

Device Modeling Report

COMPONENTS:
DIODE/ SCHOTTKY RECTIFIER /STANDARD
PART NUMBER: HN2S02JE
MANUFACTURER: TOSHIBA

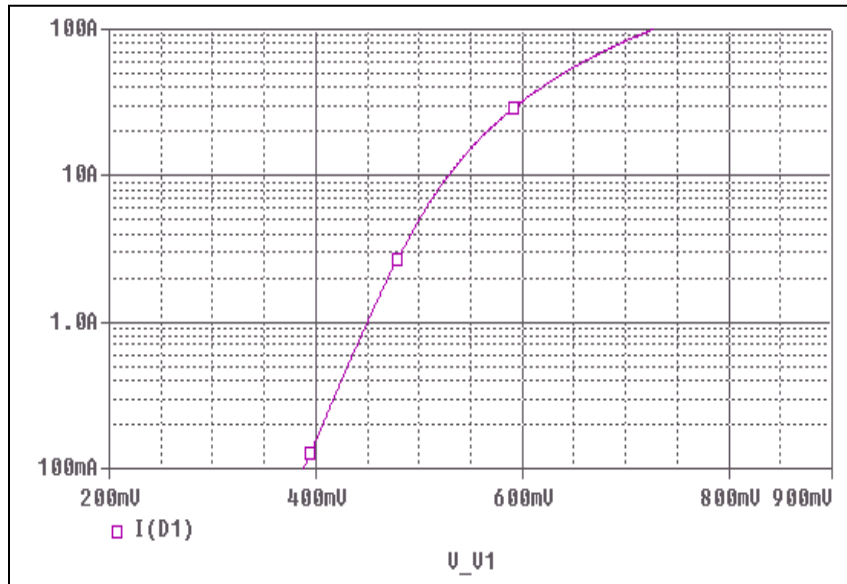


Bee Technologies Inc.

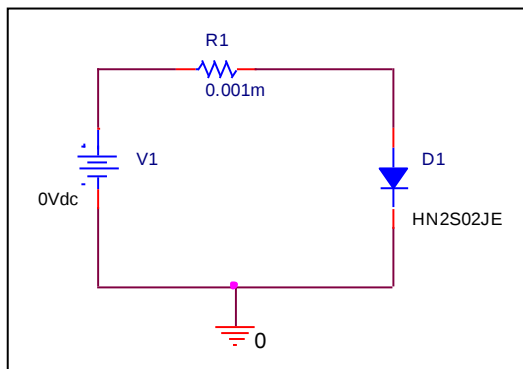
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

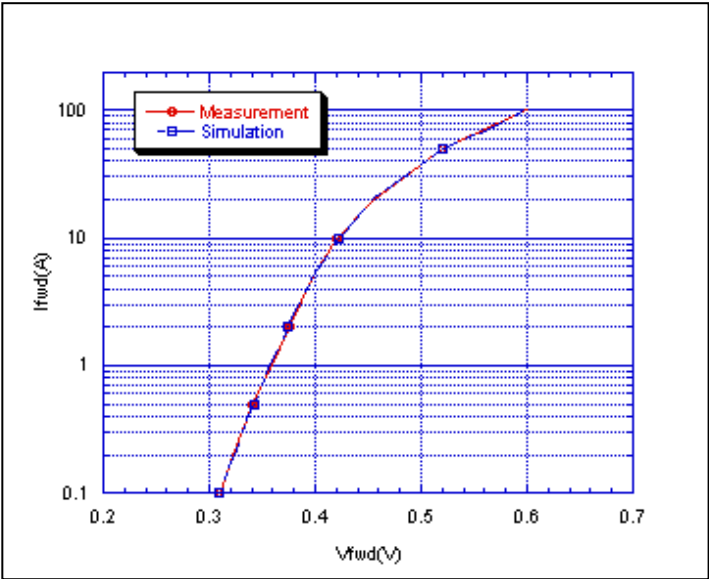


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

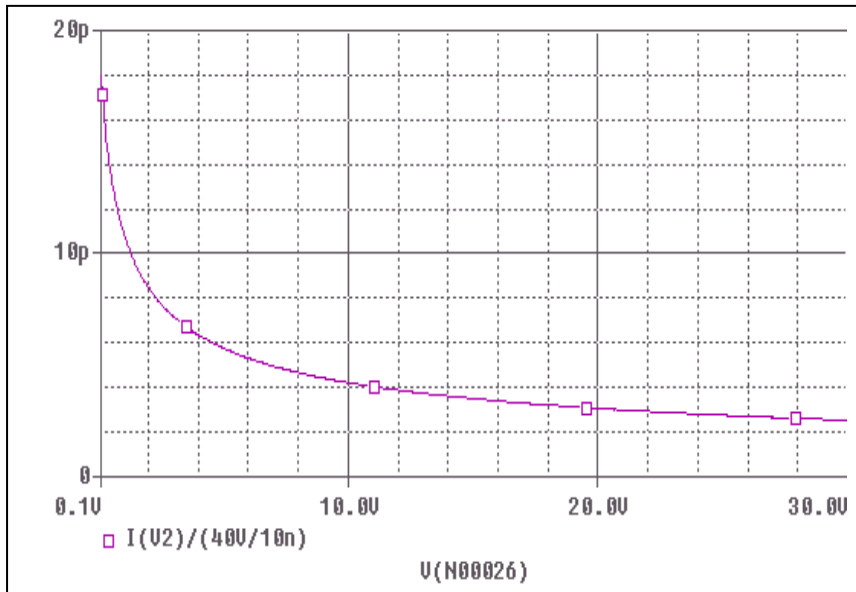


Simulation Result

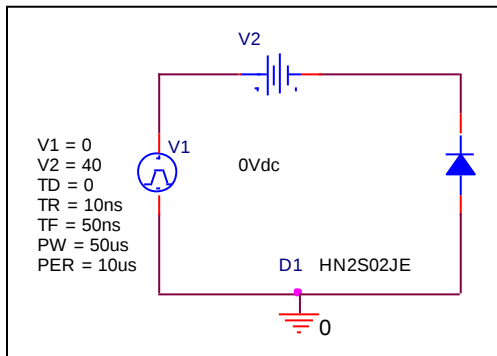
Ifwd(A)	Vfwd (V) Measurement	Vfwd(V) Simulation	%Error
0.1	0.310	0.309	-0.35
0.2	0.323	0.323	0.12
0.5	0.340	0.343	0.82
1	0.360	0.358	-0.56
2	0.376	0.374	-0.48
5	0.399	0.399	-0.05
10	0.420	0.422	0.57
20	0.455	0.455	-0.11
50	0.520	0.520	-0.06
100	0.600	0.600	-0.03

Junction Capacitance Characteristic

Circuit Simulation Result

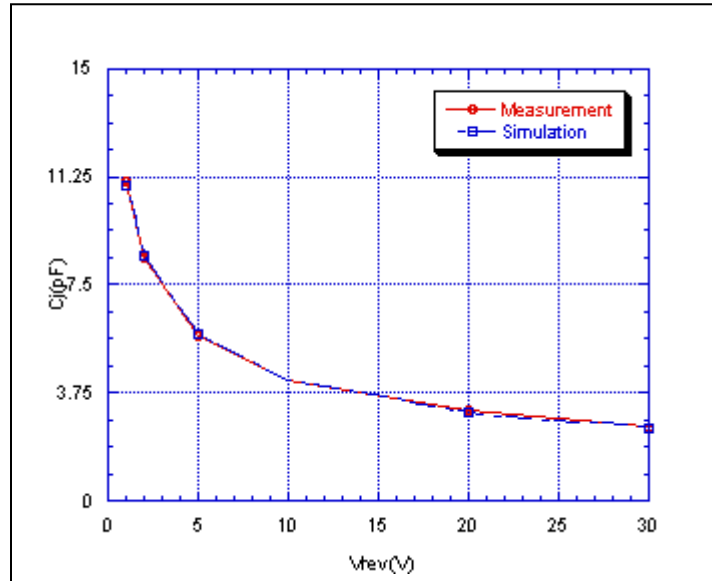


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

Vrev(V)	Cj(pF) Measurement	Cj(pF) Simulation	%Error
1	11.100	10.960	-1.26
2	8.450	8.480	0.36
5	5.750	5.760	0.17
10	4.200	4.220	0.48
20	3.150	3.060	-2.86
30	2.500	2.530	1.20