

Device Modeling Report

COMPONENTS:
DIODE/ SCHOOTKY RECTIFIER / STANDARD
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MANUFACTURER: SHINDENGEN

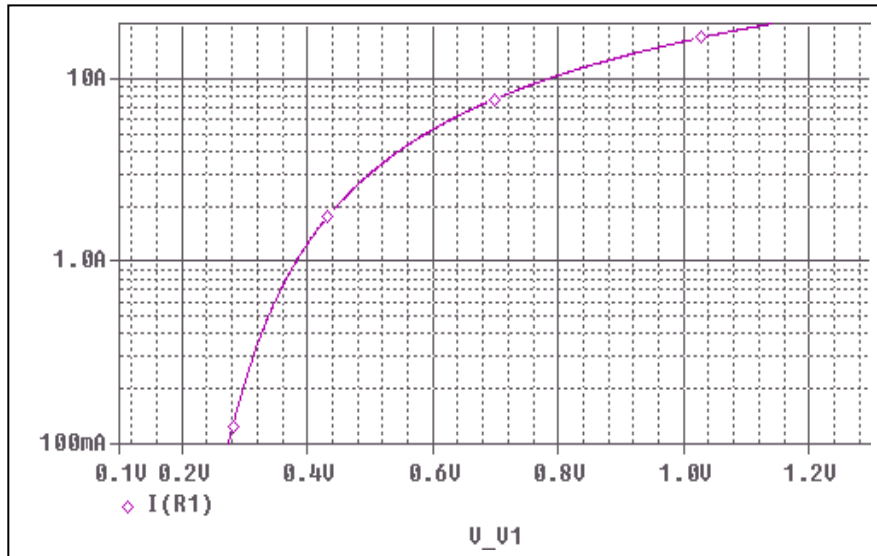


Bee Technologies Inc.

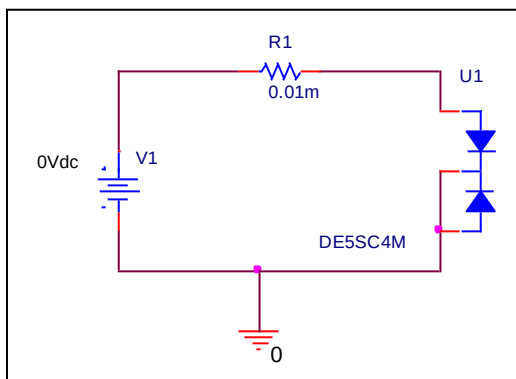
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

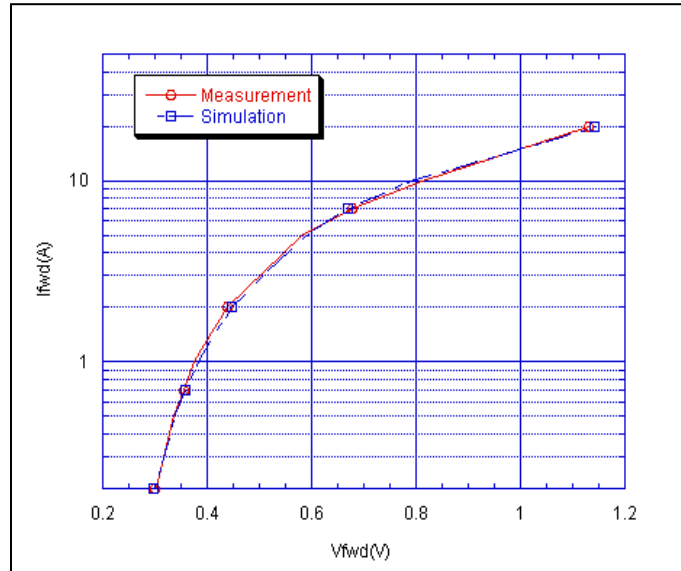


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

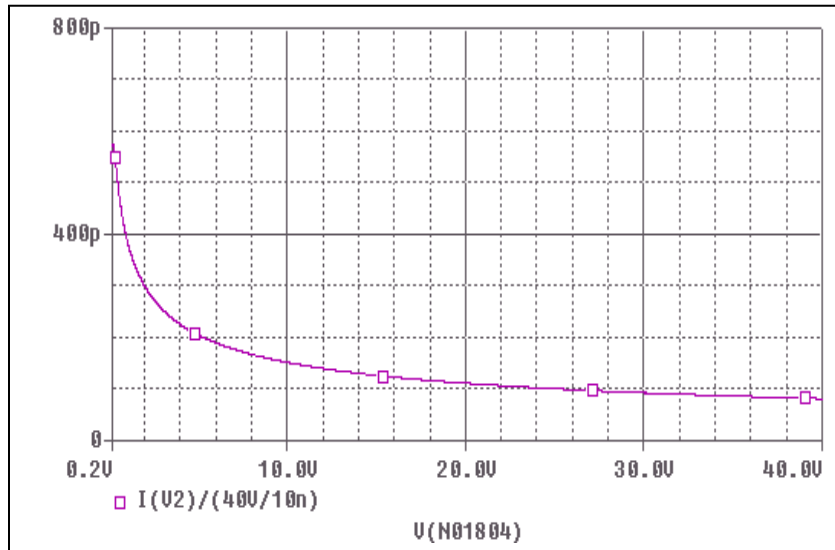


Simulation Result

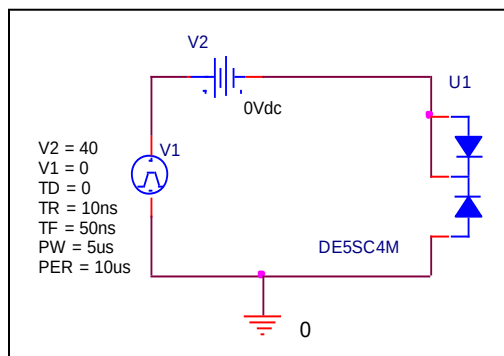
I_{fwd} (A)	V_{fwd} (V) Measurement	V_{fwd} (V) Simulation	%Error
0.2	0.300	0.297	-0.87
0.5	0.335	0.338	0.93
1	0.376	0.382	1.65
2	0.440	0.447	1.52
5	0.582	0.589	1.22
10	0.810	0.788	-2.72
20	1.130	1.142	1.06

Junction Capacitance Characteristic

Circuit Simulation Result

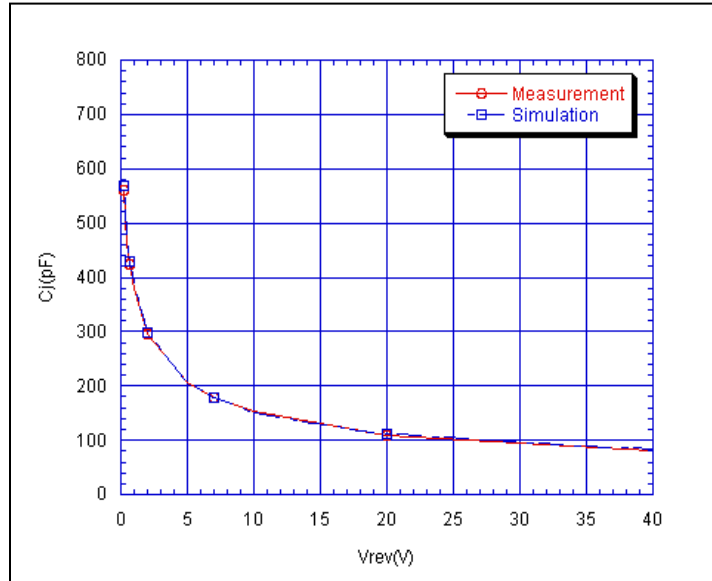


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

Vrev(V)	Cj(pF) Measurement	Cj(pF) Simulation	%Error
0.2	560.00	569.70	1.73
0.5	463.00	470.20	1.56
1	380.00	388.00	2.11
2	295.00	299.00	1.36
5	207.00	205.40	-0.77
10	154.00	151.80	-1.43
20	110.00	111.40	1.27
40	78.000	80.000	2.56