

Device Modeling Report

COMPONENTS:

DIODE/ SCHOTTKY RECTIFIER / STANDARD

PART NUMBER: HN2S01F

MANUFACTURER: TOSHIBA

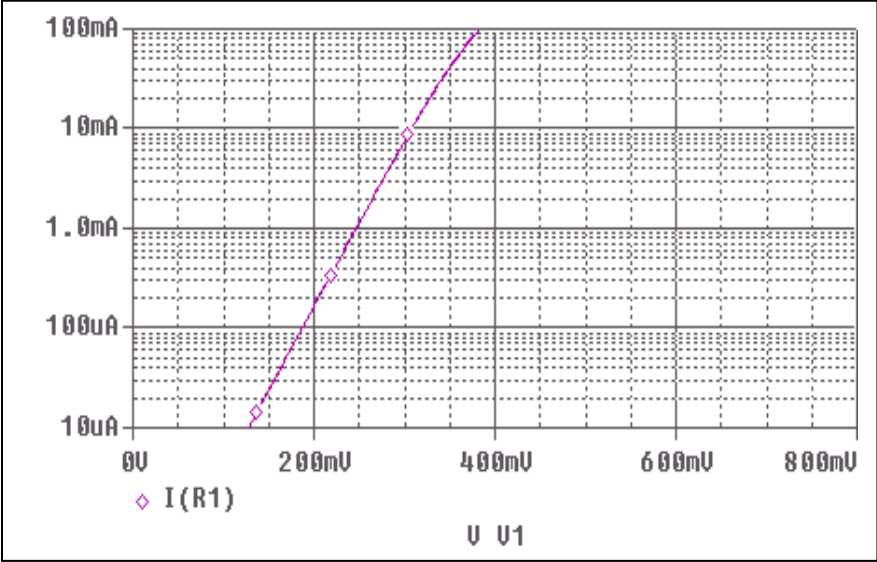


Bee Technologies Inc.

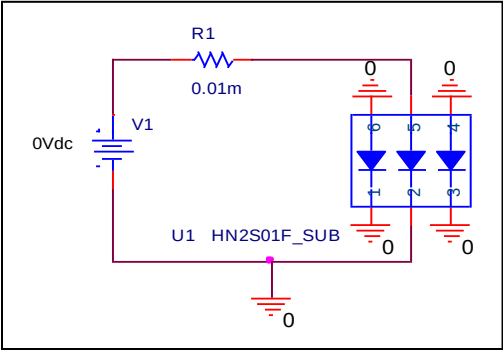
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

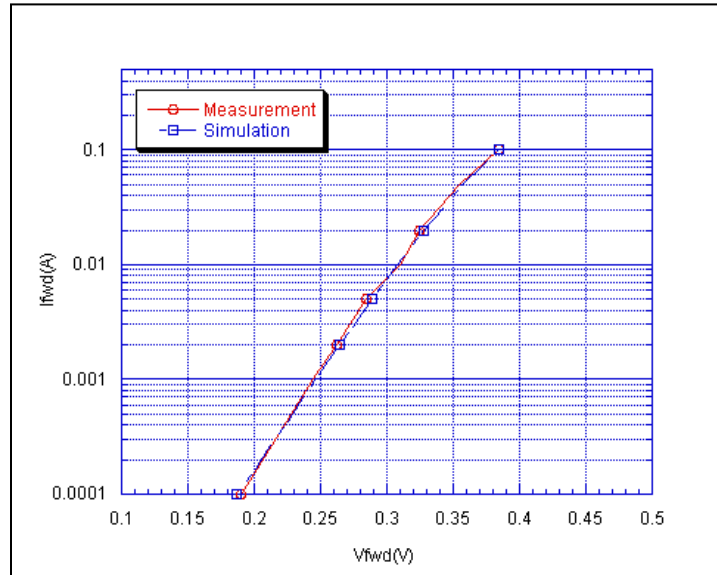


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

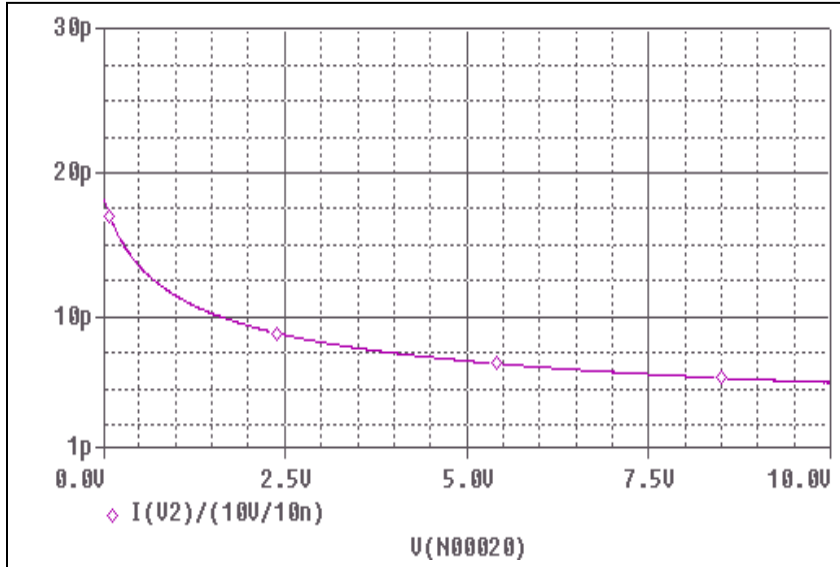


Simulation Result

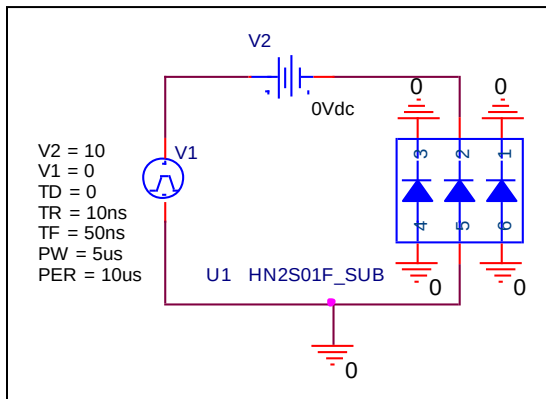
Ifwd(A)	Vfwd(V) Measurement	Vfwd(V) Simulation	%Error
0.00002	0.150	0.146	-2.47
0.00005	0.170	0.169	-0.65
0.0001	0.190	0.187	-1.68
0.001	0.245	0.247	0.90
0.002	0.262	0.265	0.99
0.005	0.285	0.289	1.37
0.01	0.310	0.308	-0.74
0.02	0.325	0.328	0.77
0.05	0.355	0.357	0.45
0.1	0.385	0.384	-0.21

Junction Capacitance Characteristic

Circuit Simulation Result

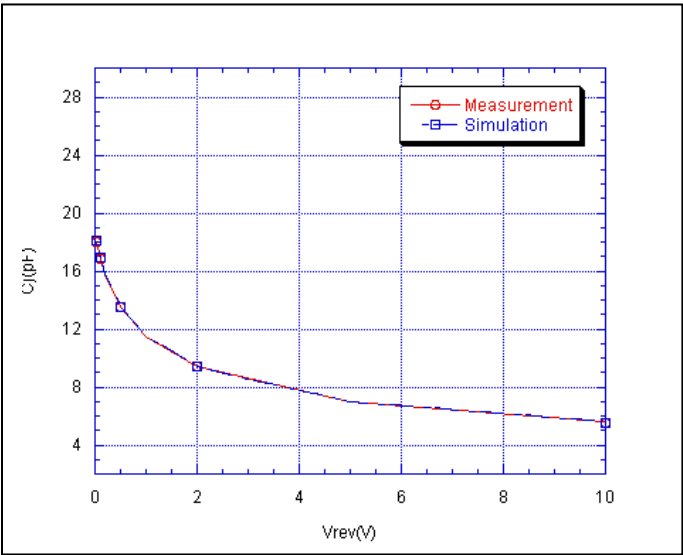


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

Vrev(V)	Cj(pF) Measurement	Cj(pF) Simulation	%Error
0.02	18.000	18.119	0.66
0.05	17.600	17.622	0.12
0.1	16.800	16.917	0.70
0.2	15.700	15.784	0.54
0.5	13.500	13.500	0.00
1	11.500	11.498	-0.02
2	9.400	9.422	0.23
5	7.000	6.974	-0.37
10	5.500	5.518	0.33