

Device Modeling Report

COMPONENTS:
DIODE/ SCHOOTTKY RECTIFIER / STANDARD
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MANUFACTURER: SHINDENGEN

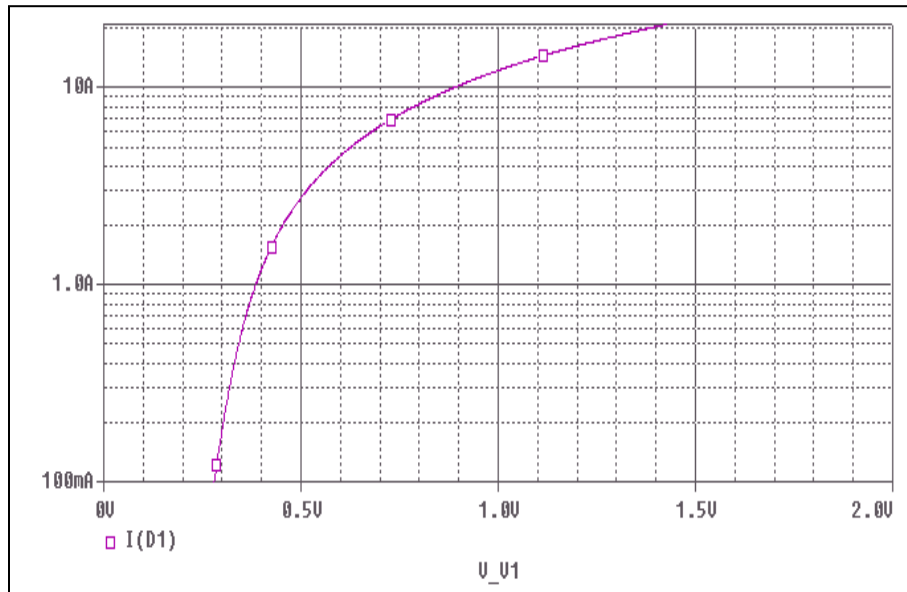


Bee Technologies Inc.

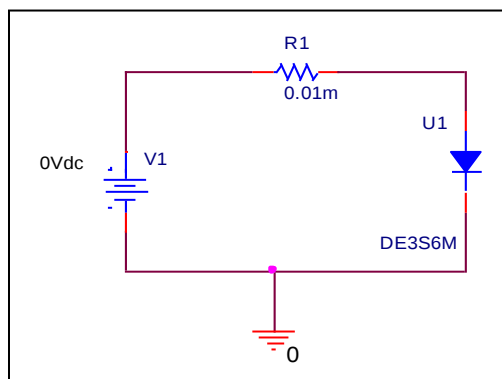
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

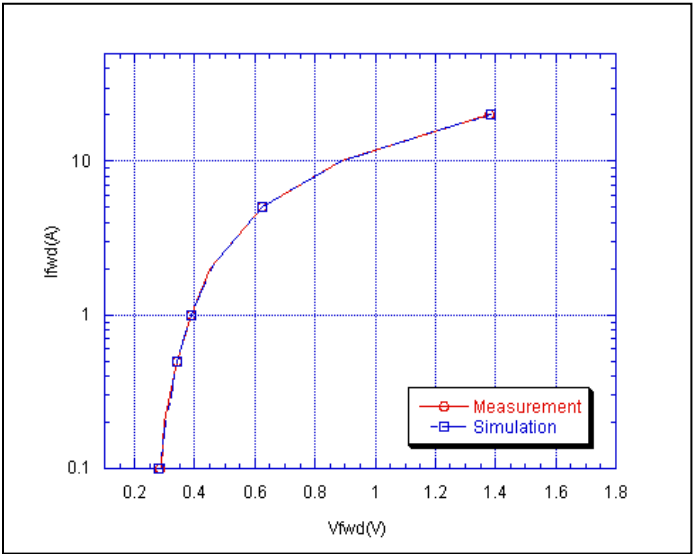


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

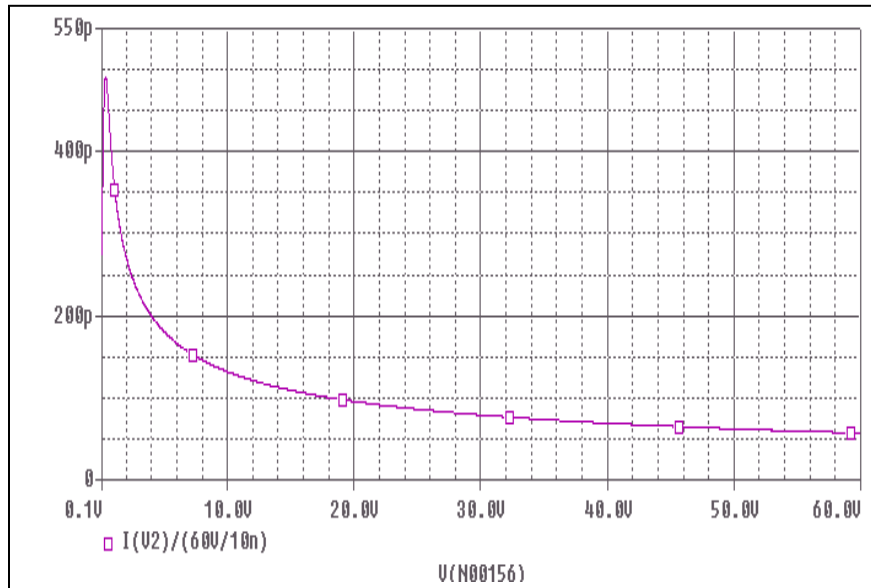


Simulation Result

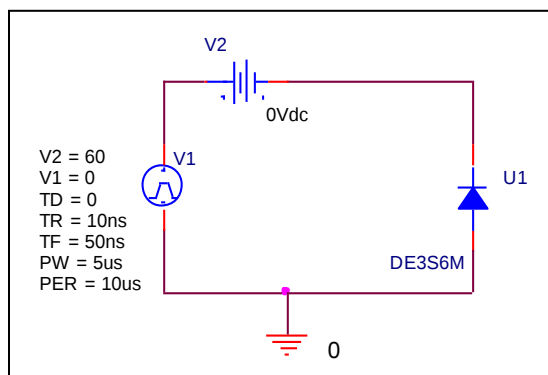
I_{fwd} (A)	V_{fwd} (V) Measurement	V_{fwd} (V) Simulation	%Error
0.1	0.284	0.282	-0.70
0.2	0.300	0.303	1.00
0.5	0.340	0.341	0.29
1	0.390	0.386	-1.03
2	0.450	0.453	0.67
5	0.625	0.626	0.16
10	0.890	0.889	-0.11
20	1.380	1.383	0.22

Junction Capacitance Characteristic

Circuit Simulation Result

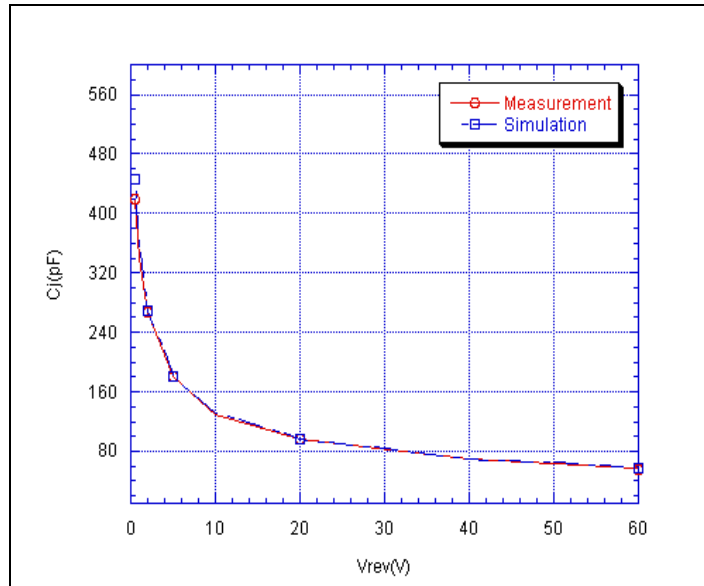


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

V_{rev} (V)	C_j (pF) Measurement	C_j (pF) Simulation	%Error
0.5	428.000	445.000	3.97
1	345.000	358.000	3.77
2	267.000	270.000	1.12
5	180.000	180.300	0.17
10	130.000	131.600	1.23
20	96.000	95.500	-0.52
60	55.000	57.100	3.82