

Device Modeling Report

COMPONENTS:
DIODE/ SCHOOTKY RECTIFIER / STANDARD
PART NUMBER: 1SS348
MANUFACTURER: TOSHIBA

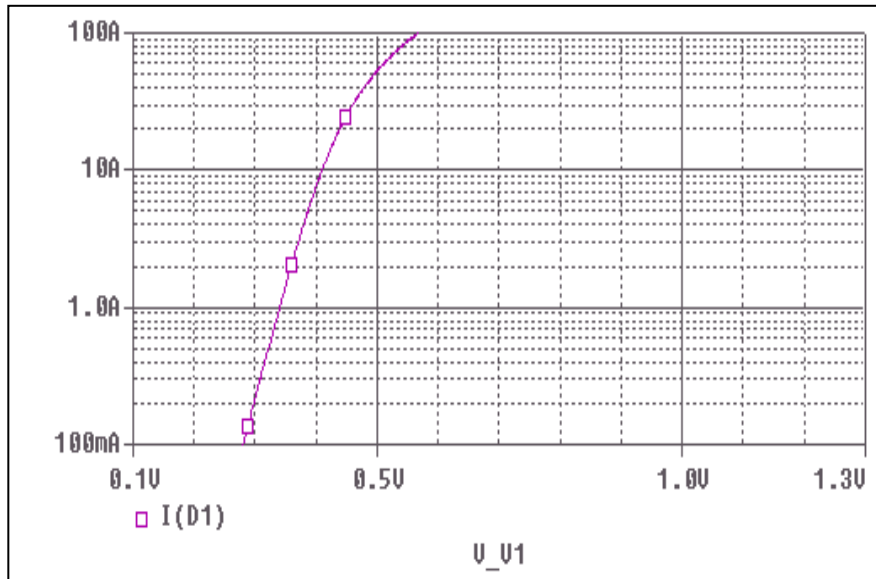


Bee Technologies Inc.

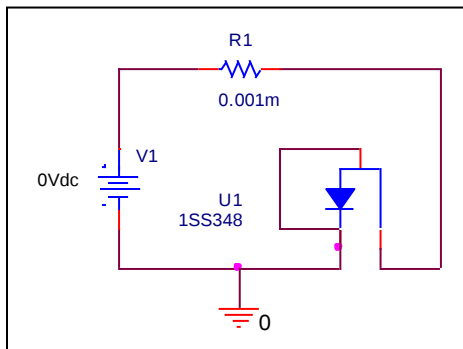
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

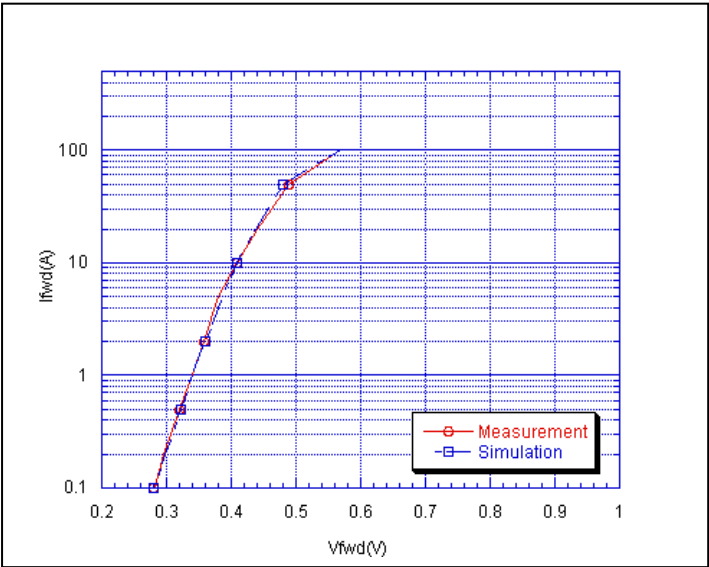


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

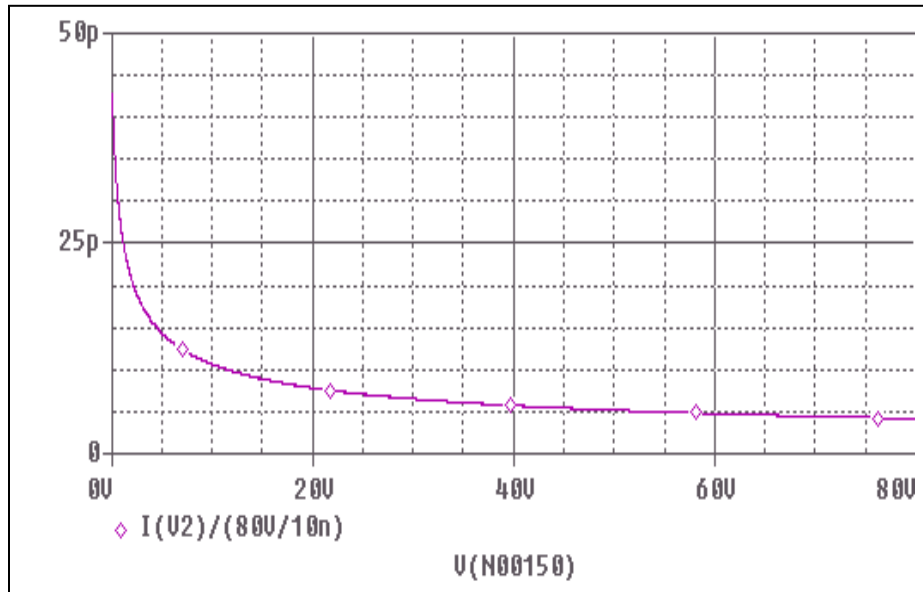


Simulation Result

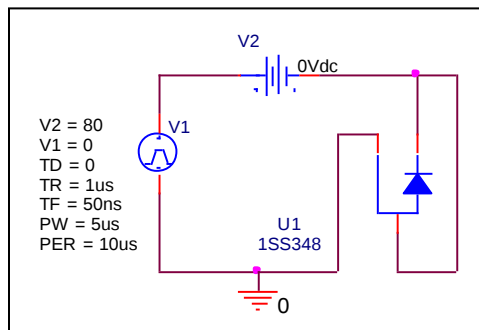
Ifwd(A)	Vfwd(V) Measurement	Vfwd(V) Simulation	%Error
0.1	0.280	0.280	-0.14
0.2	0.295	0.298	0.88
0.5	0.320	0.322	0.50
1	0.340	0.340	0.03
2	0.358	0.359	0.34
5	0.380	0.386	1.63
10	0.410	0.410	-0.10
20	0.440	0.439	-0.32
50	0.490	0.481	-1.94
100	0.570	0.569	-0.26

Junction Capacitance Characteristic

Circuit Simulation Result

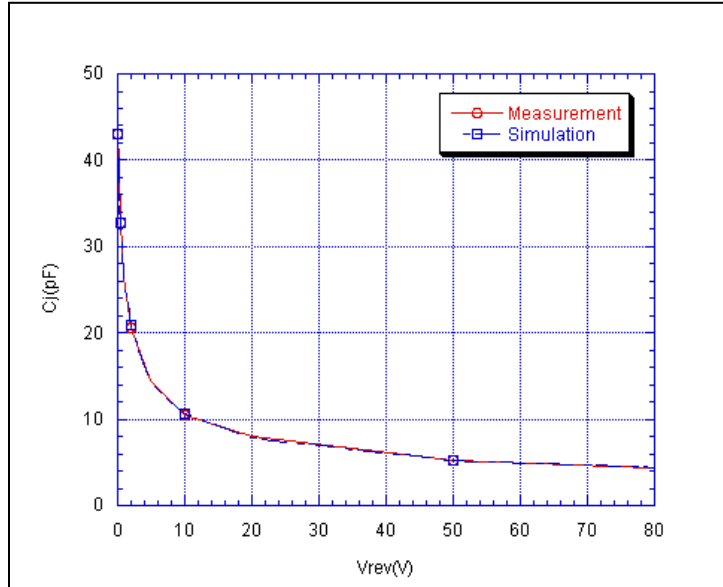


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

Vrev(V)	Cj(pF) Measurement	Cj(pF) Simulation	%Error
0.1	43.000	42.966	-0.08
0.2	39.500	39.475	-0.06
0.5	32.700	32.716	0.05
1	26.500	26.673	0.65
2	20.500	20.829	1.60
5	14.500	14.362	-0.95
10	10.500	10.646	1.39
20	8.000	7.841	-1.99
50	5.300	5.175	-2.36
80	4.200	4.190	-0.24