

Device Modeling Report

COMPONENTS:
DIODE/ SCHOTTKY RECTIFIER / STANDARD
PART NUMBER: SF30H1R5
MANUFACTURER: SHINDENGEN

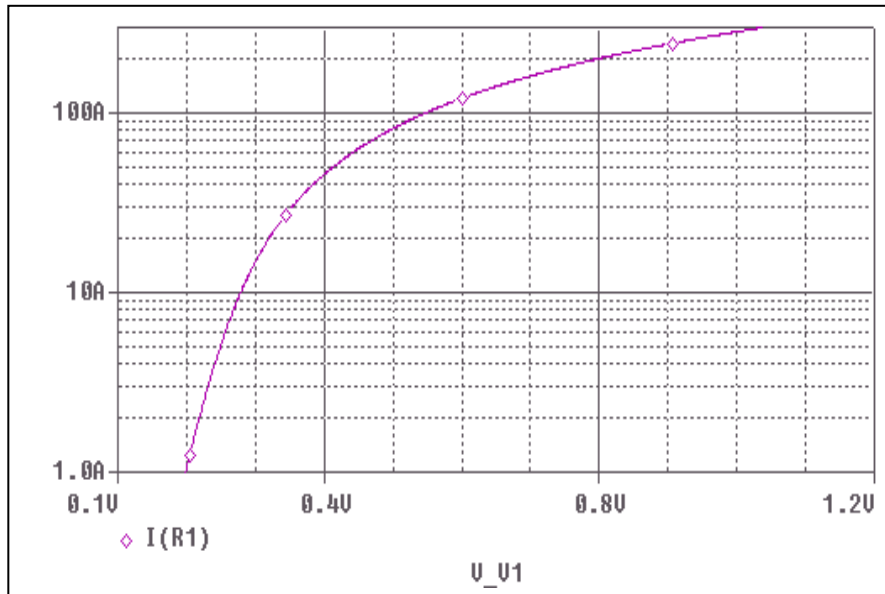


Bee Technologies Inc.

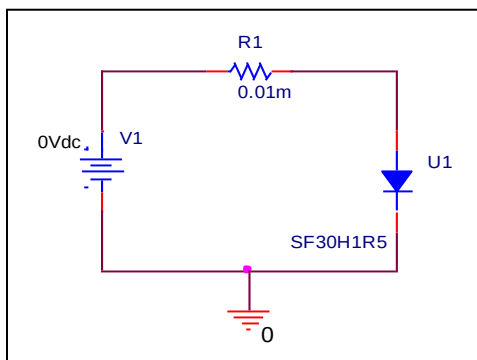
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

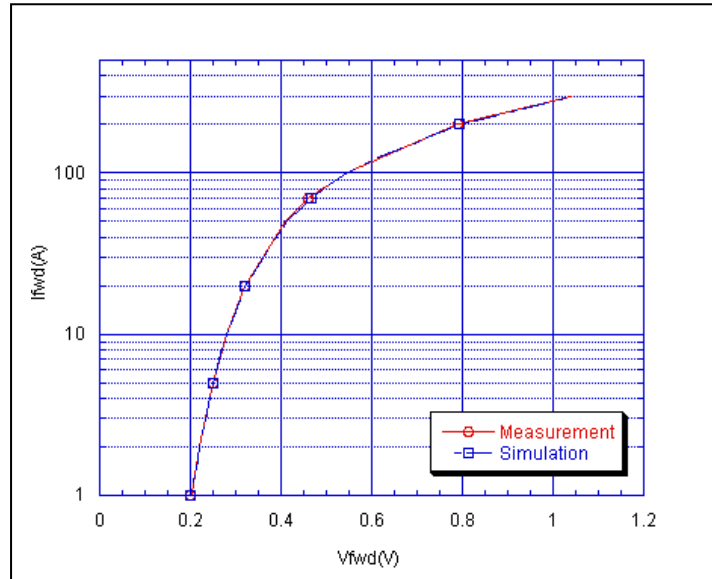


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

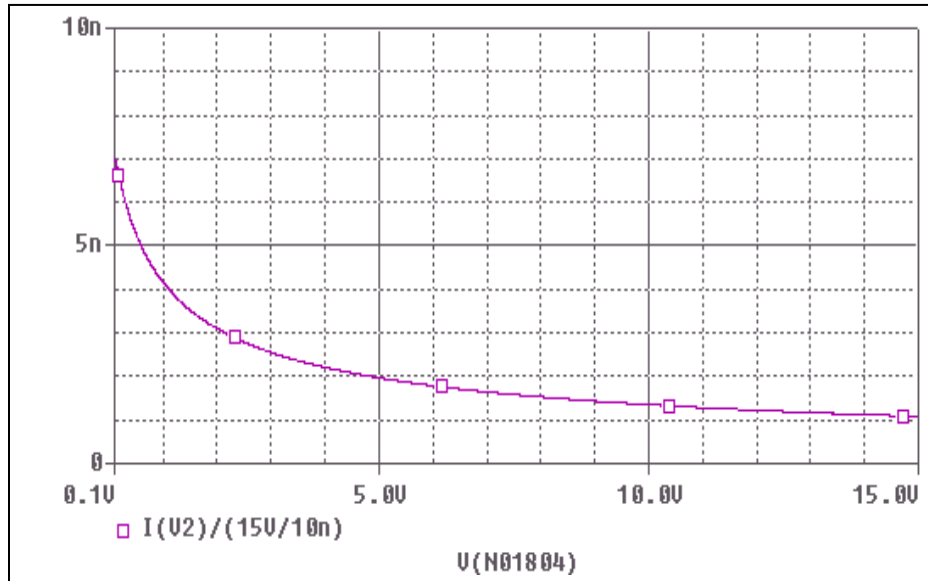


Simulation Result

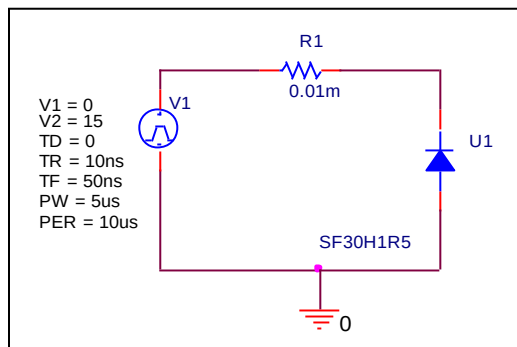
Ifwd(A)	Vfwd(V) Measurement	Vfwd(V) Simulation	%Error
1	0.200	0.199	-0.50
2	0.220	0.219	-0.45
5	0.250	0.249	-0.40
10	0.280	0.279	-0.36
20	0.320	0.319	-0.31
50	0.410	0.412	0.49
100	0.548	0.547	-0.18
200	0.790	0.792	0.25
300	1.040	1.039	-0.10

Junction Capacitance Characteristic

Circuit Simulation Result

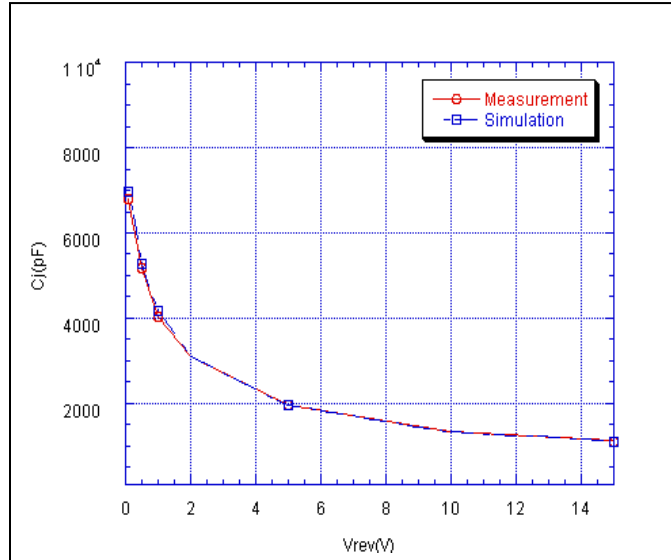


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

Vrev(V)	Cj(pF) Measurement	Cj(pF) Simulation	%Error
0.1	6800.00	6975.00	2.57
0.2	6270.00	6503.00	3.72
0.5	5180.00	5261.00	1.56
1	4050.00	4159.00	2.69
2	3100.00	3101.00	0.03
5	1950.00	1966.00	0.82
10	1350.00	1354.00	0.30