

Device Modeling Report

COMPONENTS:
DIODE/ SCHOOTTKY RECTIFIER / STANDARD
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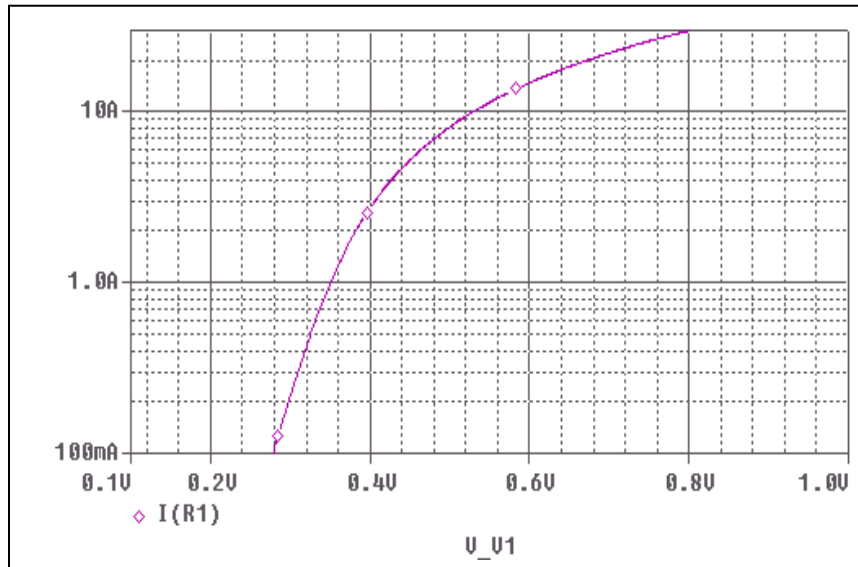


Bee Technologies Inc.

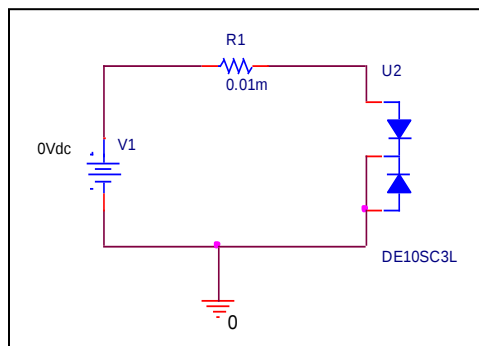
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

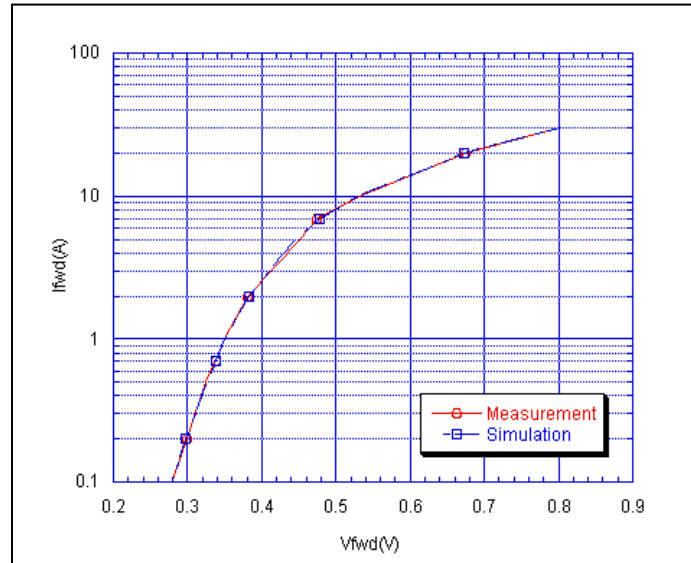


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

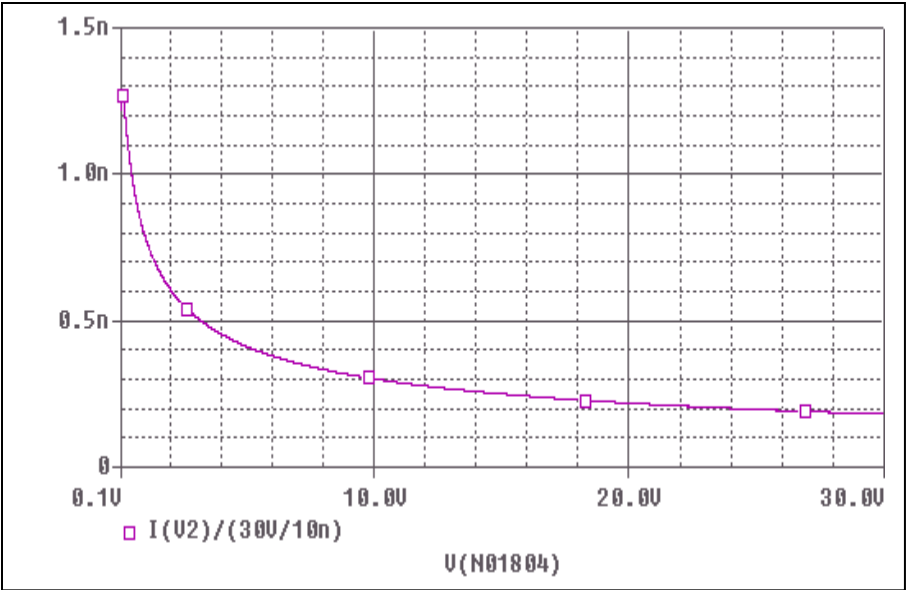


Simulation Result

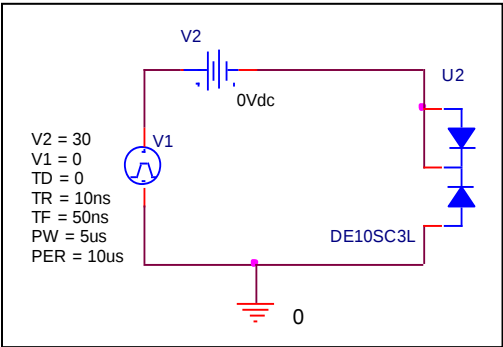
Ifwd(A)	Vfwd(V) Measurement	Vfwd(V) Simulation	%Error
0.1	0.278	0.279	0.18
0.2	0.300	0.298	-0.73
0.5	0.325	0.326	0.18
1	0.350	0.350	0.09
2	0.380	0.382	0.63
5	0.450	0.446	-0.91
10	0.530	0.529	-0.13
20	0.675	0.672	-0.47
30	0.800	0.802	0.24

Junction Capacitance Characteristic

Circuit Simulation Result

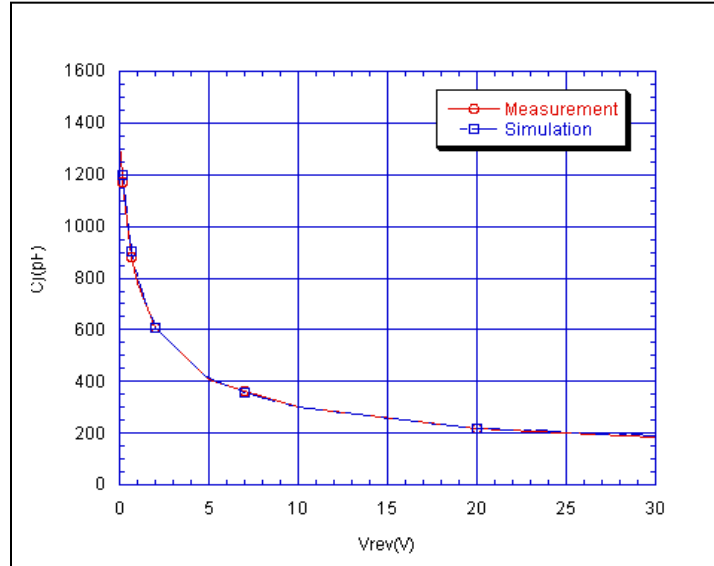


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

V_{rev} (V)	C_j (pF) Measurement	C_j (pF) Simulation	%Error
0.1	1290.000	1230.000	-4.65
0.2	1170.000	1200.000	2.56
0.5	970.000	990.000	2.06
1	780.000	797.500	2.24
2	610.000	610.400	0.07
5	407.000	412.300	1.30
10	300.000	301.400	0.47
20	218.000	218.700	0.32
30	180.000	181.900	1.06