

Device Modeling Report

COMPONENTS:

DIODE/ SCHOTTKY RECTIFIER / STANDARD

PART NUMBER: 30GWJ2CZ47C

MANUFACTURER: TOSHIBA

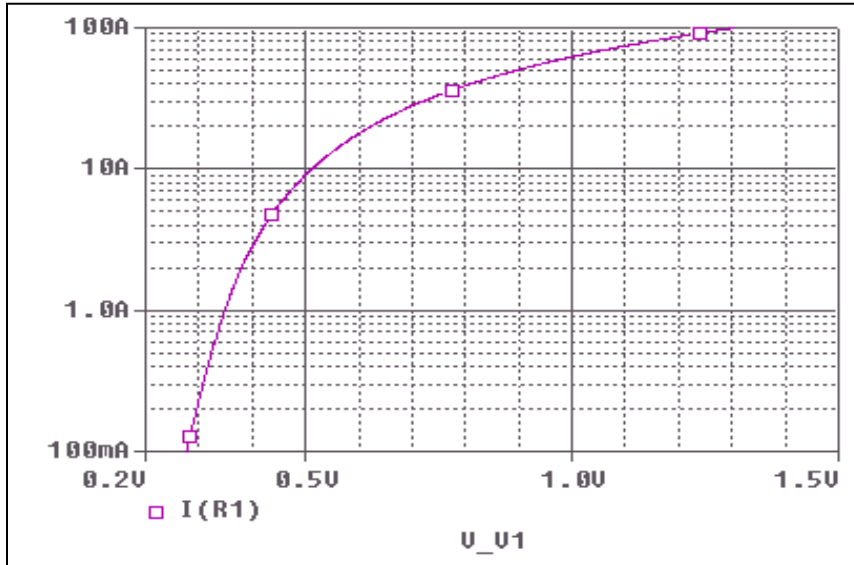


Bee Technologies Inc.

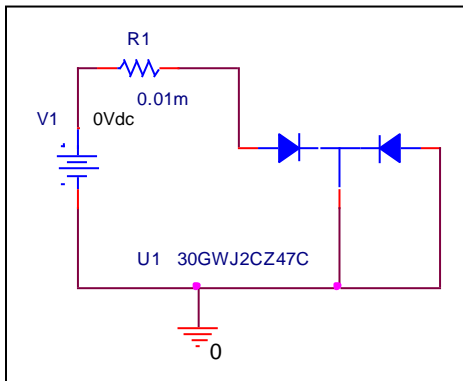
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

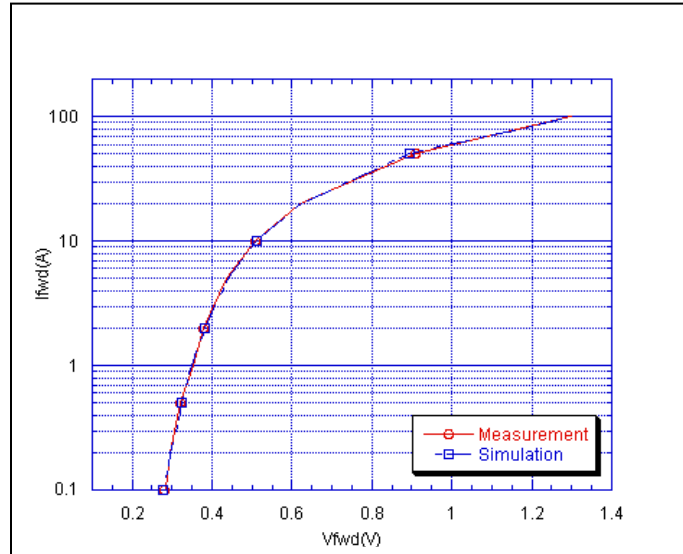


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

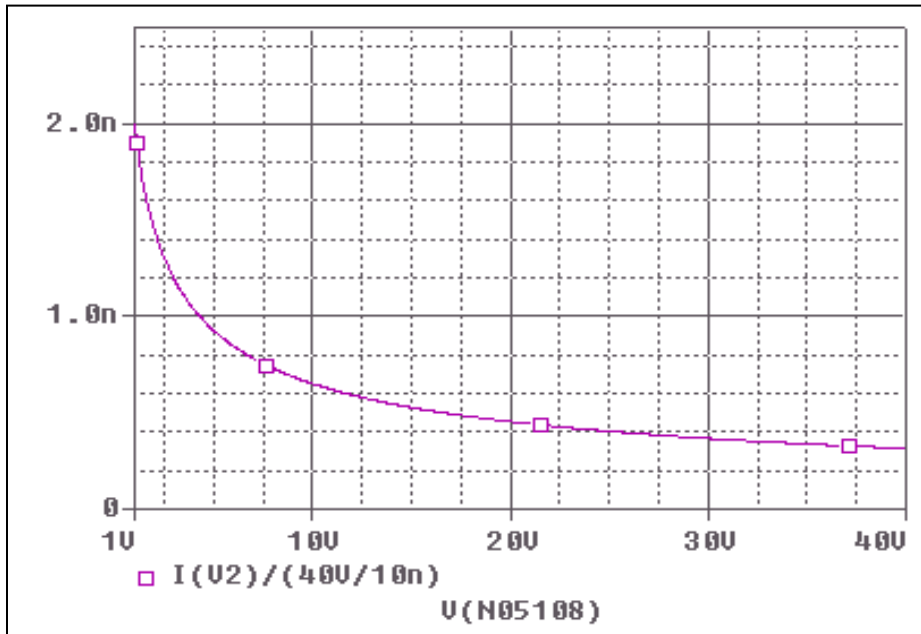


Simulation Result

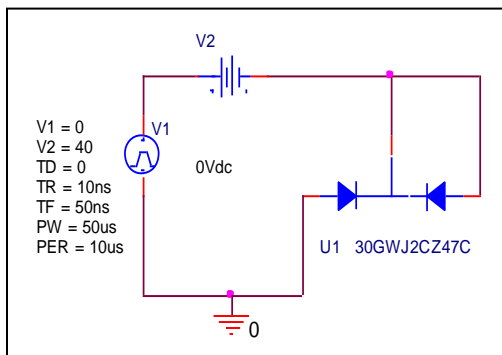
Ifwd(A)	Vfwd(V) Measurement	Vfwd(V) Simulation	%Error
0.1	0.280	0.277	-1.11
0.2	0.295	0.296	0.31
0.5	0.320	0.324	1.19
1	0.352	0.350	-0.65
2	0.380	0.380	0.03
5	0.435	0.441	1.38
10	0.510	0.512	0.39
20	0.620	0.622	0.39
50	0.910	0.896	-1.58
100	1.300	1.308	0.64

Junction Capacitance Characteristic

Circuit Simulation Result

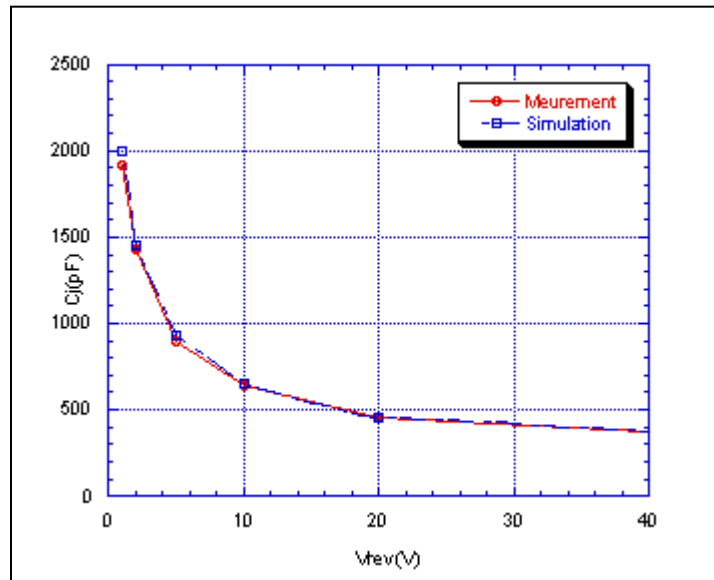


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

Vrev(V)	Cj(pF) Measurement	Cj(pF) Simulation	%Error
1	1920.00	1995.00	3.91
2	1430.00	1450.00	1.40
5	900.00	926.60	2.96
10	645.00	650.60	0.87
20	450.00	453.90	0.87
40	310.00	316.80	2.19