Device Modeling Report

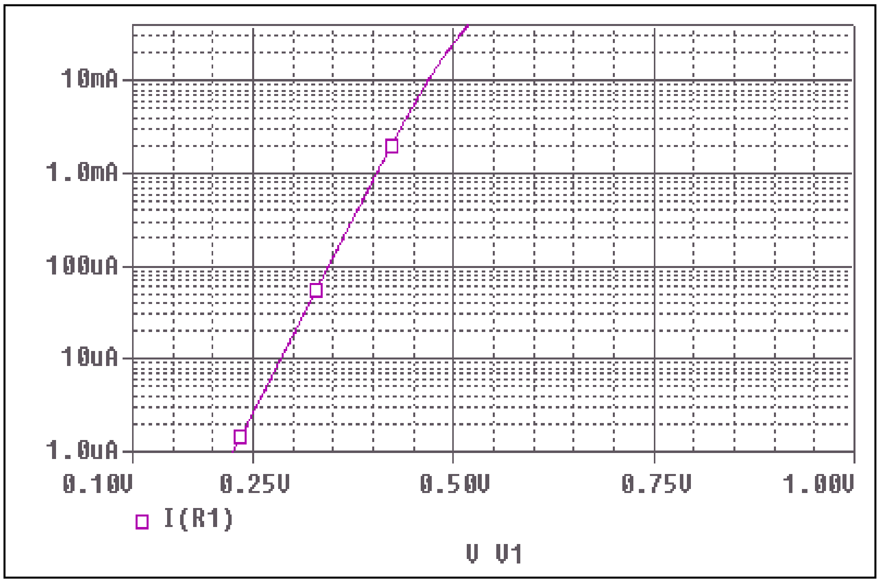
COMPONENTS:
DIODE/ SCHOOTTKY RECTIFIER /STANDARD
PART NUMBER: HN2S03FU
MANUFACTURER: TOSHIBA

Bee Technologies Inc.

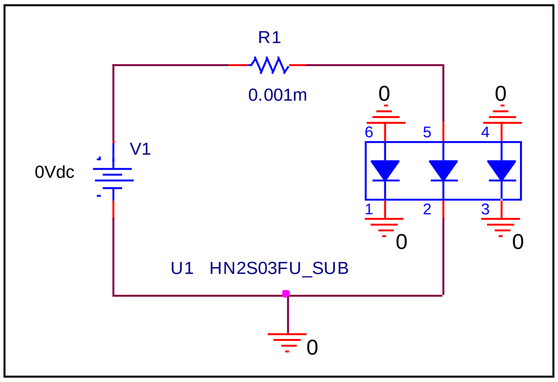
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

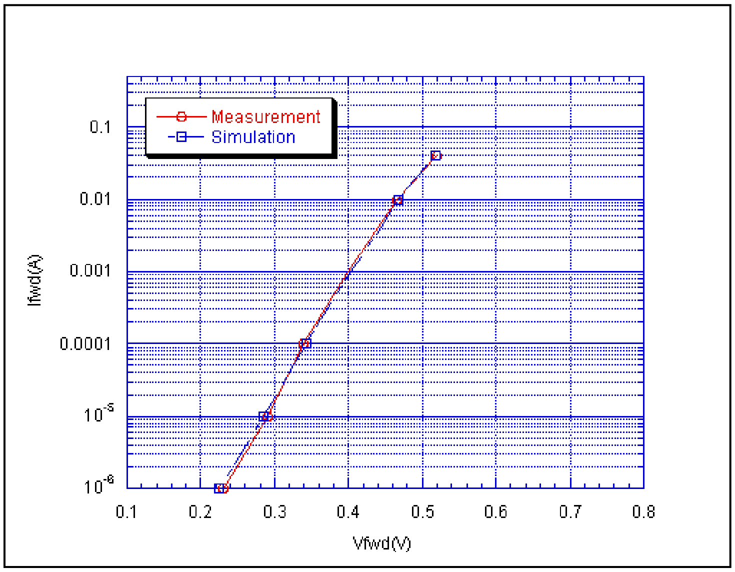


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

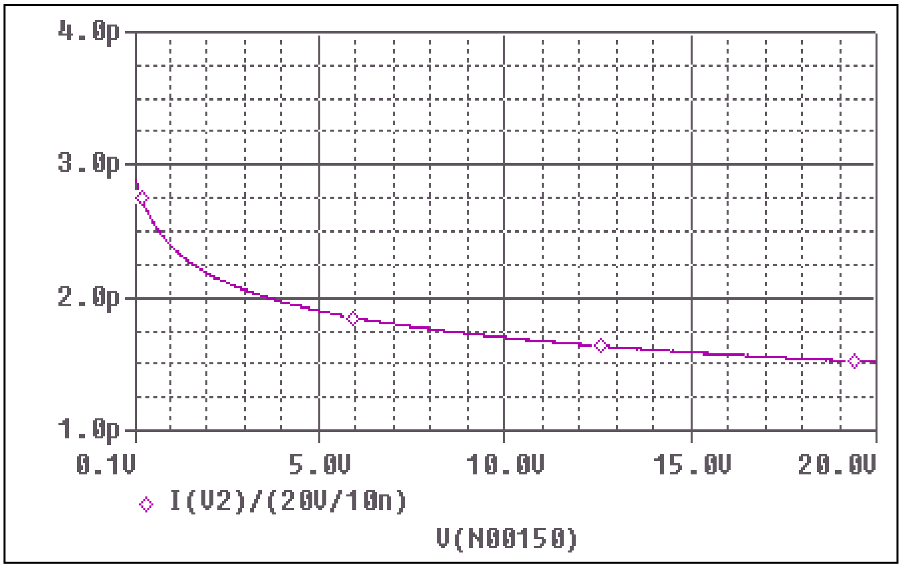


Simulation Result

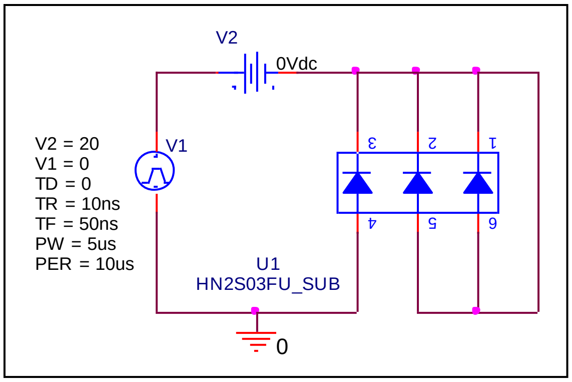
Ifwd(A)	Vfwd(V) Measurement	Vfwd(V) Simulation	%Error
0.000001	0.230	0.225	-2.22
0.00001	0.290	0.284	-1.97
0.0001	0.340	0.344	1.18
0.001	0.400	0.404	1.00
0.01	0.465	0.467	0.43
0.04	0.520	0.518	-0.38

Junction Capacitance Characteristic

Circuit Simulation Result

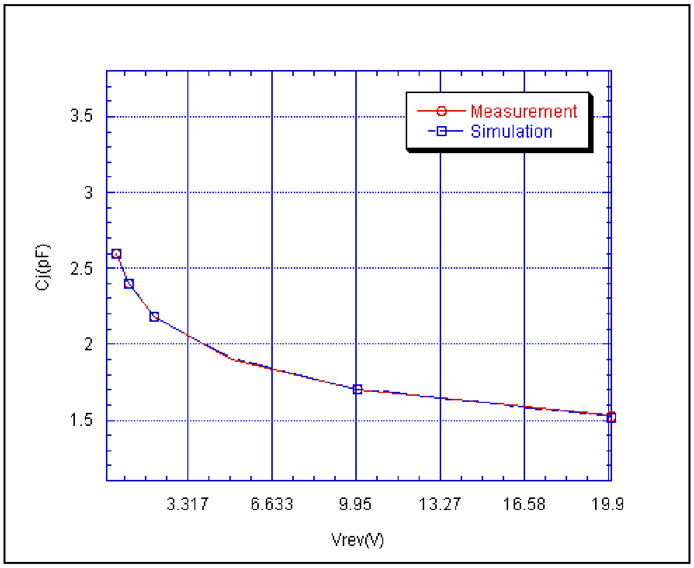


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

Vrev(V)	Cj(pF) Measurement	Cj(pF) Simulation	%Error
0.5	2.600	2.597	-0.13
1	2.400	2.400	-0.02
2	2.180	2.187	0.32
5	1.900	1.906	0.33
10	1.700	1.700	0.00
20	1.520	1.518	-0.13