

Device Modeling Report

COMPONENTS:
DIODE/ SCHOOTKY RECTIFIER / STANDARD
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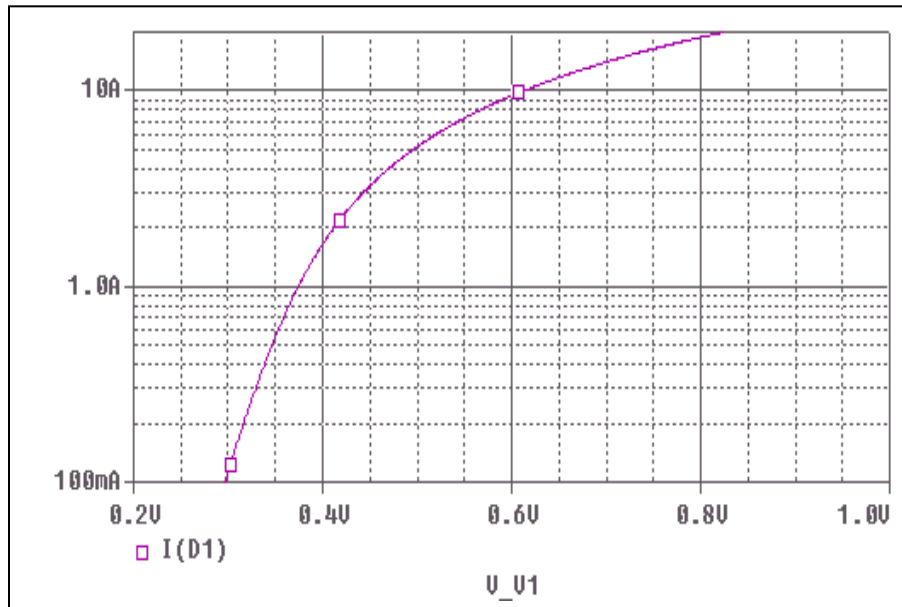


Bee Technologies Inc.

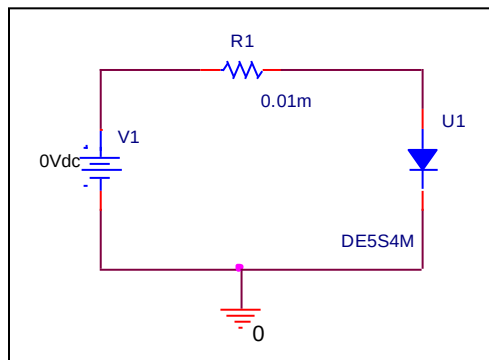
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

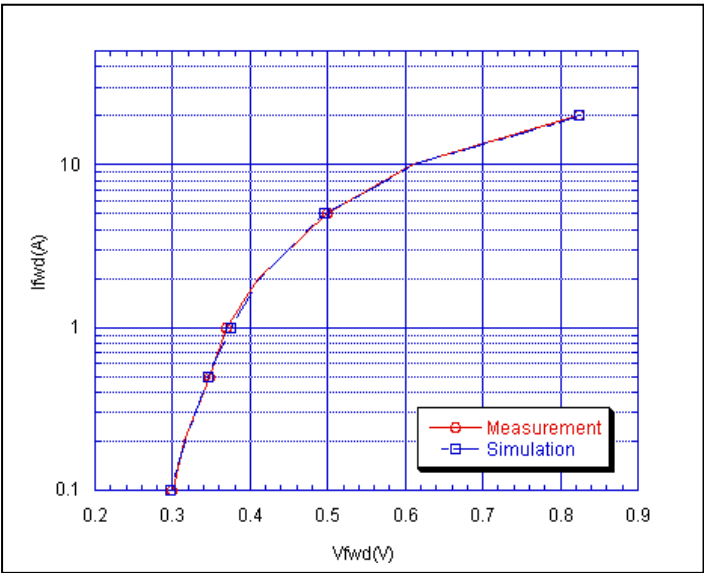


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

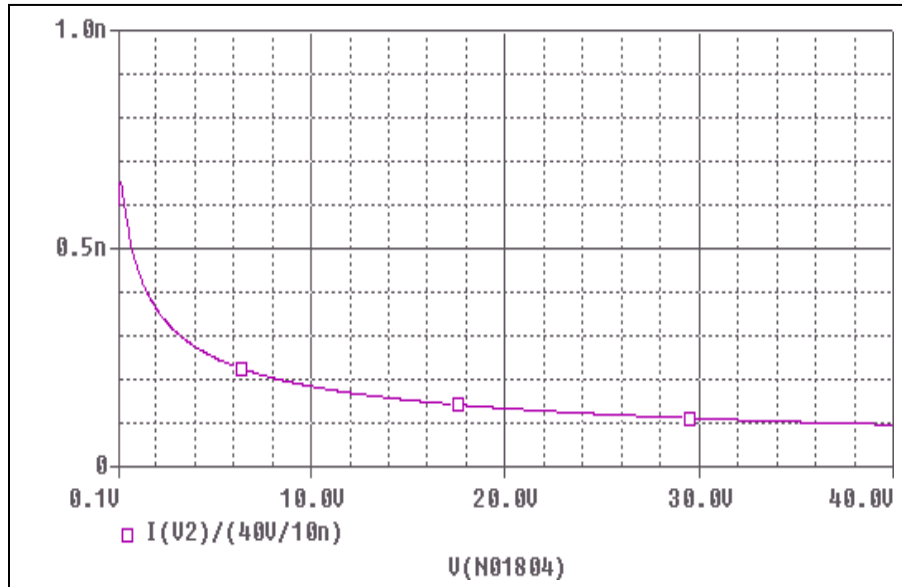


Simulation Result

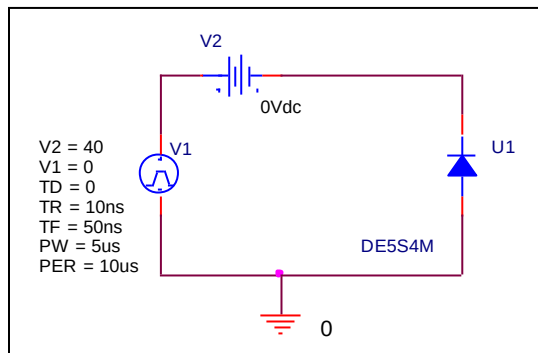
I_{fwd} (A)	V_{fwd} (V) Measurement	V_{fwd} (V) Simulation	%Error
0.1	0.300	0.297	-1.13
0.2	0.315	0.316	0.41
0.5	0.348	0.346	-0.49
1	0.370	0.374	1.16
2	0.410	0.412	0.49
5	0.500	0.496	-0.76
10	0.610	0.612	0.33
20	0.826	0.825	-0.12

Junction Capacitance Characteristic

Circuit Simulation Result

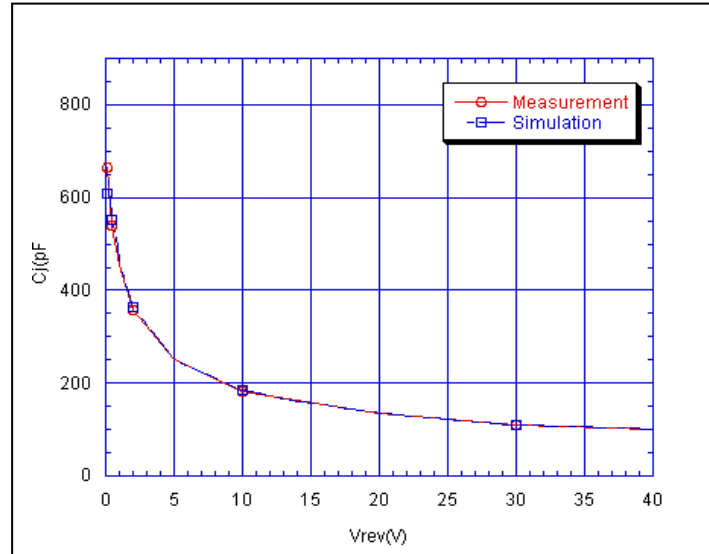


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

V_{rev} (V)	C_j (pF) Measurement	C_j (pF) Simulation	%Error
0.2	620.000	637.500	2.82
0.5	540.000	551.500	2.13
1	455.000	461.500	1.43
2	358.000	363.300	1.48
5	251.000	250.000	-0.40
10	182.000	183.900	1.04
20	135.000	133.600	-1.04
40	97.000	96.700	-0.31