

Device Modeling Report

COMPONENTS:
DIODE/ SCHOOTTKY RECTIFIER / STANDARD
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MANUFACTURER: SHINDENGEN

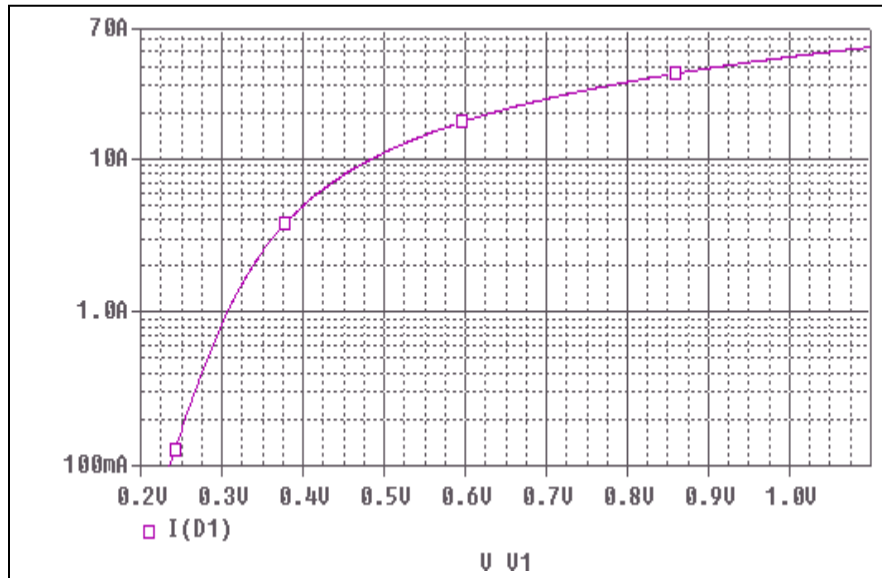


Bee Technologies Inc.

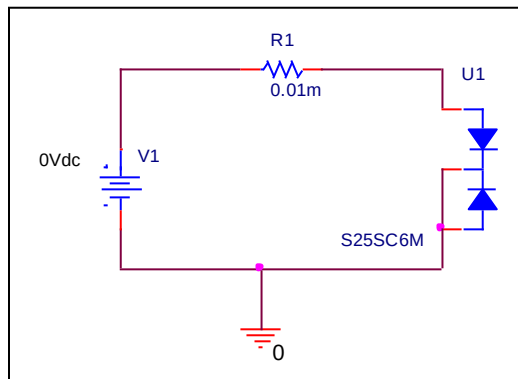
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

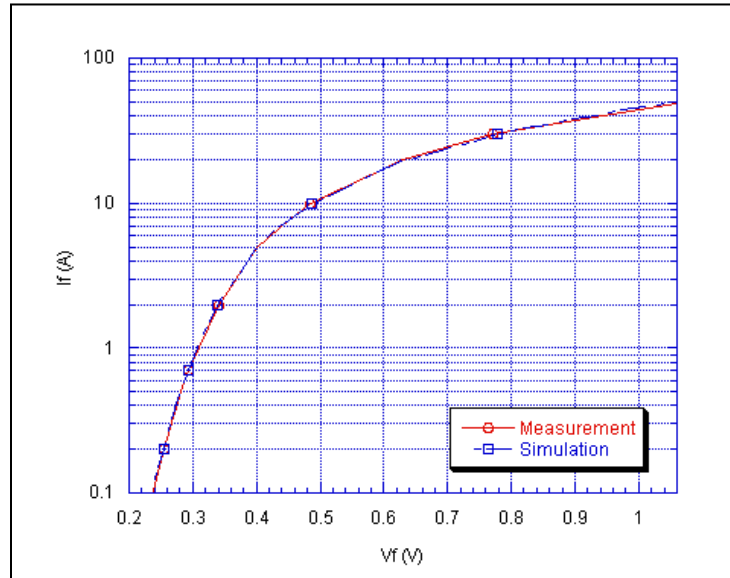


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

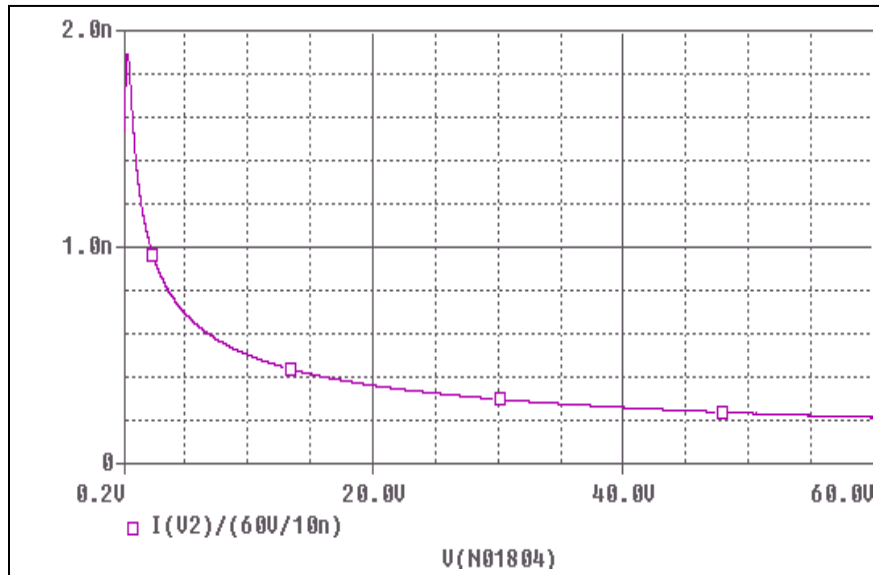


Simulation Result

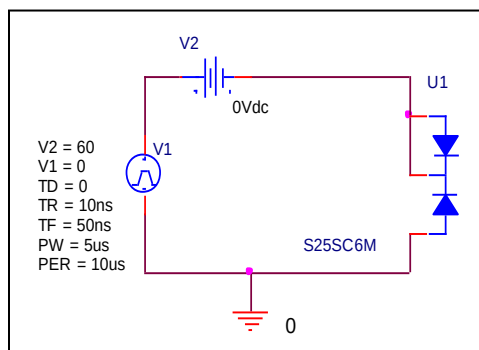
Ifwd(A)	Vfwd(V) Measurement	Vfwd(V) Simulation	%Error
0.1	0.235	0.235	-0.13
0.2	0.255	0.255	-0.08
0.5	0.282	0.282	0.11
1	0.310	0.307	-0.94
2	0.340	0.338	-0.68
5	0.400	0.401	0.25
10	0.485	0.487	0.35
20	0.630	0.636	0.90
50	1.060	1.055	-0.46

Junction Capacitance Characteristic

Circuit Simulation Result

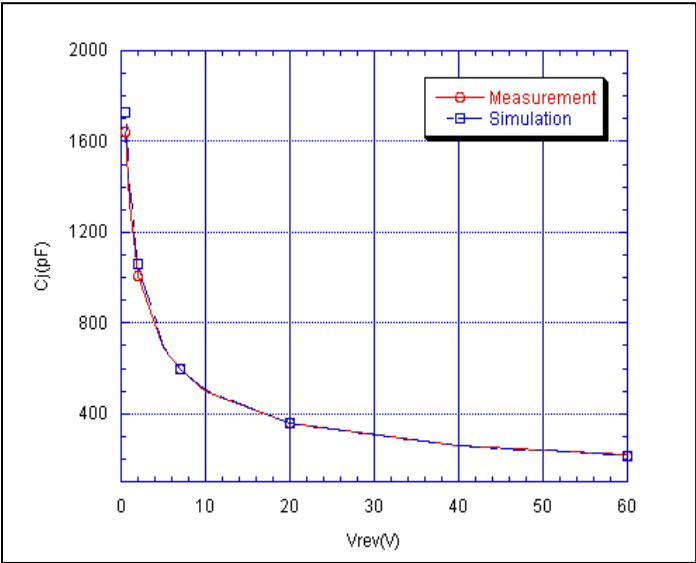


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

Vrev(V)	Cj(pF) Measurement	Cj(pF) Simulation	%Error
1	1330.00	1400.00	5.26
2	1010.00	1063.00	5.25
5	690.00	693.30	0.48
10	500.00	501.50	0.30
20	360.00	361.40	0.39
60	210.00	213.60	1.71