

Device Modeling Report

COMPONENTS:
DIODE/ SCHOOTKY RECTIFIER / STANDARD
PART NUMBER: D1NS4
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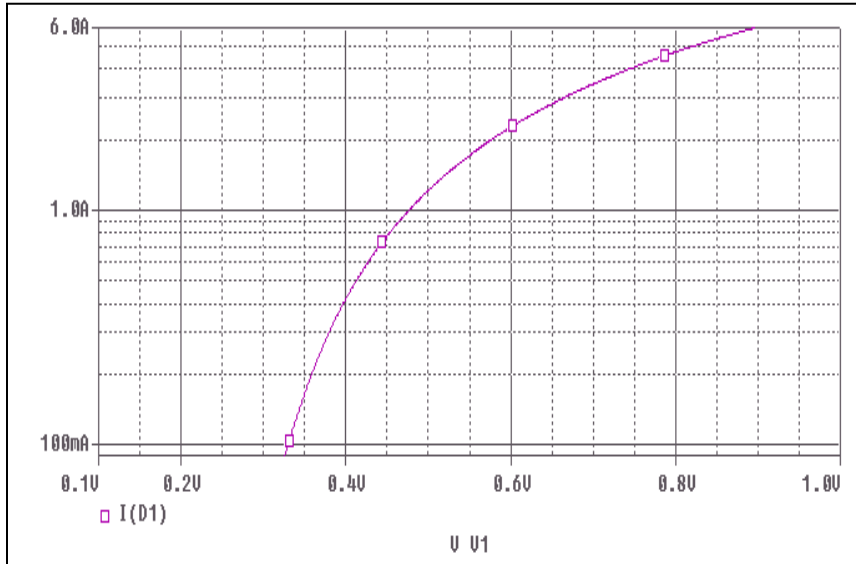


Bee Technologies Inc.

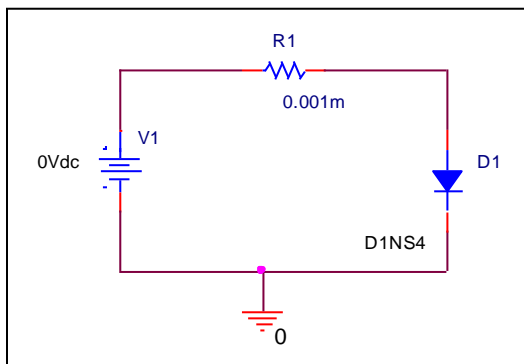
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

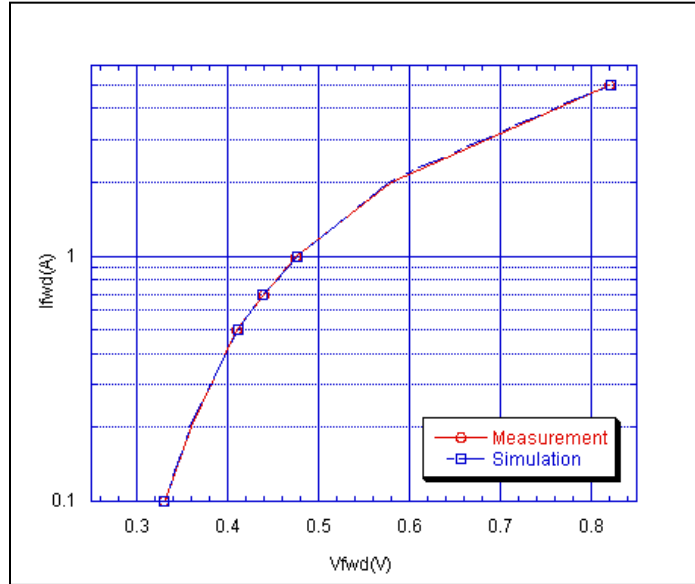


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

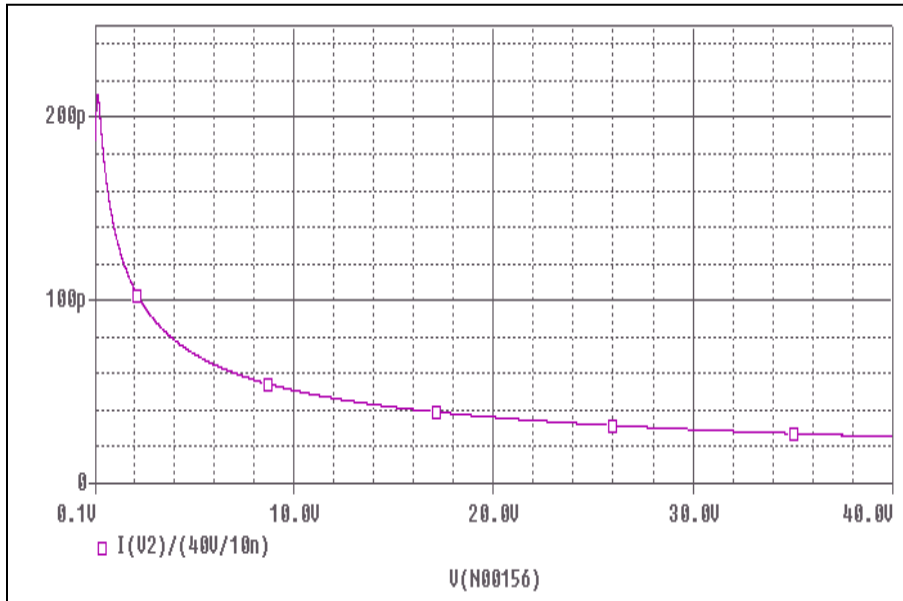


Simulation Result

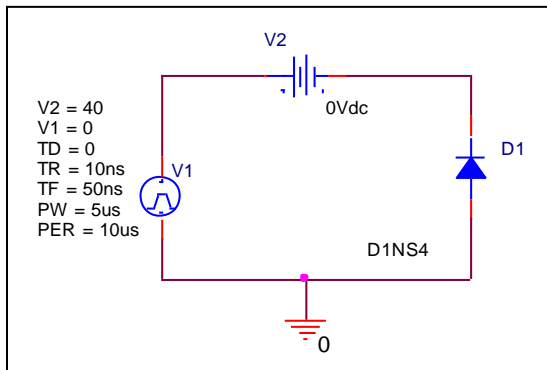
Ifwd(A)	Vfwd(V) Measurement	Vfwd(V) Simulation	%Error
0.1	0.325	0.330	1.54
0.2	0.360	0.359	-0.28
0.5	0.410	0.412	0.49
1	0.475	0.476	0.21
2	0.580	0.577	-0.52
5	0.820	0.821	0.12

Junction Capacitance Characteristic

Circuit Simulation Result

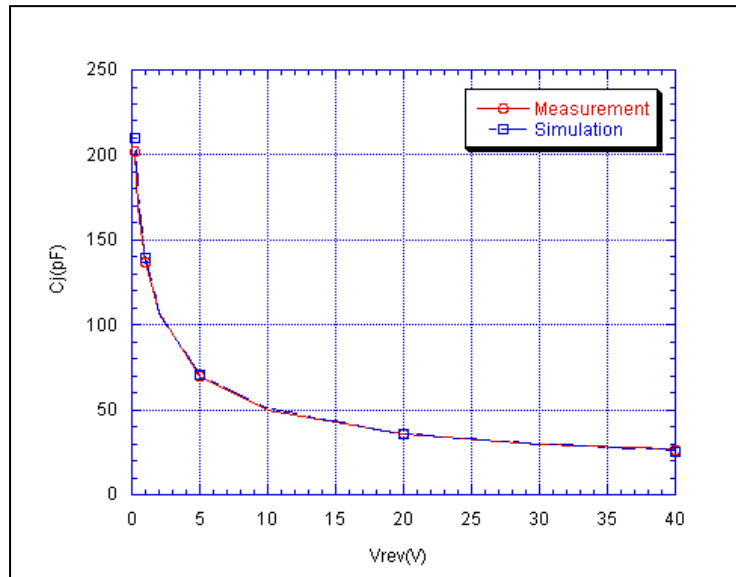


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

Vrev(V)	Cj(pF) Measurement	Cj(pF) Simulation	%Error
0.2	202.000	210.000	3.96
0.5	169.000	175.000	3.55
1	137.000	139.000	1.46
2	107.000	106.000	-0.93
5	70.000	70.500	0.71
10	50.000	51.000	2.00
20	36.000	36.100	0.28
40	26.000	25.500	-1.92