

Device Modeling Report

COMPONENTS:
DIODE/ SCHOTTKY RECTIFIER /STANDARD
PART NUMBER: U5FWJ2C48M
MANUFACTURER: TOSHIBA

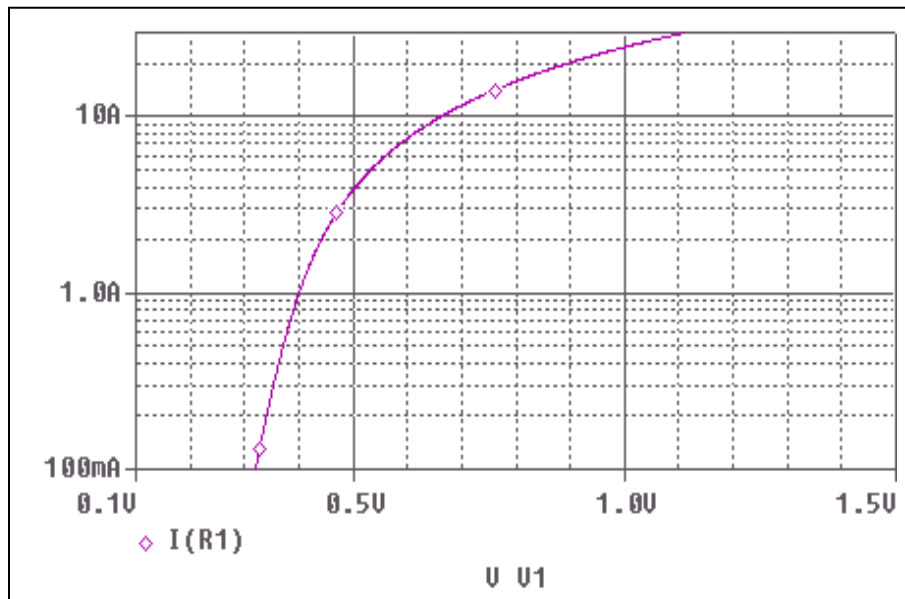


Bee Technologies Inc.

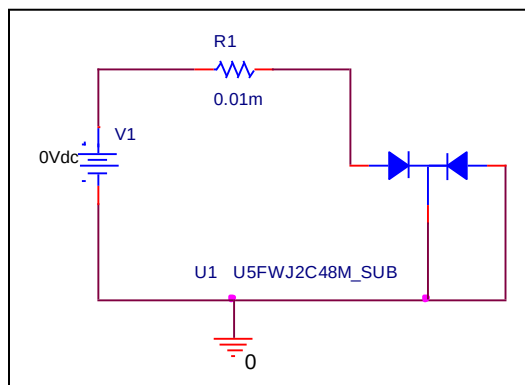
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

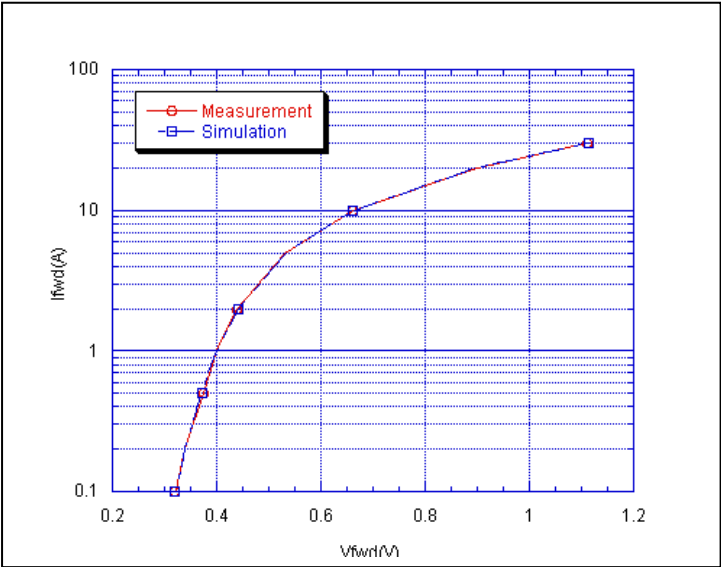


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

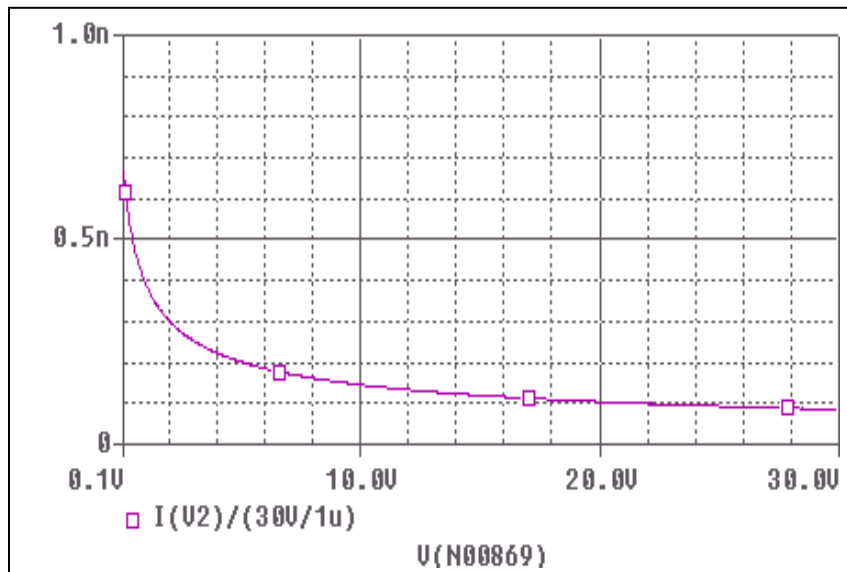


Simulation Result

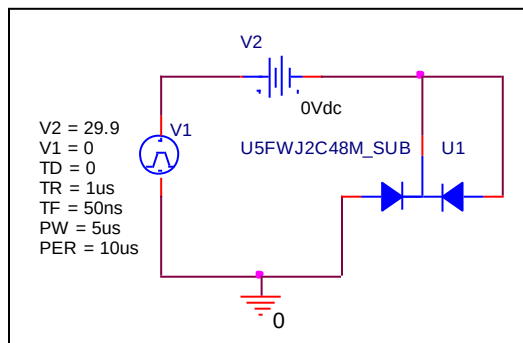
Ifwd(A)	Vfwd(V) Measurement	Vfwd(V) Simulation	%Error
0.1	0.320	0.320	0.09
0.2	0.340	0.340	0.12
0.5	0.375	0.371	-1.04
1	0.400	0.400	0.10
2	0.440	0.442	0.34
5	0.530	0.533	0.55
10	0.660	0.662	0.36
20	0.900	0.894	-0.68
30	1.110	1.115	0.45

Junction Capacitance Characteristic

Circuit Simulation Result

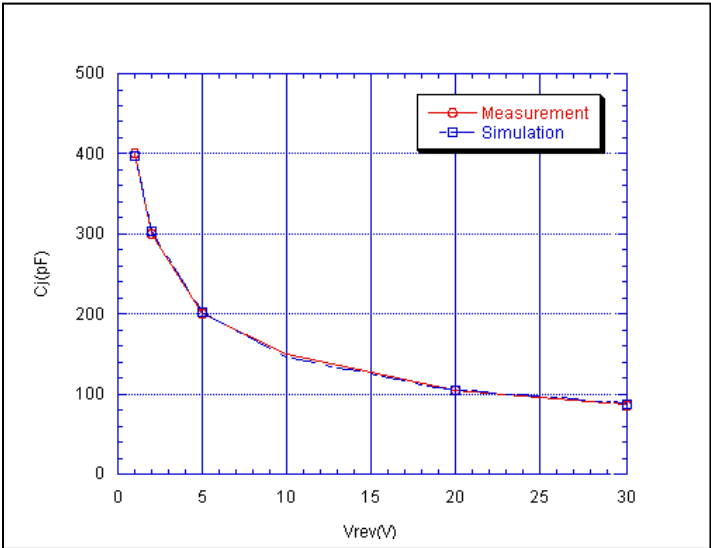


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

Vrev(V)	Cj(pF) Measurement	Cj(pF) Simulation	%Error
1	400.00	397.71	-0.57
2	300.00	303.39	1.13
5	200.00	202.53	1.26
10	150.00	146.00	-2.66
20	105.00	104.39	-0.58
30	85.00	87.00	2.35