

Device Modeling Report

COMPONENTS:
DIODE/ SCHOOTTKY RECTIFIER / STANDARD
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MANUFACTURER: SHINDENGEN

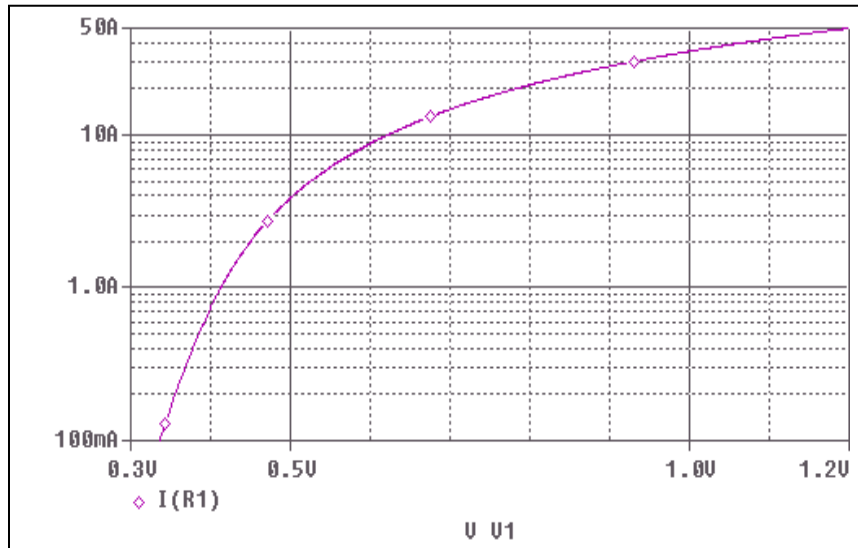


Bee Technologies Inc.

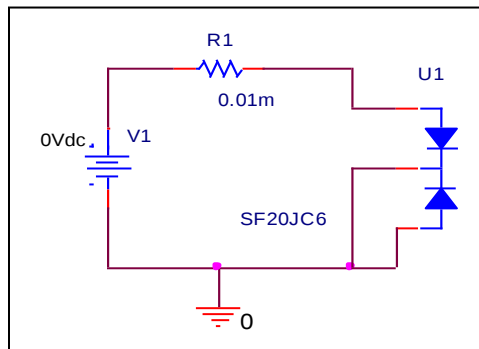
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

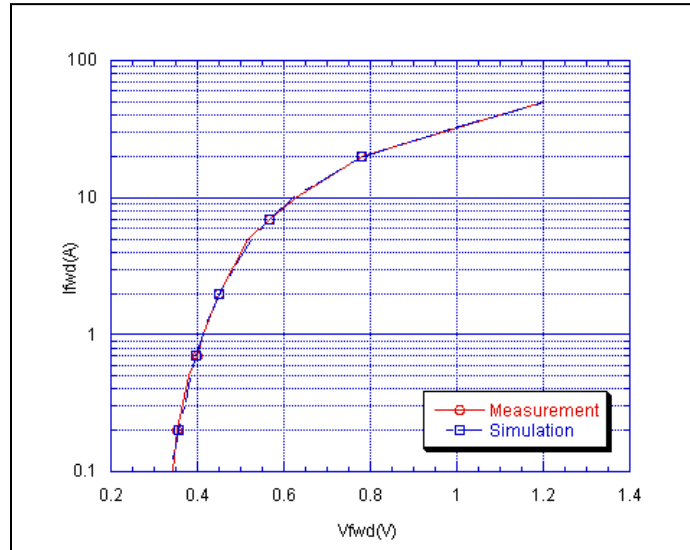


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

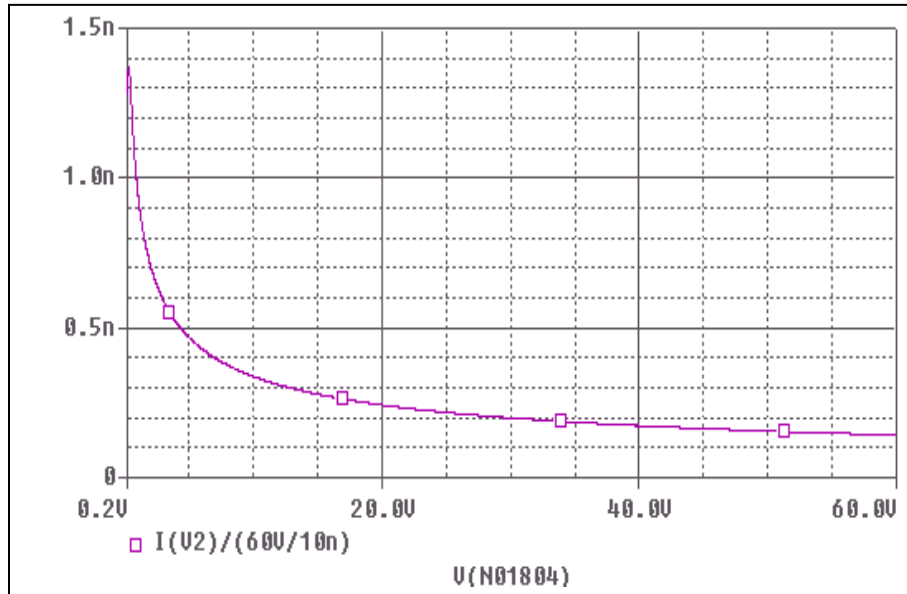


Simulation Result

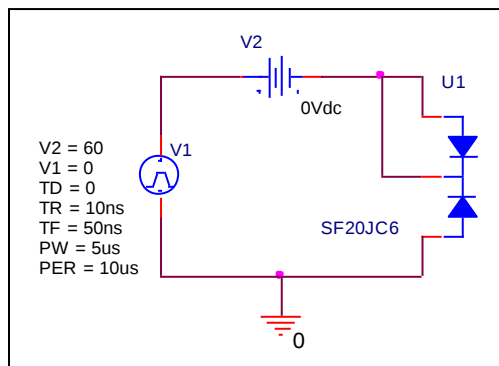
I_{fwd} (A)	V_{fwd} (V) Measurement	V_{fwd} (V) Simulation	%Error
0.1	0.339	0.336	-0.91
0.2	0.355	0.356	0.20
0.5	0.380	0.385	1.32
1	0.415	0.413	-0.48
2	0.451	0.450	-0.22
5	0.518	0.526	1.54
10	0.628	0.622	-0.99
20	0.780	0.781	0.13
50	1.210	1.200	-0.83

Junction Capacitance Characteristic

Circuit Simulation Result

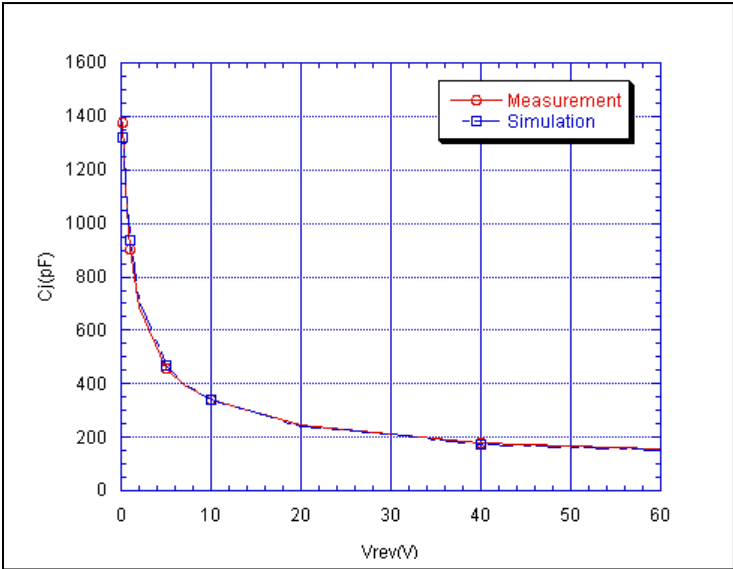


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

Vrev(V)	Cj(pF) Measurement	Cj(pF) Simulation	%Error
1	905.00	934.40	3.25
2	685.00	707.90	3.34
5	455.00	468.00	2.86
10	340.00	337.90	-0.62
20	245.00	242.40	-1.06
40	180.00	173.20	-3.78
60	150.00	143.30	-4.47