Device Modeling Report

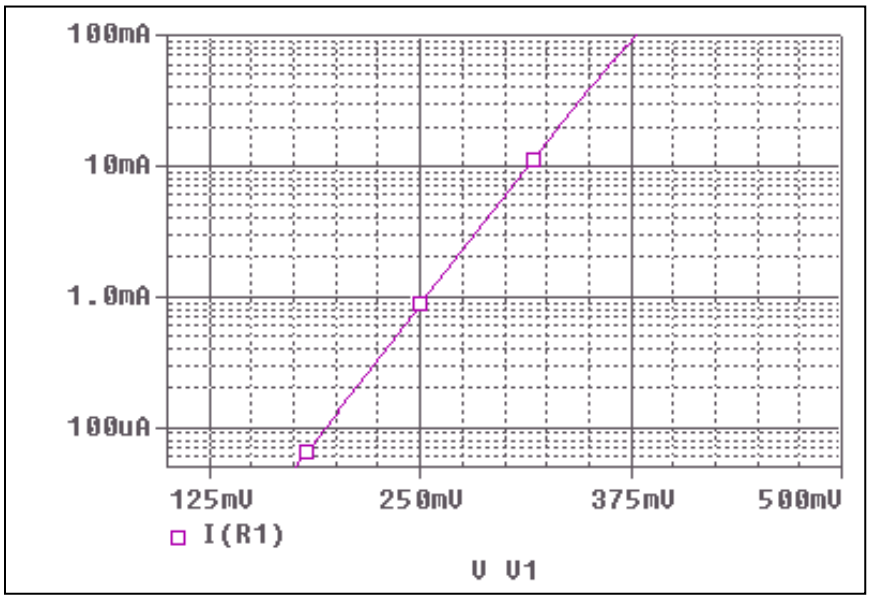
COMPONENTS:
DIODE/ SCHOOTTKY RECTIFIER / STANDARD
PART NUMBER: 1SS395
MANUFACTURER: TOSHIBA

Bee Technologies Inc.

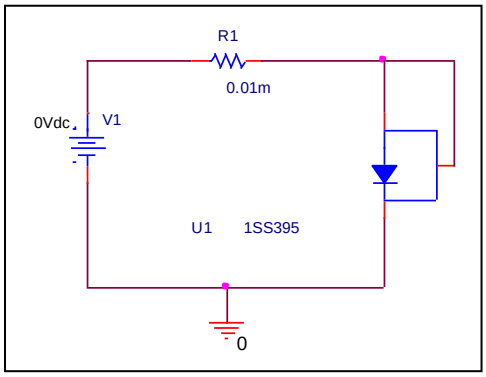
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

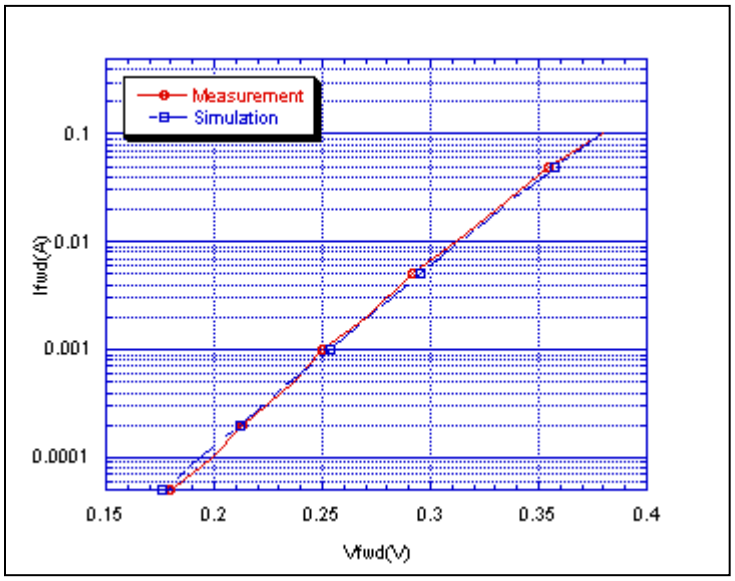


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

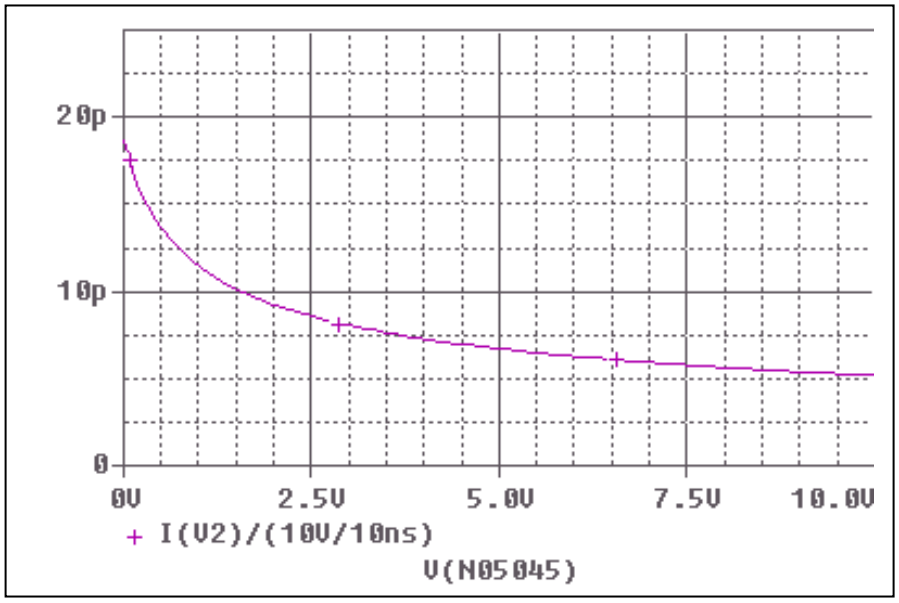


Simulation Result

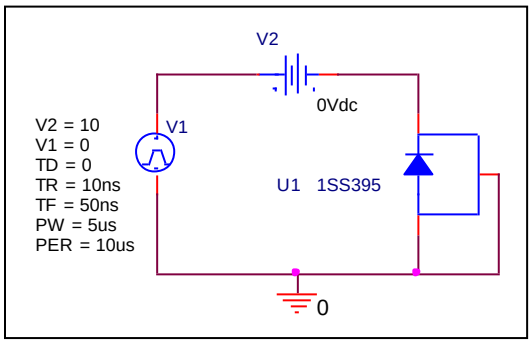
Ifwd(A)	Vfwd(V) Measurement	Vfwd(V) Simulation	%Error
0.00005	0.180	0.176	-2.17
0.0001	0.199	0.194	-2.51
0.0002	0.213	0.212	-0.52
0.0005	0.237	0.236	-0.59
0.001	0.250	0.254	1.44
0.002	0.270	0.272	0.56
0.005	0.292	0.295	1.16
0.01	0.312	0.314	0.51
0.05	0.355	0.358	0.70
0.1	0.380	0.378	-0.45

Junction Capacitance Characteristic

Circuit Simulation Result

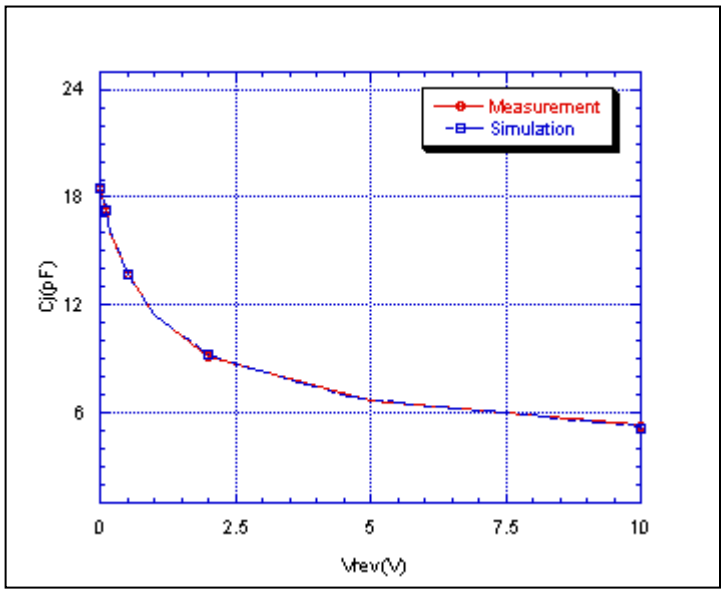


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

Vrev(V)	Cj(pF) Measurement	Cj(pF) Simulation	%Error
0.02	18.500	18.550	0.27
0.05	18.000	18.020	0.11
0.1	17.300	17.280	-0.12
0.2	16.000	16.060	0.37
0.5	13.700	13.660	-0.29
1	11.500	11.470	-0.26
2	9.200	9.260	0.65
5	6.700	6.710	0.15
10	5.200	5.190	-0.19