

Device Modeling Report

COMPONENTS:

DIODE/ SCHOOTTKY RECTIFIER / STANDARD

PART NUMBER: 5GWJZ47

MANUFACTURER: TOSHIBA

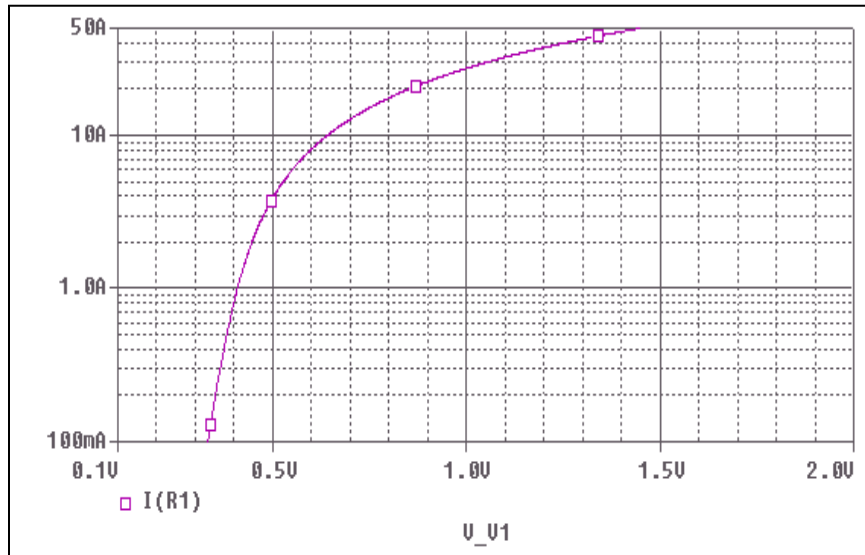


Bee Technologies Inc.

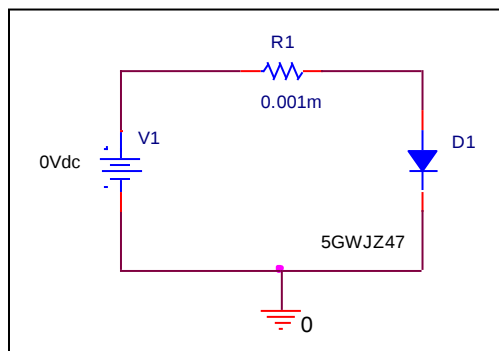
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

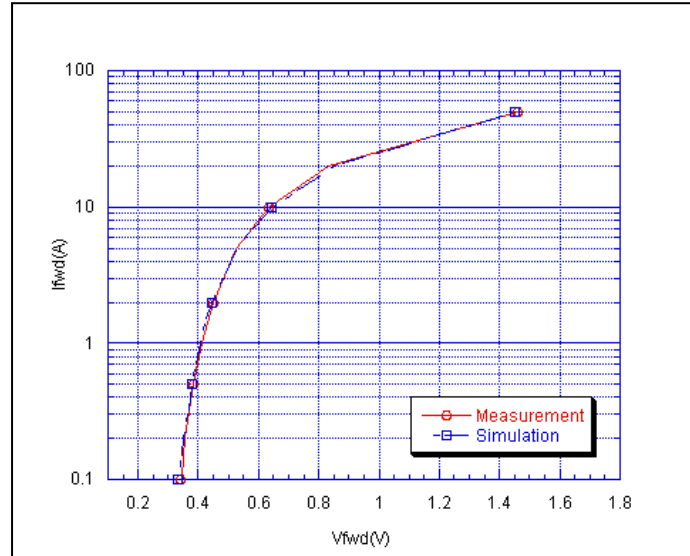


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

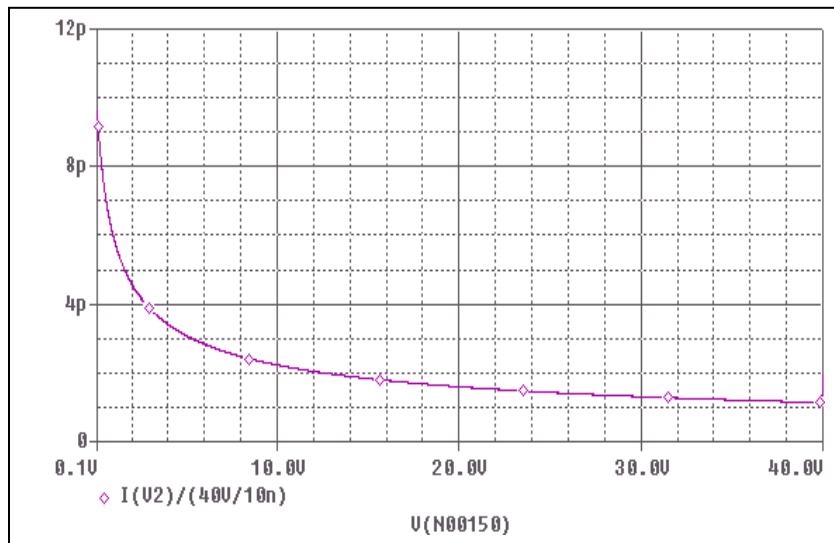


Simulation Result

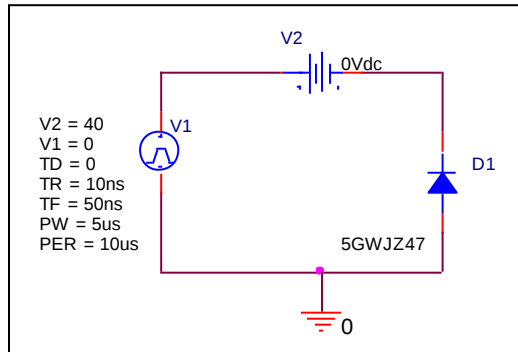
Ifwd(A)	Vfwd(V) Measurement	Vfwd(V) Simulation	%Error
0.1	0.340	0.332	-2.35
0.2	0.355	0.351	-1.13
0.5	0.385	0.381	-1.04
1	0.410	0.408	-0.49
2	0.450	0.445	-1.11
5	0.525	0.527	0.38
10	0.635	0.641	0.94
20	0.830	0.850	2.41
50	1.460	1.450	-0.68

Junction Capacitance Characteristic

Circuit Simulation Result

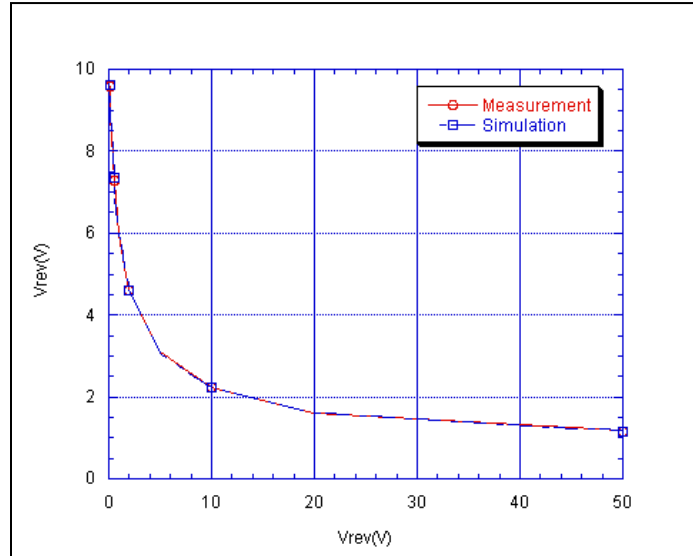


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

Vrev(V)	Cj(pF) Measurement	Cj(pF) Simulation	%Error
0.1	9.600	9.607	0.07
0.2	8.900	8.841	-0.67
0.5	7.300	7.348	0.66
1	5.950	5.951	0.02
2	4.600	4.589	-0.24
5	3.100	3.080	-0.65
10	2.220	2.221	0.05
20	1.600	1.591	-0.58
50	1.150	1.154	0.36