

Device Modeling Report

COMPONENTS:
DIODE/ SCHOTTKY RECTIFIER /STANDARD
PART NUMBER: JDH3D01S
MANUFACTURER: TOSHIBA

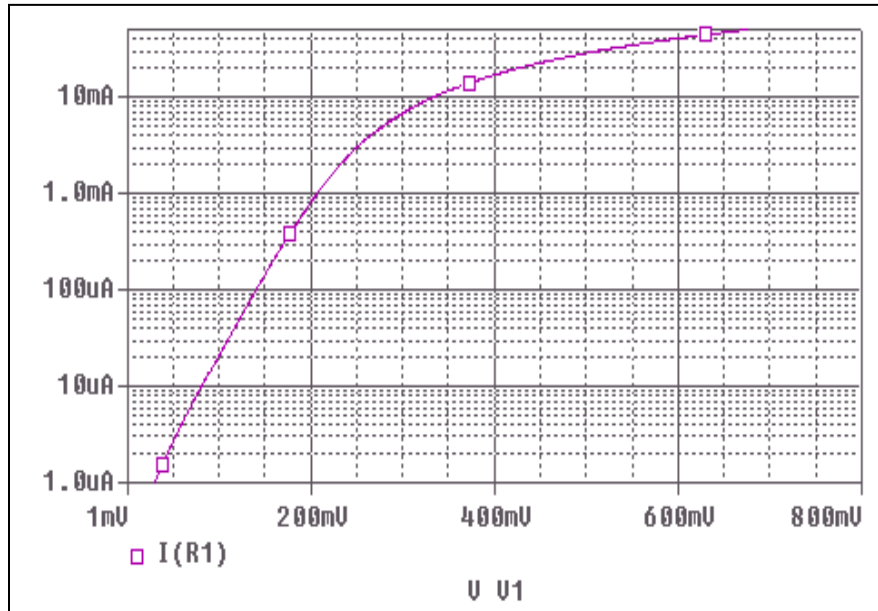


Bee Technologies Inc.

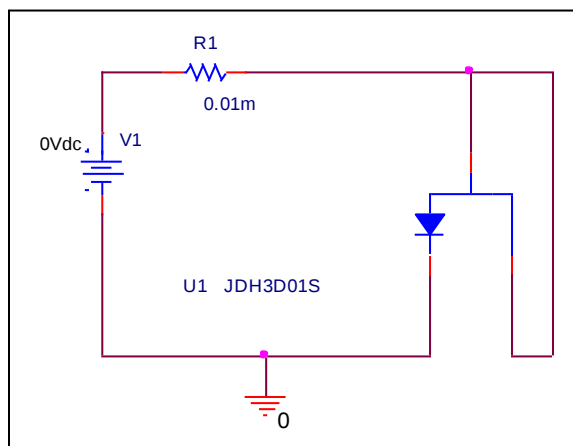
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

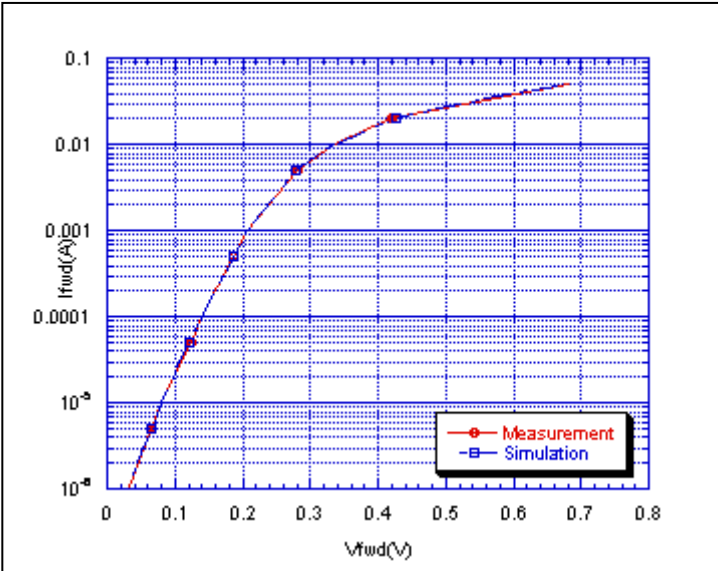


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

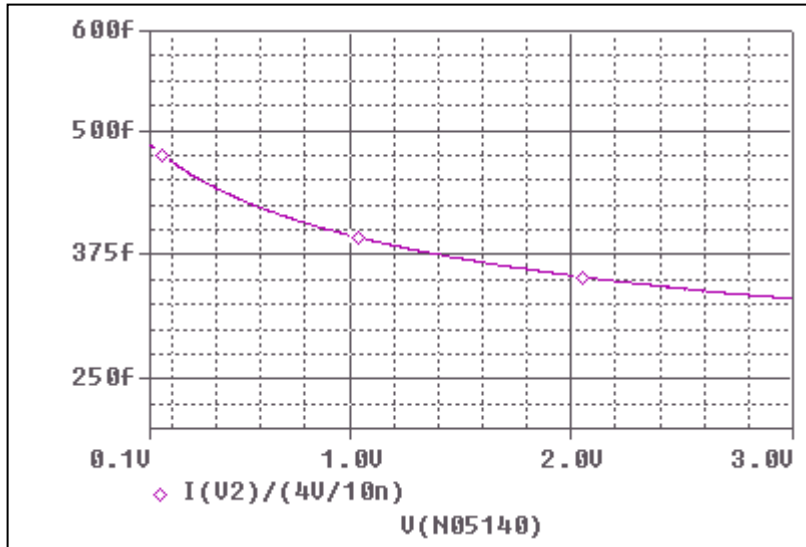


Simulation Result

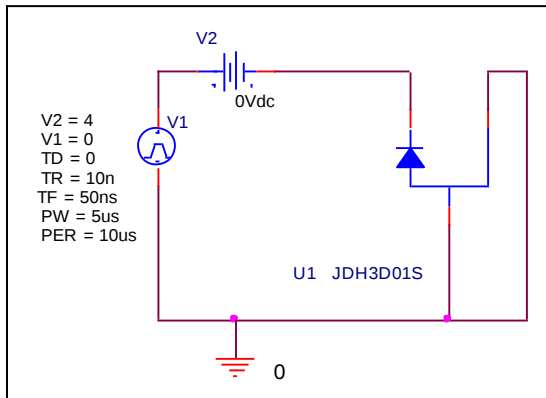
I_{fwd} (A)	V_{fwd} (V) Measurement	V_{fwd} (V) Simulation	%Error
0.000001	0.030	0.031	1.67
0.000005	0.065	0.065	-0.62
0.00001	0.080	0.082	1.88
0.00005	0.124	0.123	-1.21
0.0001	0.140	0.141	0.50
0.0005	0.188	0.185	-1.44
0.001	0.207	0.207	-0.05
0.005	0.280	0.279	-0.25
0.01	0.335	0.334	-0.21
0.02	0.420	0.428	1.79
0.05	0.68	0.68	-0.41

Junction Capacitance Characteristic

Circuit Simulation Result

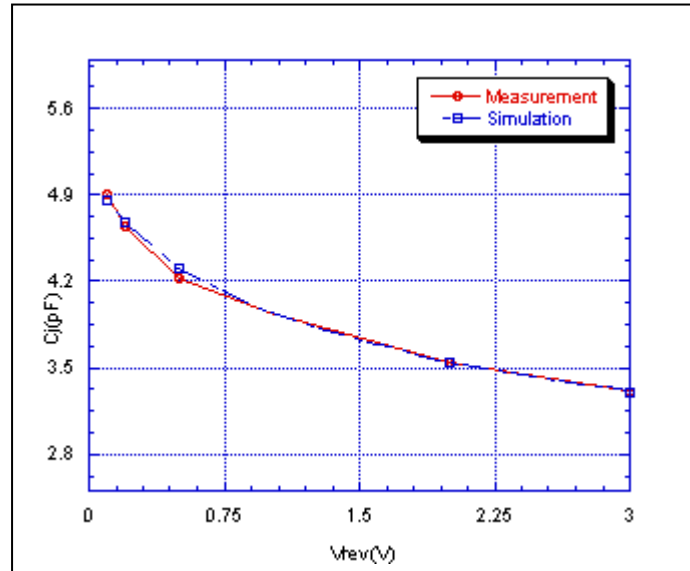


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

V_{rev} (V)	C_j (pF) Measurement	C_j (pF) Simulation	%Error
0.1	4.900	4.856	-0.90
0.2	4.650	4.682	0.69
0.5	4.230	4.310	1.89
1	3.950	3.946	-0.10
2	3.550	3.542	-0.23
3	3.300	3.304	0.12