

Device Modeling Report

COMPONENTS:

DIODE/ SCHOTTKY RECTIFIER / STANDARD

PART NUMBER: U10GWJ2C48C

MANUFACTURER: TOSHIBA

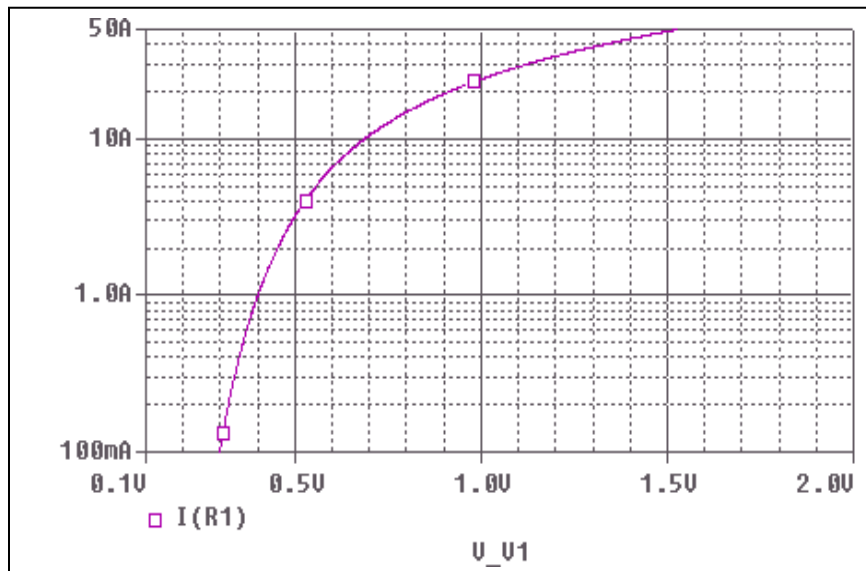


Bee Technologies Inc.

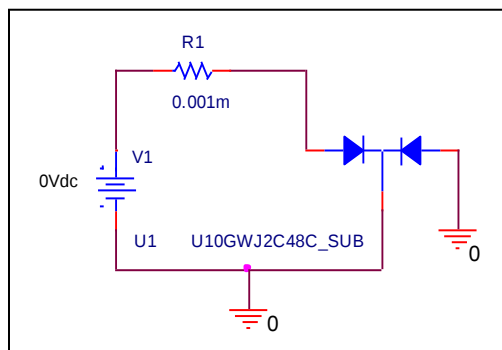
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

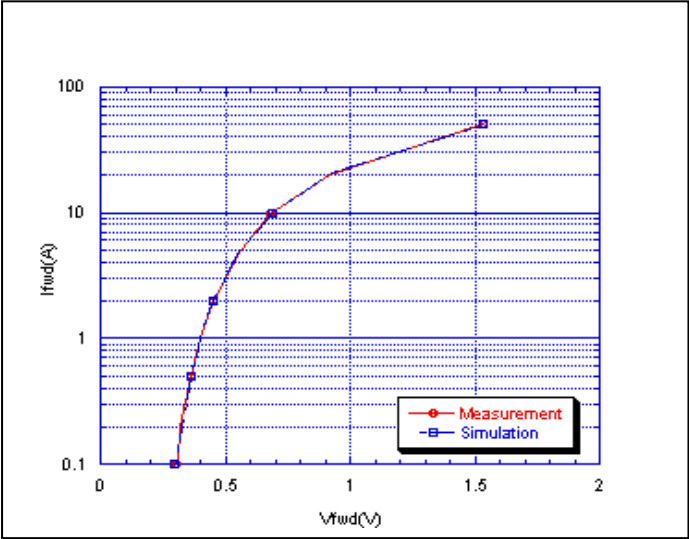


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

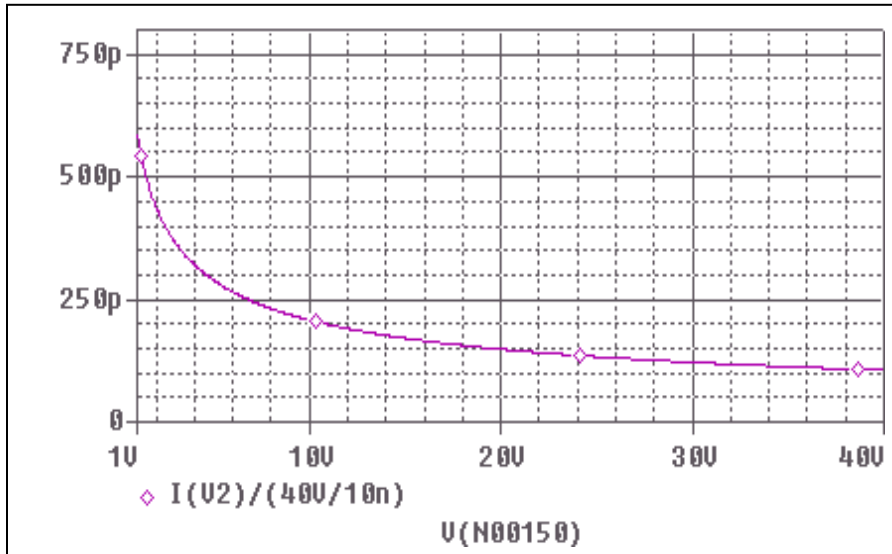


Simulation Result

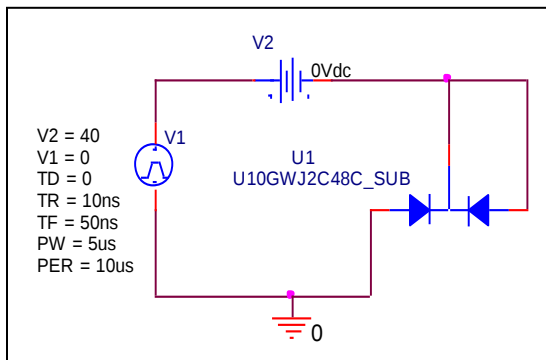
Ifwd(A)	Vfwd(V) Measurement	Vfwd(V) Simulation	%Error
0.1	0.300	0.298	-0.67
0.2	0.320	0.324	1.16
0.5	0.360	0.360	0.11
1	0.400	0.402	0.50
2	0.455	0.454	-0.33
5	0.560	0.558	-0.43
10	0.680	0.689	1.31
20	0.920	0.914	-0.67
50	1.530	1.531	0.07

Junction Capacitance Characteristic

Circuit Simulation Result

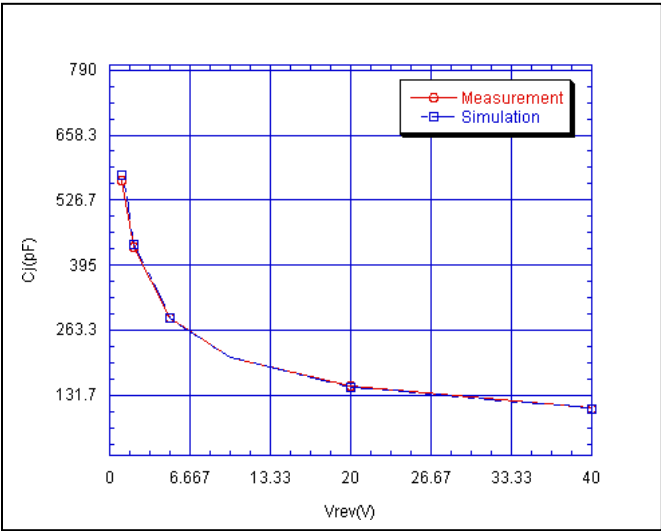


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

Vrev(V)	Cj(pF) Measurement	Cj(pF) Simulation	%Error
1	565.00	577.00	2.12
2	430.00	435.70	1.33
5	288.00	288.20	0.07
10	208.00	207.83	-0.08
20	150.00	148.30	-1.13
40	103.00	105.00	1.94