

Device Modeling Report

COMPONENTS:

DIODE/ SCHOOTTKY RECTIFIER / STANDARD

PART NUMBER: DF40SC3L

MANUFACTURER: SHINDENGEN

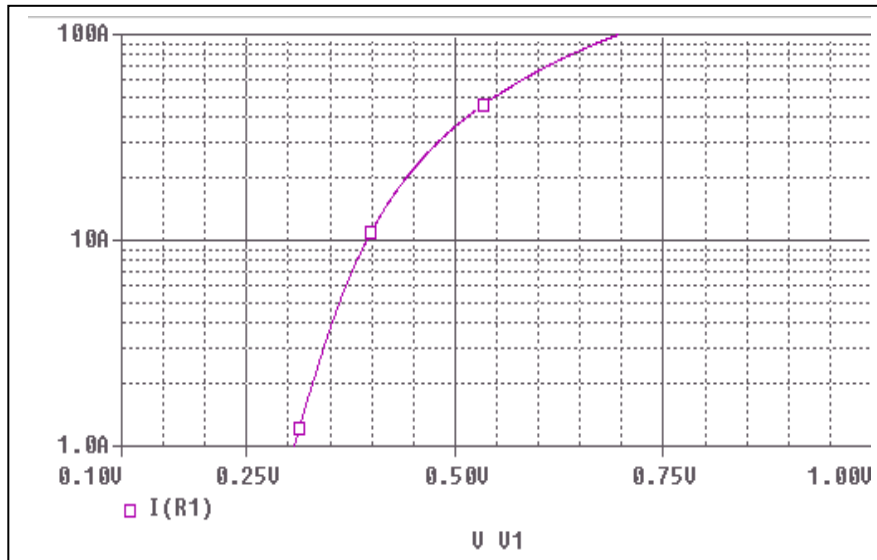


Bee Technologies Inc.

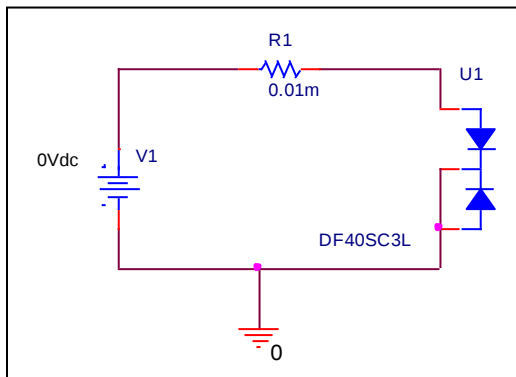
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

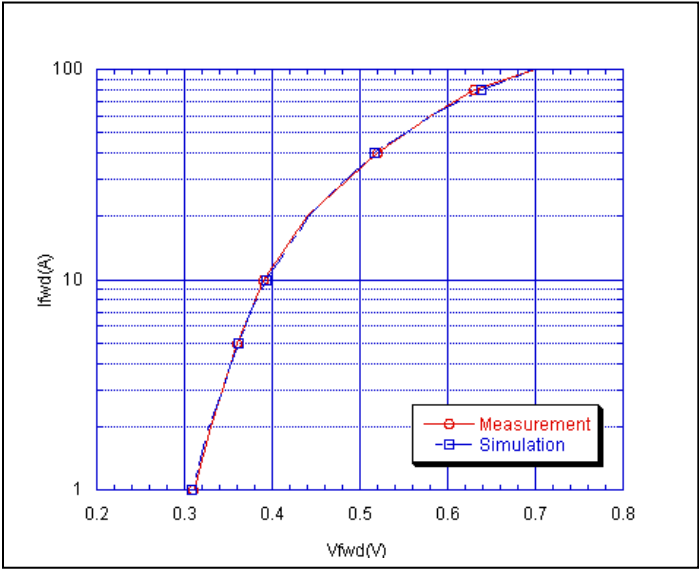


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

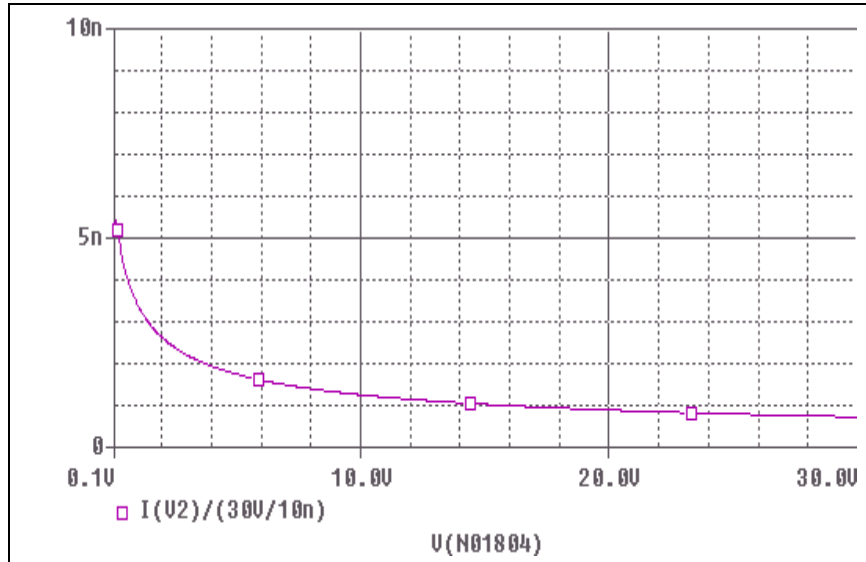


Simulation Result

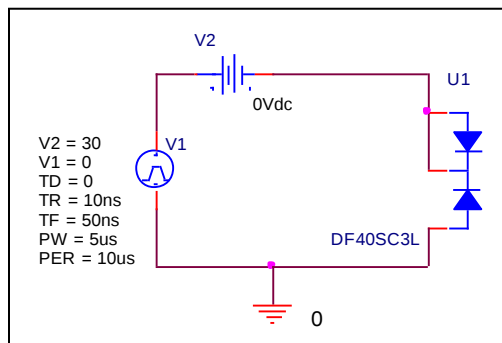
Ifwd(A)	Vfwd(V) Measurement	Vfwd(V) Simulation	%Error
1	0.310	0.308	-0.74
2	0.330	0.329	-0.39
5	0.360	0.361	0.39
10	0.390	0.394	0.97
20	0.440	0.441	0.27
40	0.520	0.516	-0.69
60	0.580	0.579	-0.12
100	0.700	0.697	-0.44

Junction Capacitance Characteristic

Circuit Simulation Result

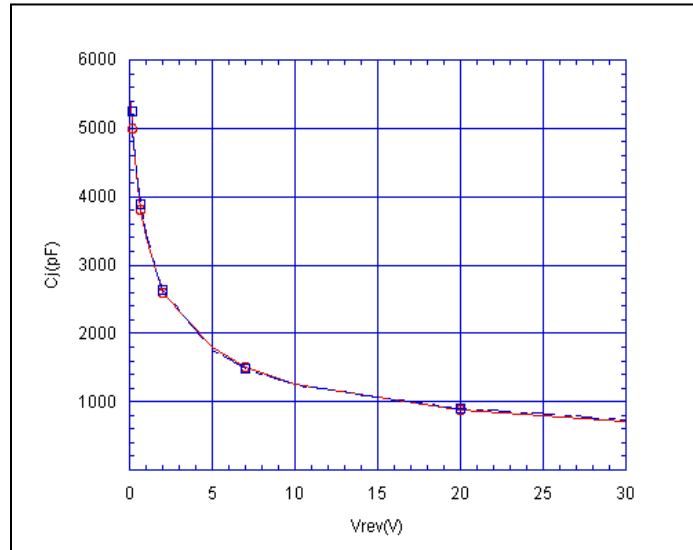


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

Vrev(V)	Cj(pF) Measurement	Cj(pF) Simulation	%Error
0.1	5400.00	5246.00	-2.85
0.2	5110.00	5250.00	2.74
0.5	4110.00	4210.00	2.43
1	3400.00	3447.00	1.38
2	2600.00	2634.00	1.31
5	1790.00	1751.00	-2.18
10	1250.00	1255.00	0.40
20	880.00	890.50	1.19
30	700.00	719.90	2.84