Device Modeling Report

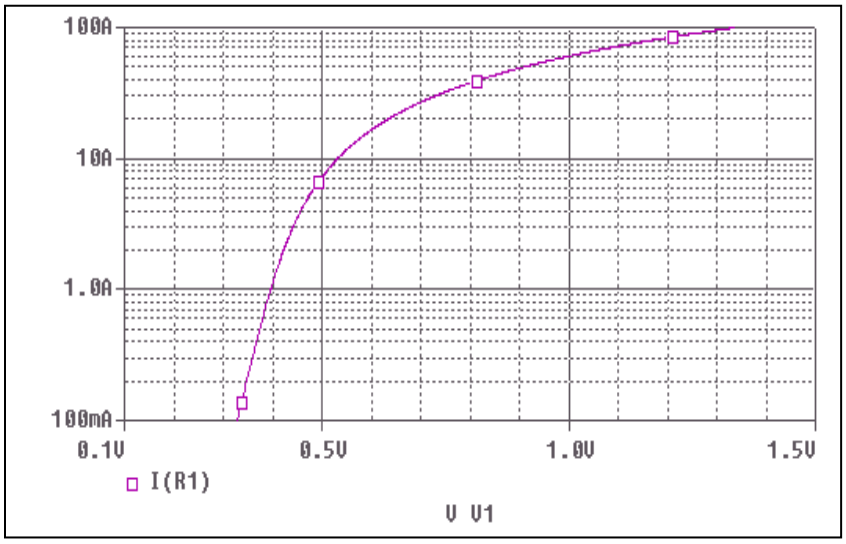
COMPONENTS:
DIODE/ SCHOOTTKY RECTIFIER / STANDARD
PART NUMBER: U10FWJ2C48M
MANUFACTURER: TOSHIBA

Bee Technologies Inc.

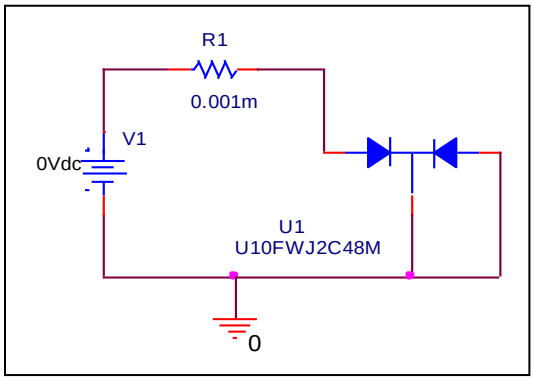
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

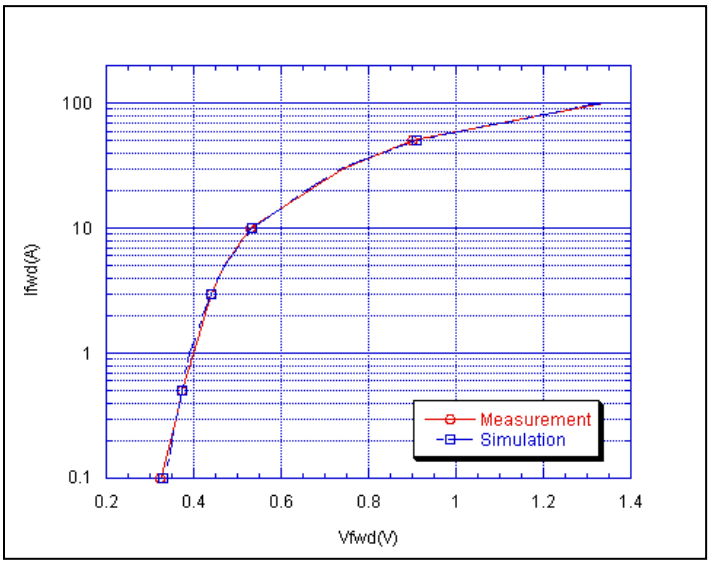


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

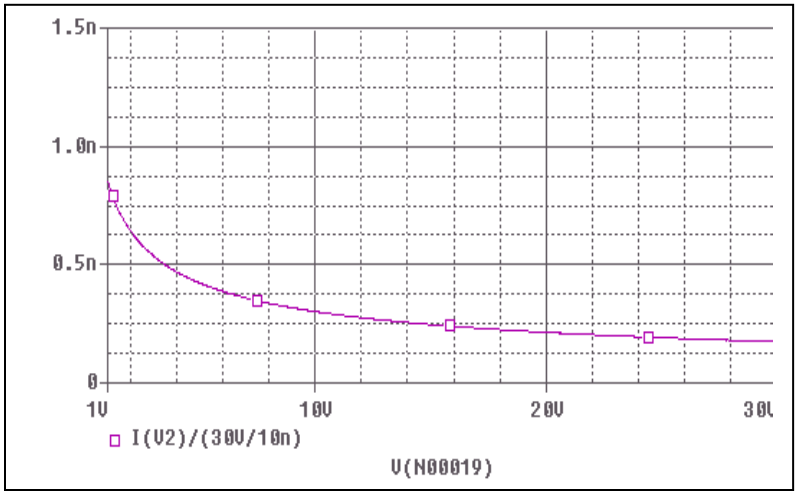


Simulation Result

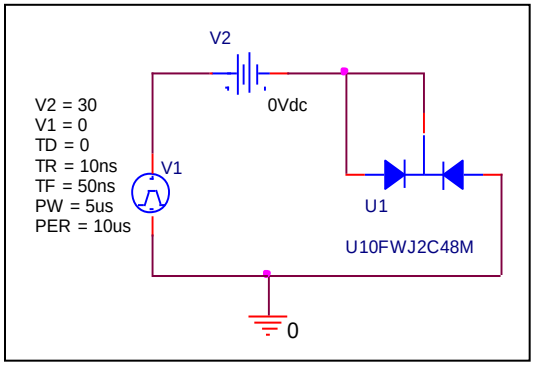
Ifwd(A)	Vfwd(V) Measurement	Vfwd(V) Simulation	%Error
0.1	0.325	0.329	1.20
0.3	0.360	0.359	-0.31
0.5	0.375	0.374	-0.29
1	0.400	0.392	-2.13
3	0.440	0.442	0.34
5	0.470	0.472	0.34
10	0.530	0.533	0.51
30	0.740	0.735	-0.66
50	0.900	0.909	1.03
100	1.340	1.340	-0.04

Junction Capacitance Characteristic

Circuit Simulation Result

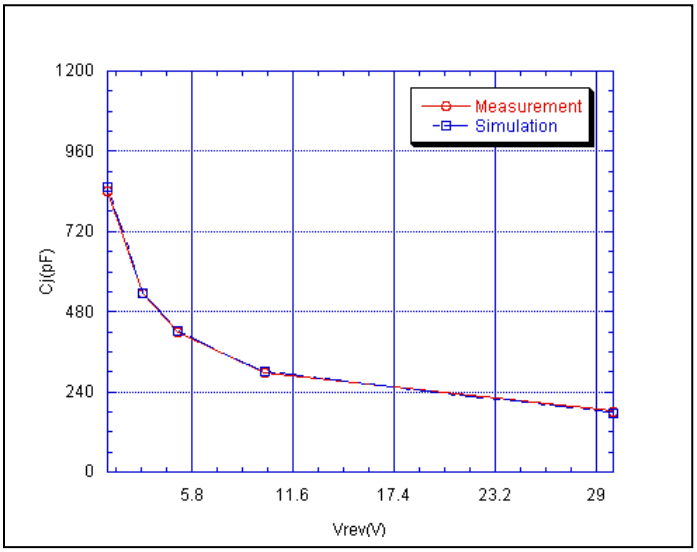


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

Vrev(V)	Cj(pF) Measurement	Cj(pF) Simulation	%Error
1	840.00	852.00	1.43
3	535.00	535.49	0.09
5	420.00	421.66	0.39
10	298.00	301.65	1.22
30	178.00	175.28	-1.53