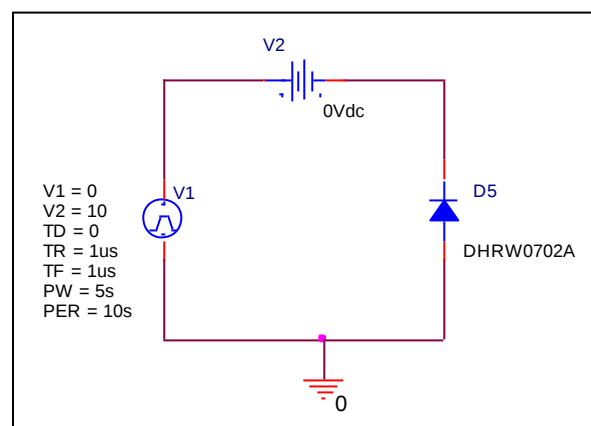
Ifwd(A)	Vfwd(V) Measurement	Vfwd(V) Simulation	%Error
0.01	0.196	0.195	-0.513
0.02	0.214	0.215	0.465
0.05	0.243	0.241	-0.830
0.1	0.264	0.264	0.000
0.2	0.293	0.291	-0.687
0.5	0.340	0.343	0.875
1	0.409	0.408	-0.245

Junction Capacitance Characteristic

Circuit Simulation Result

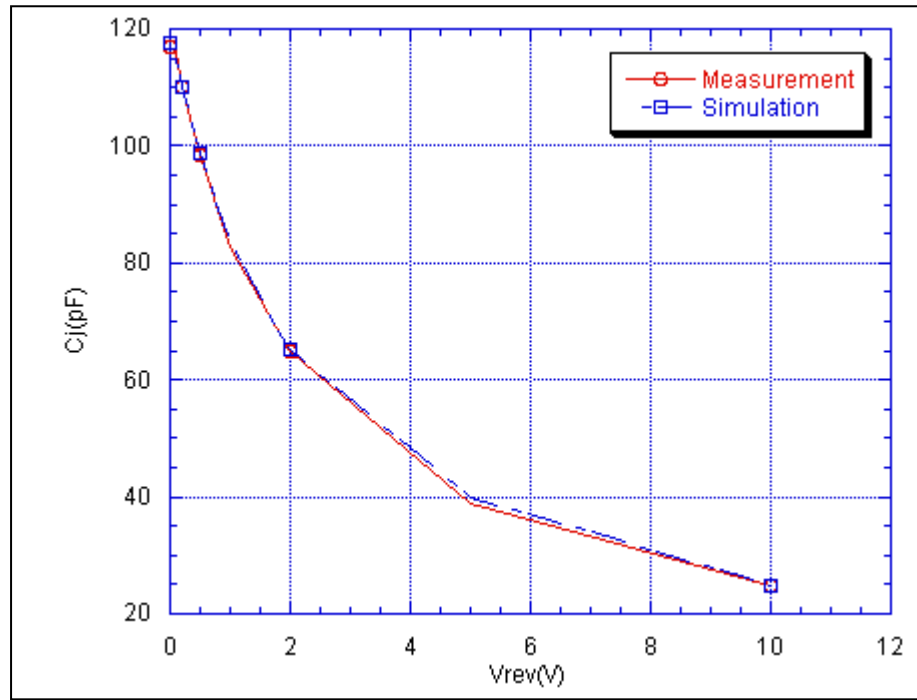


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

V_{rev} (V)	C_j (pF) Measurement	C_j (pF) Simulation	%Error
0	116.795	117.552	0.644
0.1	115.964	114.603	-1.188
0.2	110.035	109.985	-0.045
0.5	98.461	98.632	0.173
1	82.650	84.017	1.627
2	64.941	65.373	0.661
5	38.807	39.874	2.676
10	24.723	24.681	-0.170