

Device Modeling Report

COMPONENTS:
DIODE/ SCHOOTTKY RECTIFIER / STANDARD
PART NUMBER: SF5S4
MANUFACTURER: SHINDENGEN

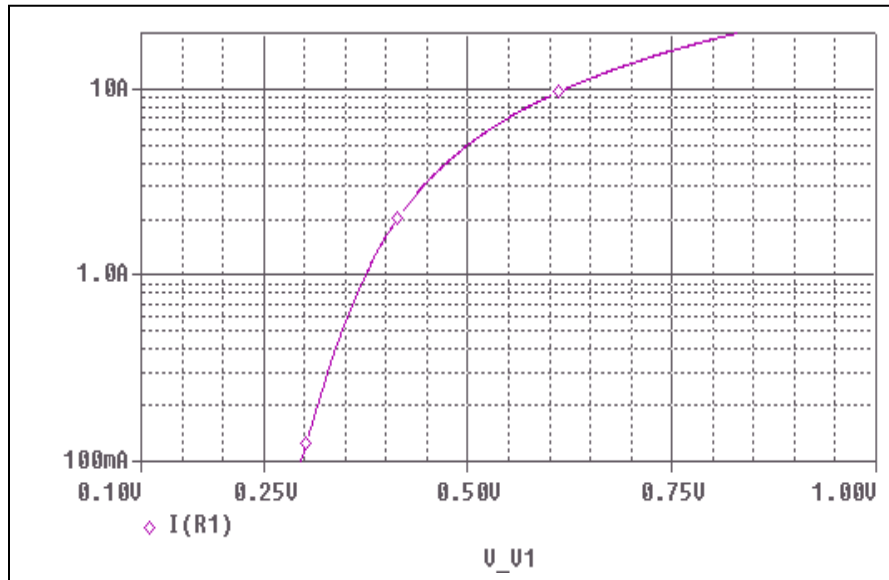


Bee Technologies Inc.

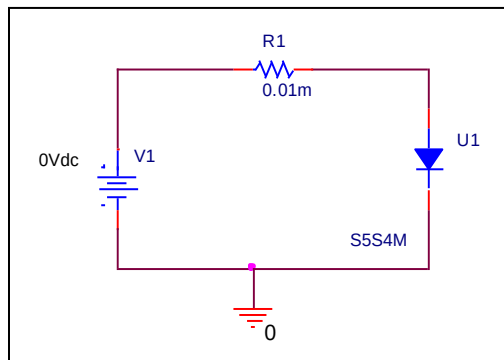
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

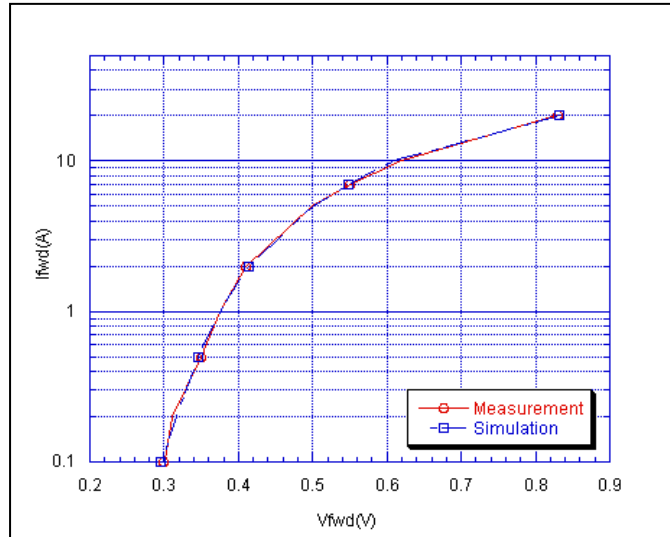


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

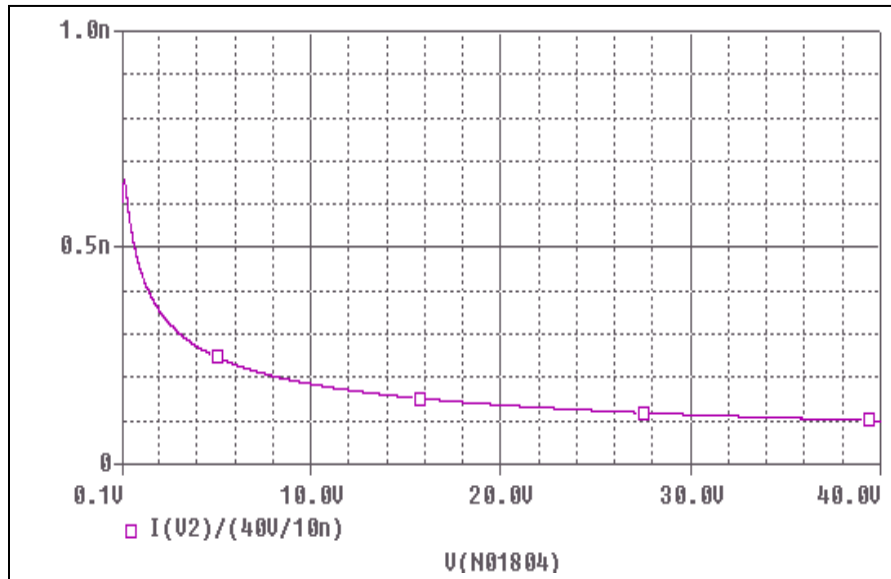


Simulation Result

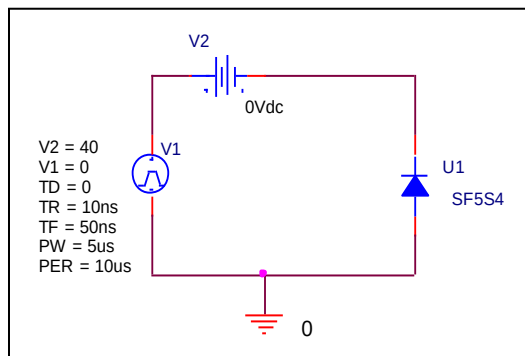
Ifwd(A)	Vfwd(V) Measurement	Vfwd(V) Simulation	%Error
0.1	0.300	0.296	-1.40
0.2	0.310	0.316	1.90
0.5	0.350	0.346	-1.11
1	0.375	0.375	-0.08
2	0.410	0.414	0.85
5	0.500	0.501	0.20
10	0.620	0.610	-1.61
20	0.830	0.831	0.14

Junction Capacitance Characteristic

Circuit Simulation Result

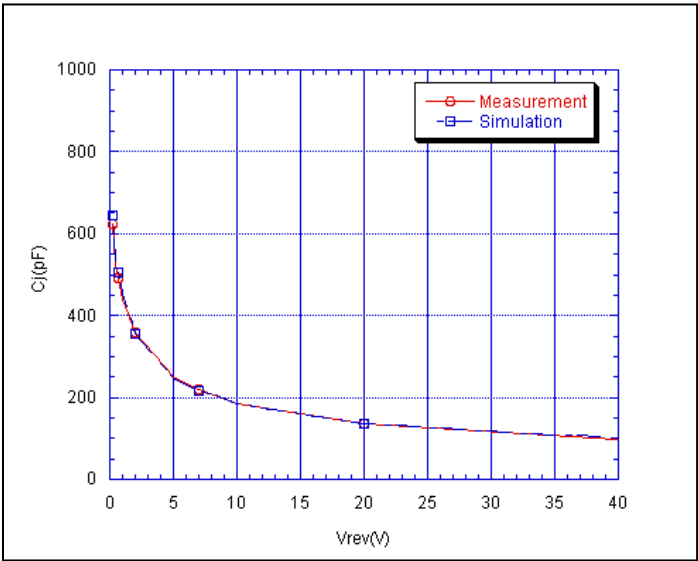


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

Vrev(V)	Cj(pF) Measurement	Cj(pF) Simulation	%Error
0.2	625.00	644.30	3.09
0.5	525.00	522.30	-0.51
1	440.00	452.60	2.86
2	360.00	356.10	-1.08
5	250.00	248.20	-0.72
10	185.00	185.40	0.22
20	135.00	136.80	1.33
40	95.00	98.00	3.16