

Device Modeling Report

COMPONENTS:
DIODE/ SCHOTTKY RECTIFIER /STANDARD
PART NUMBER: 30GWJ2C42C
MANUFACTURER: TOSHIBA

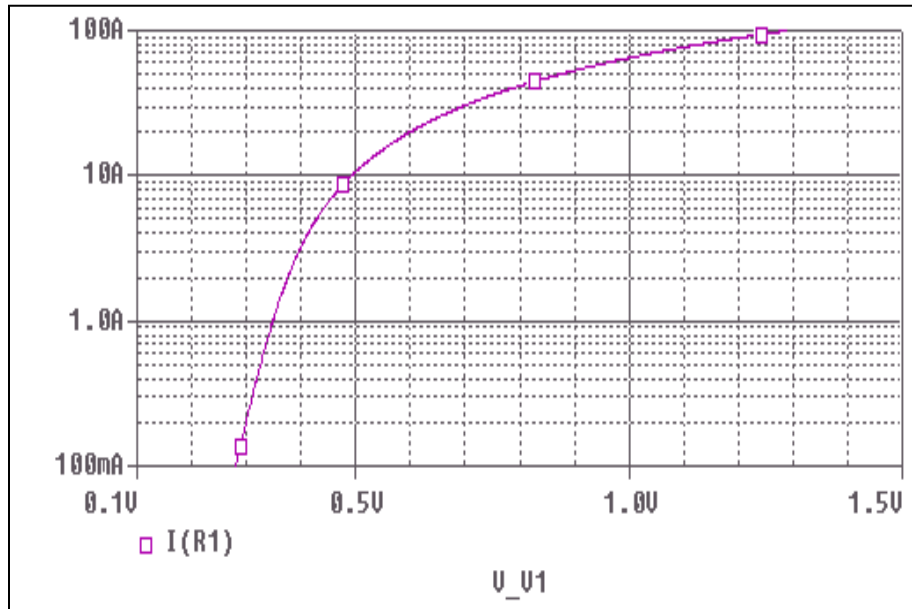


Bee Technologies Inc.

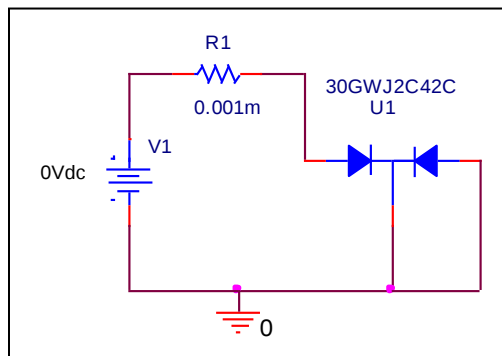
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

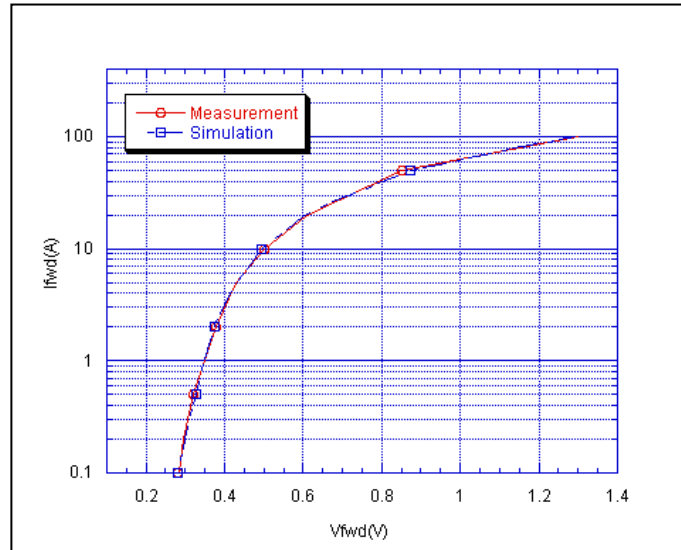


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

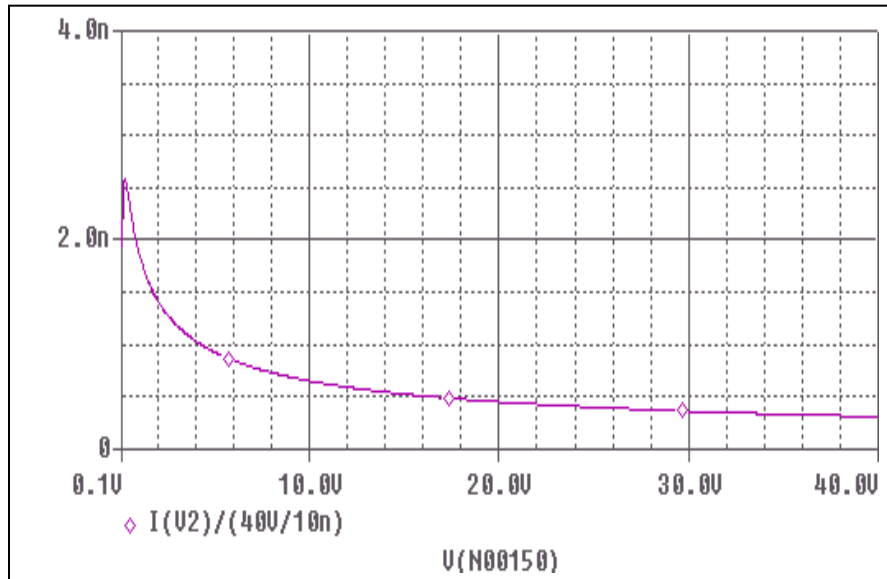


Simulation Result

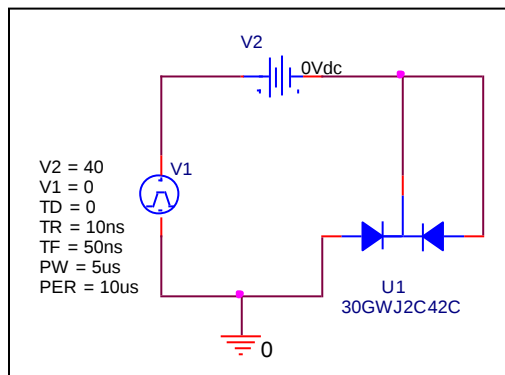
Ifwd(A)	Vfwd(V) Measurement	Vfwd(V) Simulation	%Error
0.1	0.280	0.280	0.11
0.2	0.295	0.299	1.46
0.5	0.320	0.326	1.84
1	0.350	0.348	-0.46
2	0.380	0.376	-1.11
5	0.429	0.428	-0.26
10	0.500	0.492	-1.52
20	0.610	0.601	-1.46
50	0.850	0.874	2.86
100	1.300	1.292	-0.61

Junction Capacitance Characteristic

Circuit Simulation Result

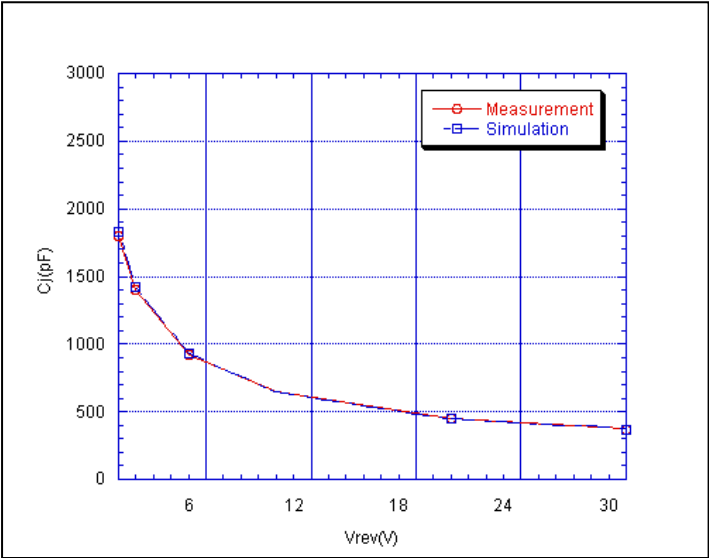


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

Vrev(V)	Cj(pF) Measurement	Cj(pF) Simulation	%Error
1	1800.00	1833.10	1.84
2	1400.00	1420.00	1.43
5	920.00	928.27	0.90
10	650.00	652.95	0.45
20	450.00	452.85	0.63
30	370.00	363.91	-1.65