

Device Modeling Report

COMPONENTS:
DIODE/ SCHOOTTKY RECTIFIER / STANDARD
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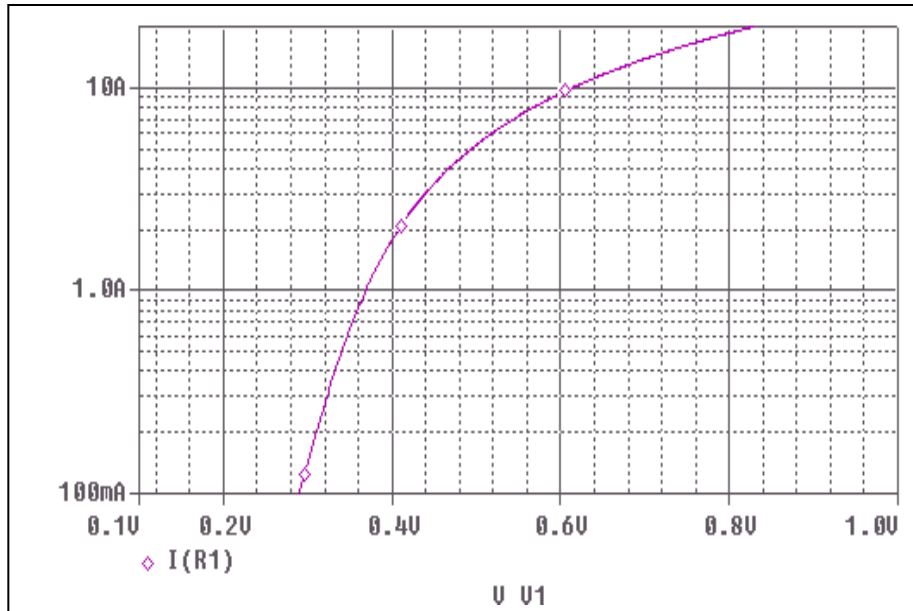


Bee Technologies Inc.

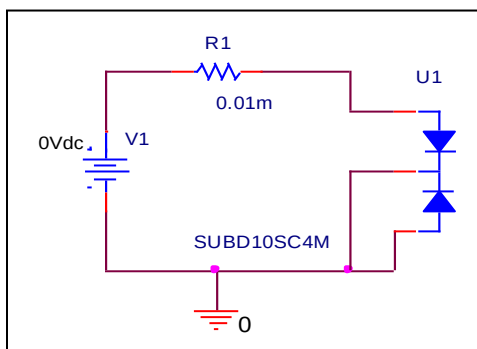
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

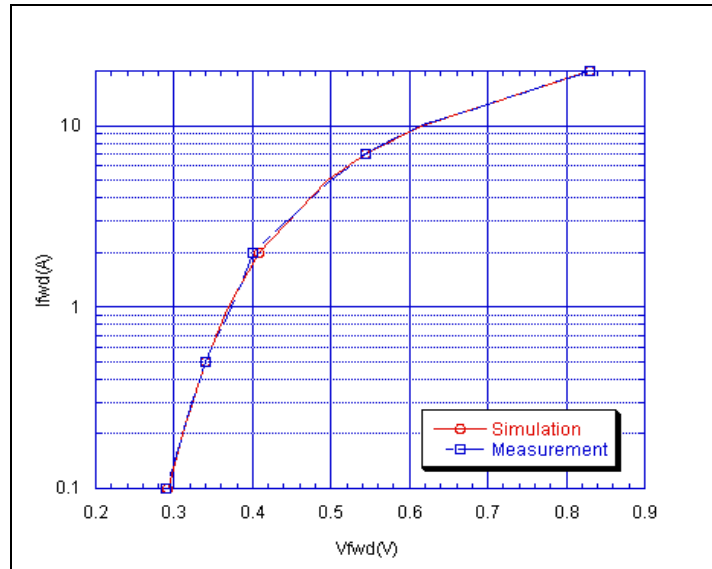


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

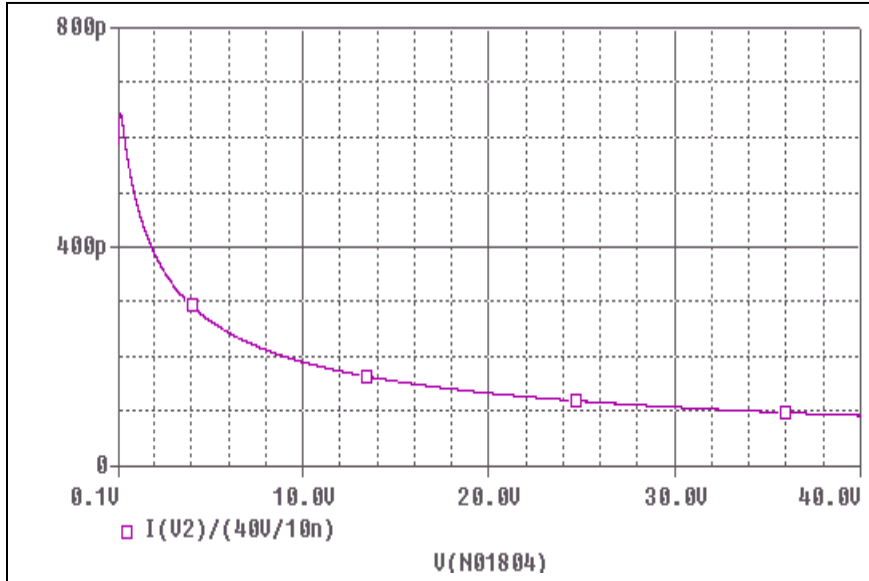


Simulation Result

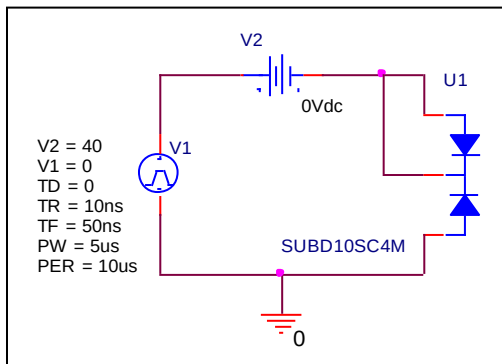
Ifwd(A)	Vfwd(V) Measurement	Vfwd(V) Simulation	%Error
0.1	0.290	0.291	0.24
0.2	0.310	0.310	0.03
0.5	0.340	0.340	-0.06
1	0.373	0.369	-1.07
2	0.400	0.407	1.80
5	0.500	0.495	-1.06
10	0.610	0.615	0.74
20	0.835	0.830	-0.60

Junction Capacitance Characteristic

Circuit Simulation Result

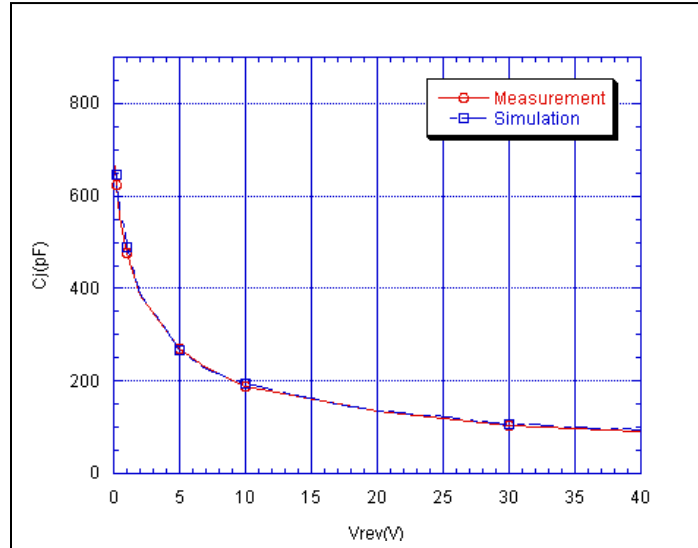


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

V_{rev} (V)	C_j (pF) Measurement	C_j (pF) Simulation	%Error
0.1	665.00	620.00	-6.77
0.2	625.00	644.80	3.17
0.5	555.00	576.40	3.86
1	478.00	488.40	2.18
2	385.00	388.60	0.94
5	270.00	265.30	-1.74
10	189.00	195.10	3.23
20	135.00	133.50	-1.11
40	87.00	90.00	3.45