

Device Modeling Report

COMPONENTS:
DIODE/ SCHOOTKY RECTIFIER /STANDARD
PART NUMBER: HN2S03FE
MANUFACTURER: TOSHIBA

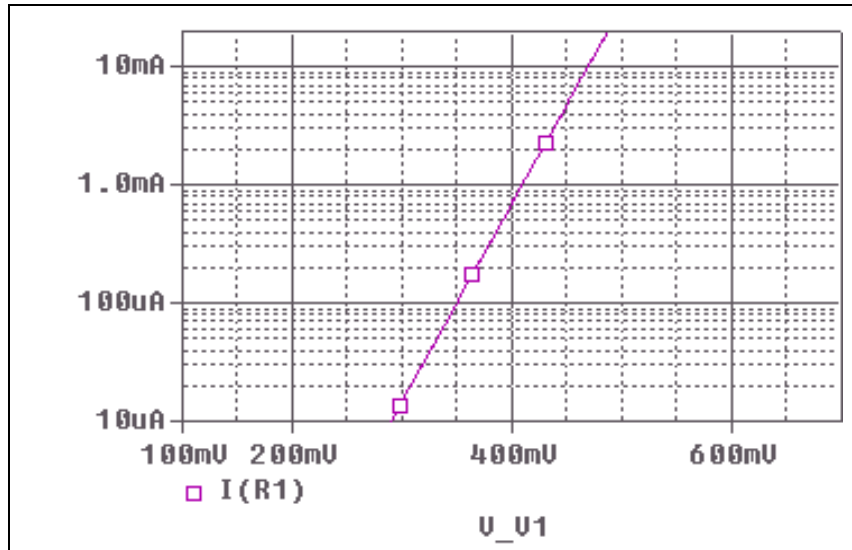


Bee Technologies Inc.

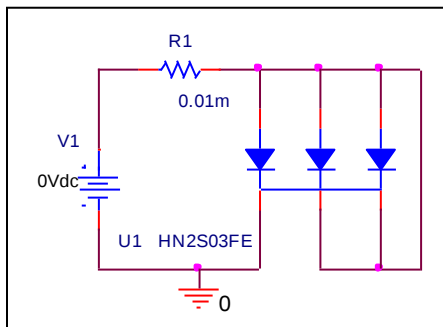
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

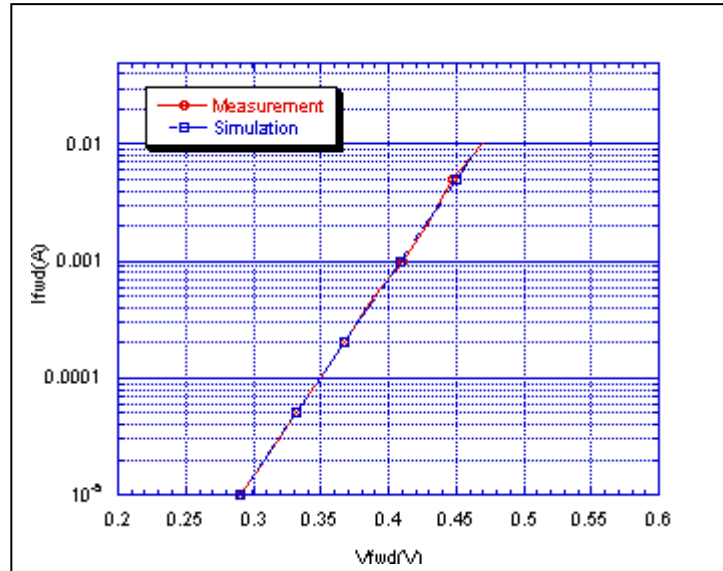


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

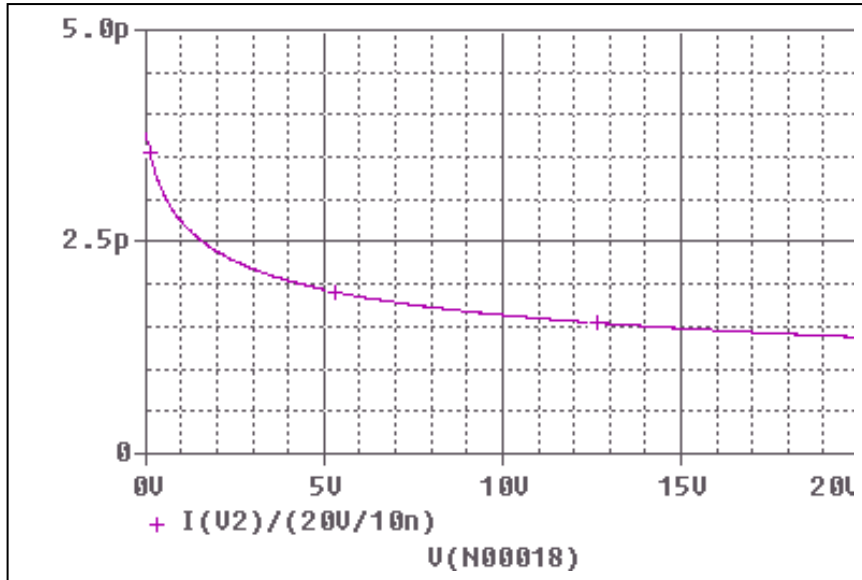


Simulation Result

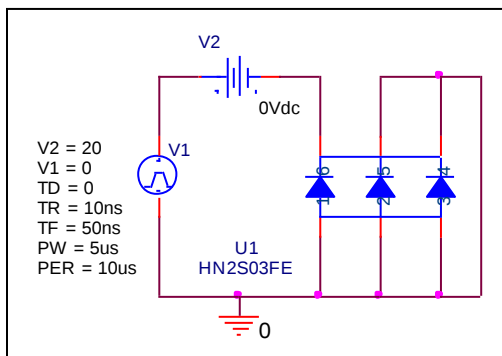
Ifwd(A)	Vfwd(V) Measurement	Vfwd(V) Simulation	%Error
0.00001	0.290	0.290	-0.03
0.00002	0.308	0.308	-0.06
0.00005	0.332	0.332	-0.15
0.0001	0.350	0.349	-0.17
0.0002	0.367	0.367	0.11
0.0005	0.390	0.391	0.28
0.001	0.410	0.409	-0.24
0.002	0.428	0.427	-0.23
0.005	0.448	0.451	0.60
0.01	0.470	0.469	-0.26

Junction Capacitance Characteristic

Circuit Simulation Result

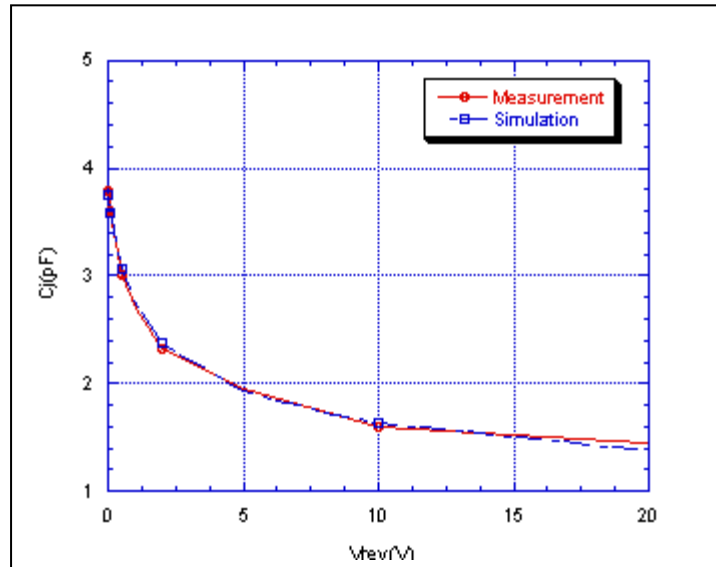


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

Vrev(V)	Cj(pF) Measurement	Cj(pF) Simulation	%Error
0.01	3.800	3.773	-0.71
0.02	3.780	3.750	-0.79
0.05	3.700	3.680	-0.54
0.1	3.600	3.581	-0.53
0.2	3.400	3.416	0.47
0.5	3.000	3.071	2.37
1	2.700	2.736	1.33
2	2.320	2.380	2.59
5	1.950	1.937	-0.67
10	1.600	1.635	2.19
20	1.43	1.36	-4.69