

Device Modeling Report

COMPONENTS:
DIODE/ SCHOOTTKY RECTIFIER / STANDARD
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MANUFACTURER: SHINDENGEN

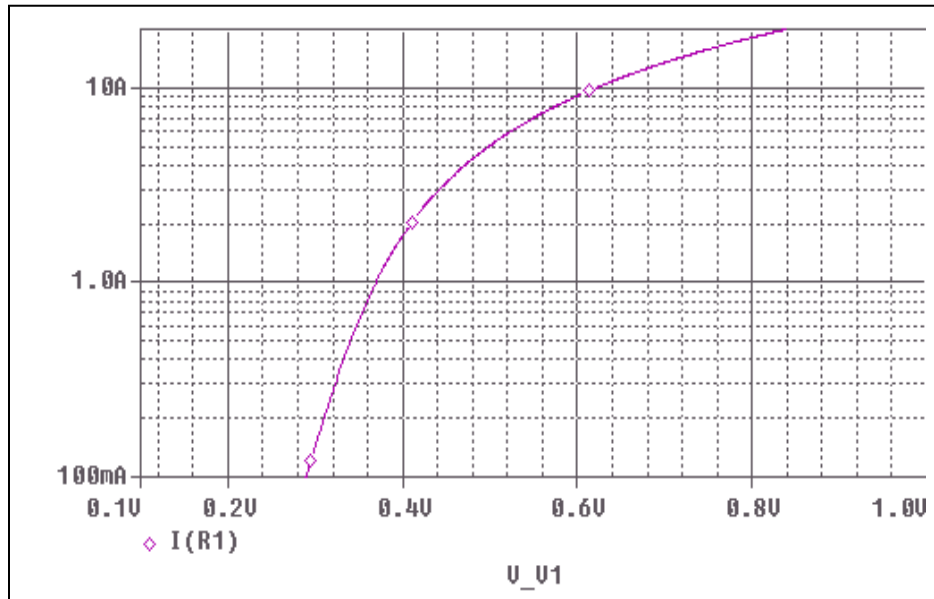


Bee Technologies Inc.

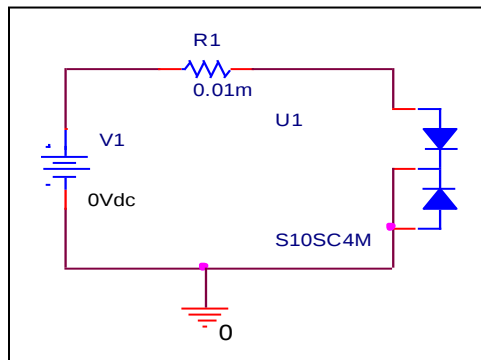
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

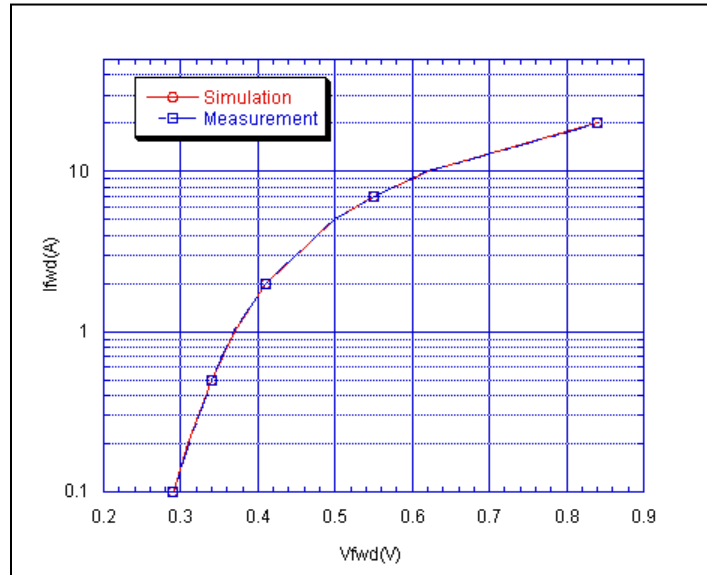


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

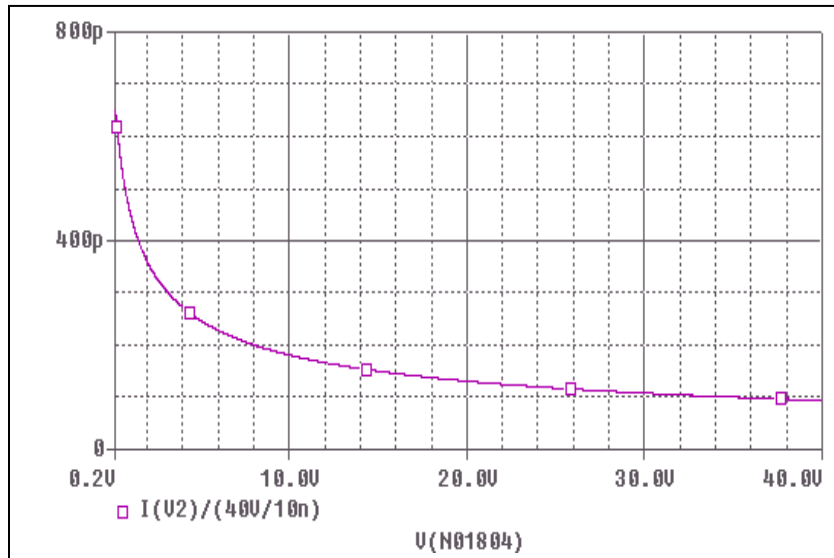


Simulation Result

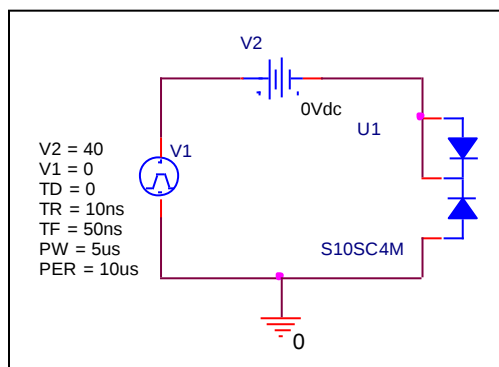
Ifwd(A)	Vfwd(V) Measurement	Vfwd(V) Simulation	%Error
0.1	0.290	0.290	-0.14
0.2	0.310	0.310	-0.06
0.5	0.340	0.340	-0.03
1	0.368	0.370	0.41
2	0.410	0.409	-0.17
5	0.500	0.499	-0.22
10	0.620	0.622	0.29
20	0.840	0.840	-0.02

Junction Capacitance Characteristic

Circuit Simulation Result

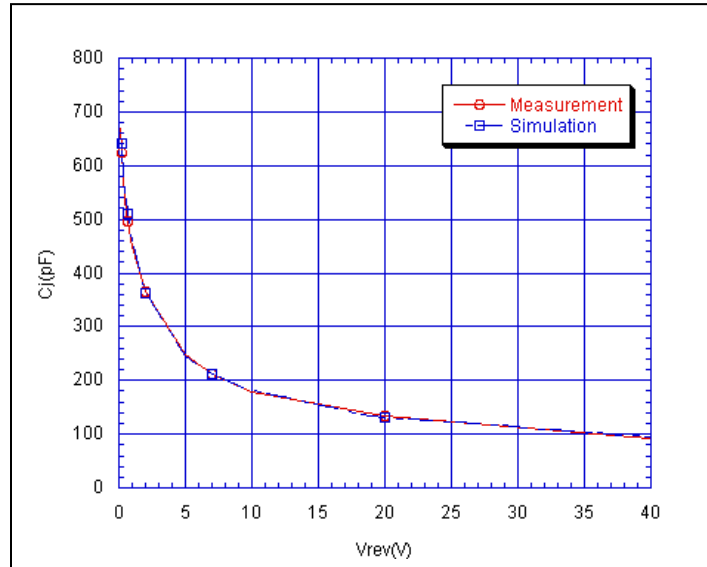


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

V_{rev} (V)	C_j (pF) Measurement	C_j (pF) Simulation	%Error
0.1	640.00	610.00	-4.69
0.2	625.00	640.70	2.51
0.5	535.00	550.00	2.80
1	450.00	460.50	2.33
2	365.00	361.30	-1.01
5	248.00	246.60	-0.56
10	179.00	181.00	1.12
20	133.00	131.00	-1.50
40	89.00	93.00	4.49