

Device Modeling Report

COMPONENTS:

DIODE/ SCHOOTKY RECTIFIER / STANDARD

PART NUMBER: 20FWJ2C48M

MANUFACTURER: TOSHIBA

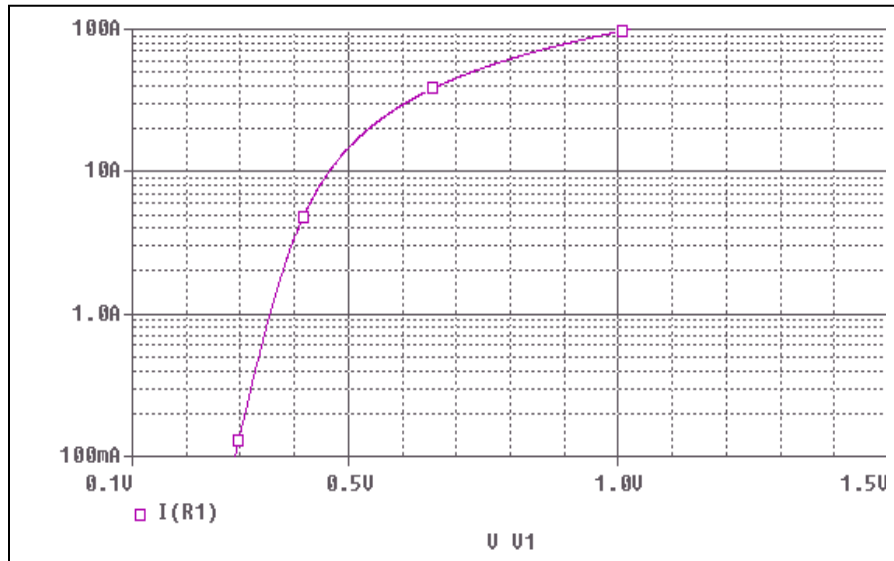


Bee Technologies Inc.

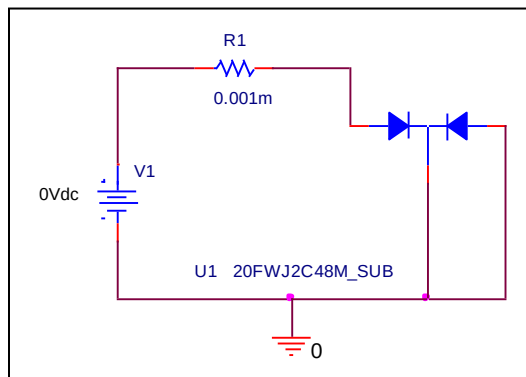
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

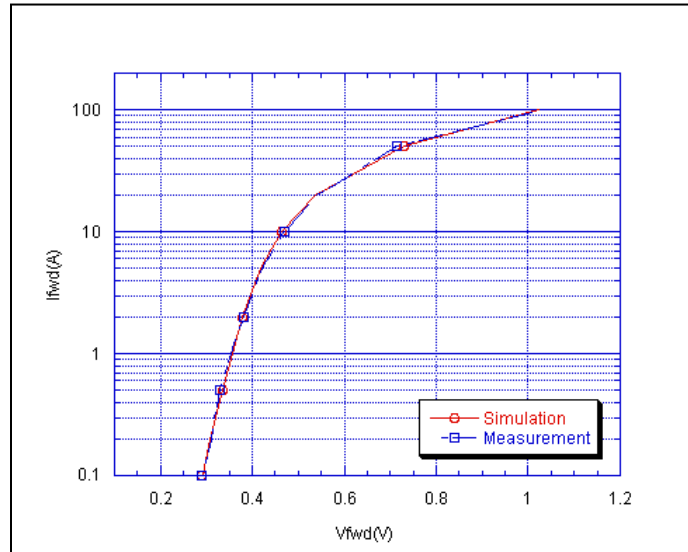


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

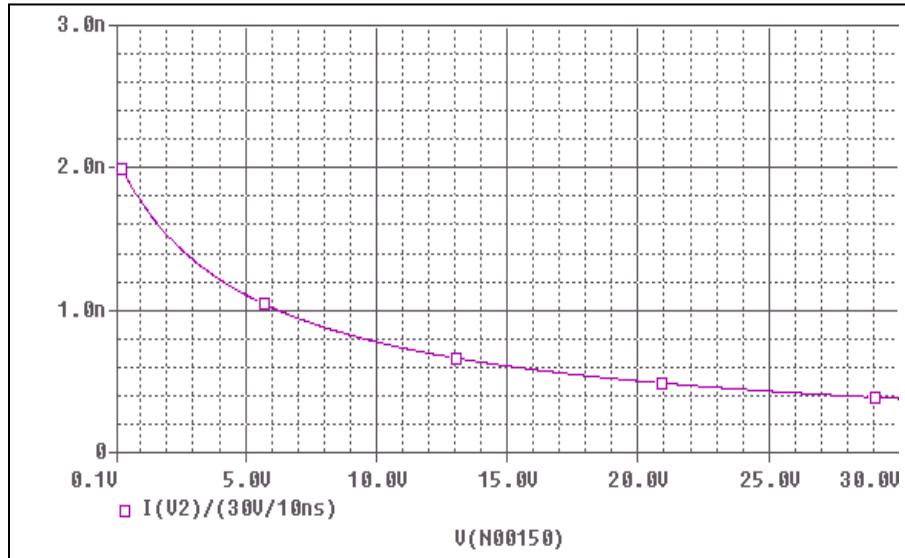


Simulation Result

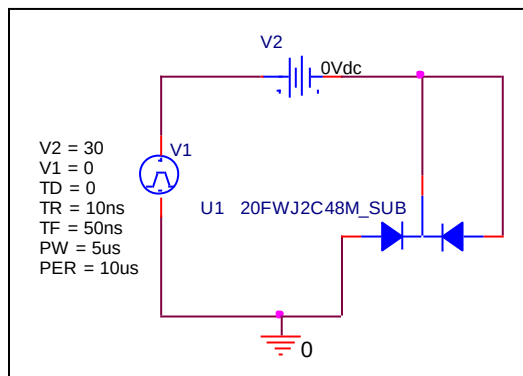
Ifwd(A)	Vfwd(V) Measurement	Vfwd(V) Simulation	%Error
0.1	0.290	0.290	0.07
0.2	0.310	0.309	-0.42
0.5	0.330	0.334	1.24
1	0.355	0.356	0.28
2	0.380	0.378	-0.45
5	0.420	0.419	-0.14
10	0.470	0.463	-1.55
20	0.540	0.538	-0.46
50	0.715	0.728	1.87
100	1.030	1.024	-0.58

Junction Capacitance Characteristic

Circuit Simulation Result

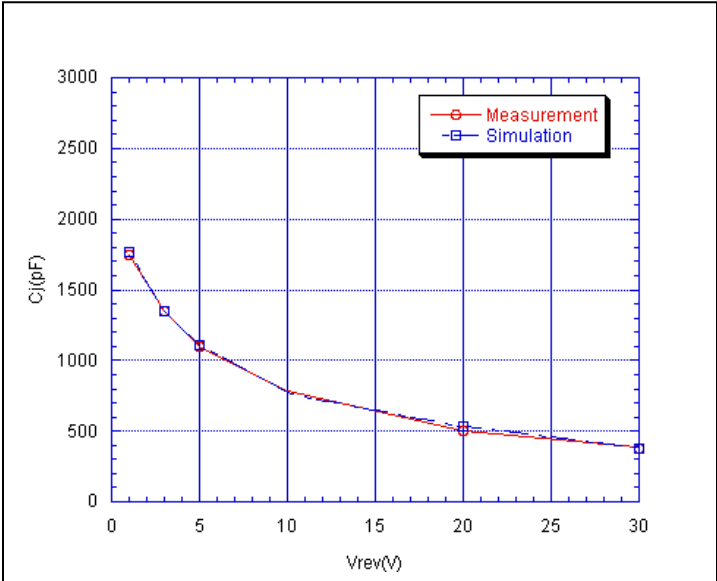


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

Vrev(V)	Cj(pF) Measurement	Cj(pF) Simulation	%Error
1	1750.00	1764.00	0.80
3	1350.00	1353.00	0.22
5	1100.00	1106.00	0.55
10	780.00	777.80	-0.28
20	500.00	530.20	6.04
30	380.00	380.90	0.24