

Device Modeling Report

COMPONENTS:
DIODE/ SCHOOTTKY RECTIFIER / STANDARD
PART NUMBER: SF30SC6
MANUFACTURER: SHINDENGEN

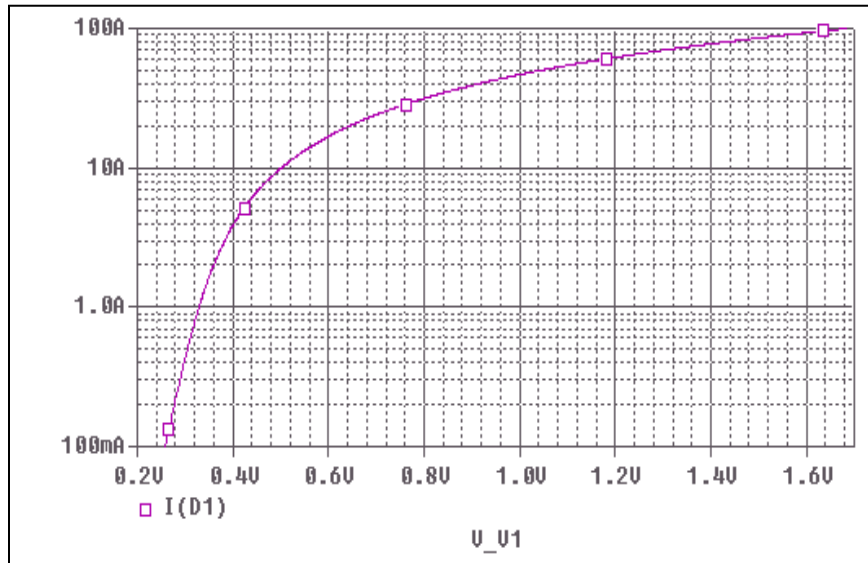


Bee Technologies Inc.

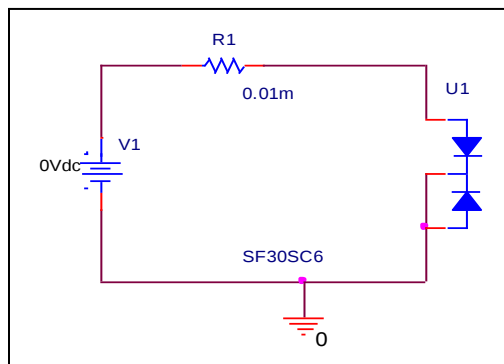
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

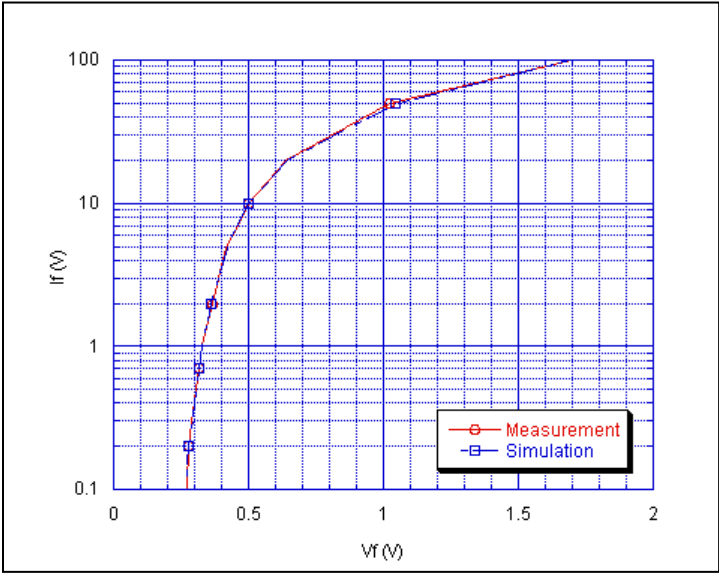


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

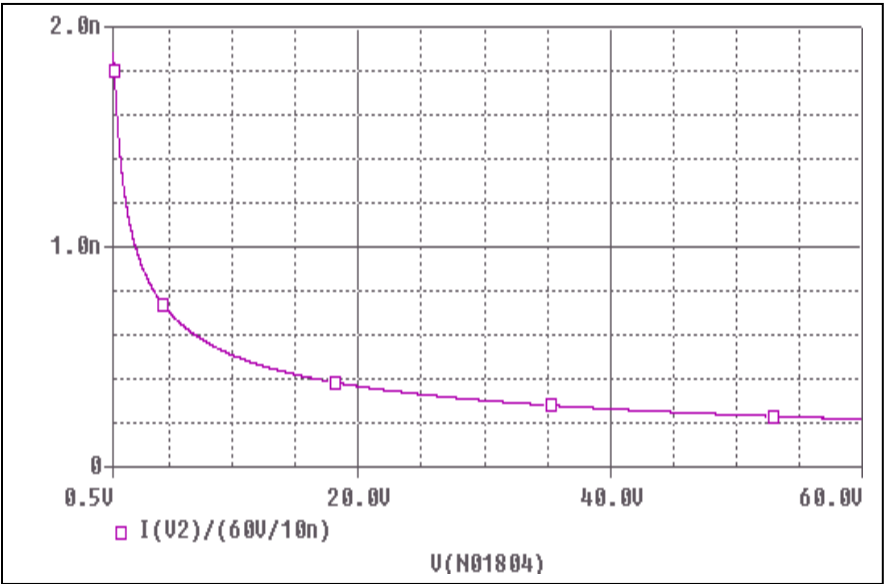


Simulation Result

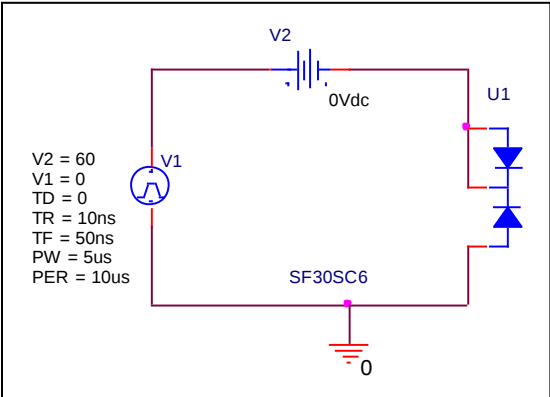
Ifwd(A)	Vfwd(V) Measurement	Vfwd(V) Simulation	%Error
0.1	0.265	0.262	-1.13
0.2	0.280	0.278	-0.71
0.5	0.309	0.307	-0.65
1	0.330	0.329	-0.30
2	0.365	0.359	-1.64
5	0.418	0.421	0.72
10	0.500	0.501	0.20
20	0.640	0.646	0.94
50	1.020	1.043	2.25
100	1.700	1.687	-0.76

Junction Capacitance Characteristic

Circuit Simulation Result

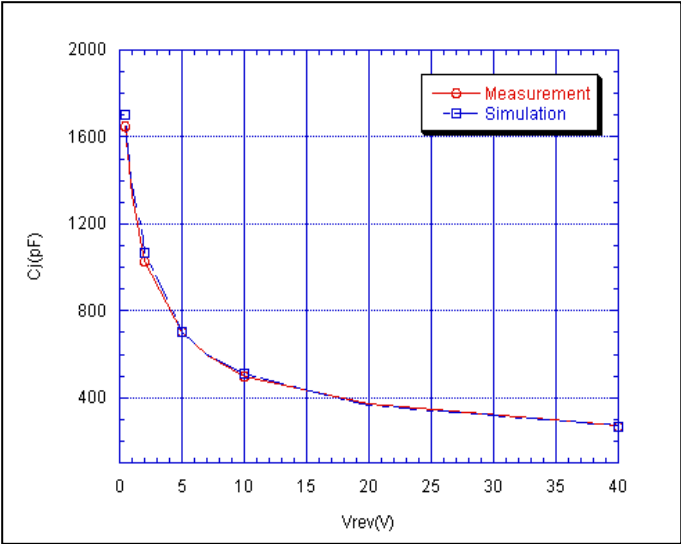


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

Vrev(V)	Cj(pF) Measurement	Cj(pF) Simulation	%Error
1	1330.00	1380.00	3.76
2	1030.00	1067.00	3.59
5	700.00	704.20	0.60
10	500.00	509.20	1.84
20	370.00	366.50	-0.95
40	265.00	263.80	-0.45
60	210.00	217.10	3.38