

Device Modeling Report

COMPONENTS:

DIODE/ SCHOOTKY RECTIFIER /STANDARD

PART NUMBER: U30FWJ2C48M

MANUFACTURER: TOSHIBA

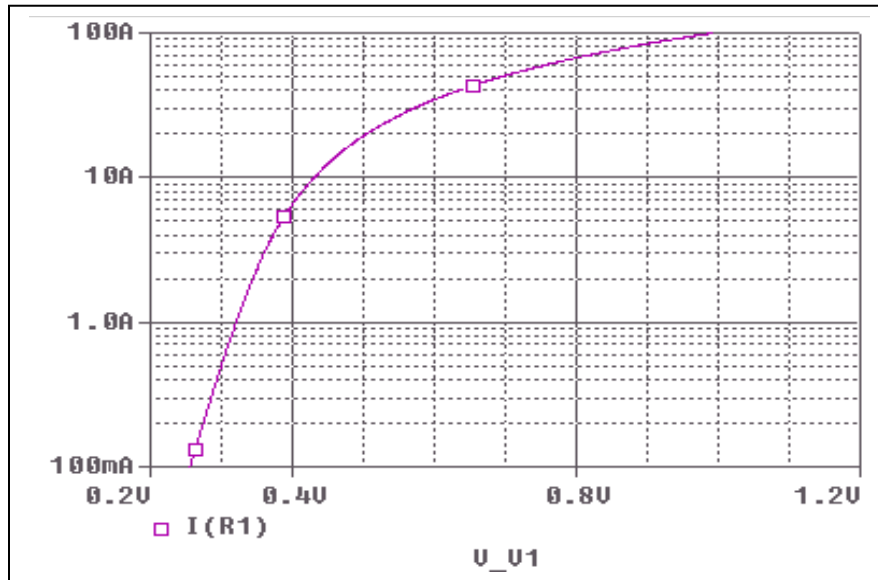


Bee Technologies Inc.

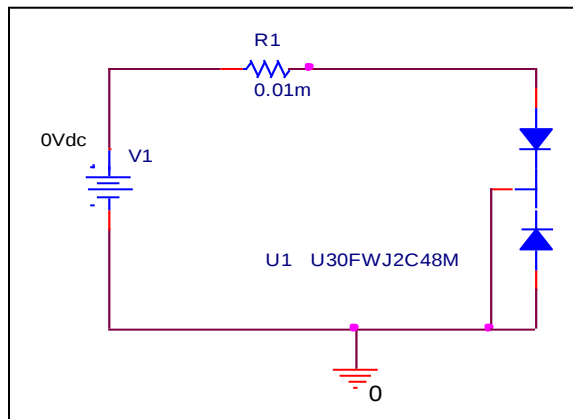
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

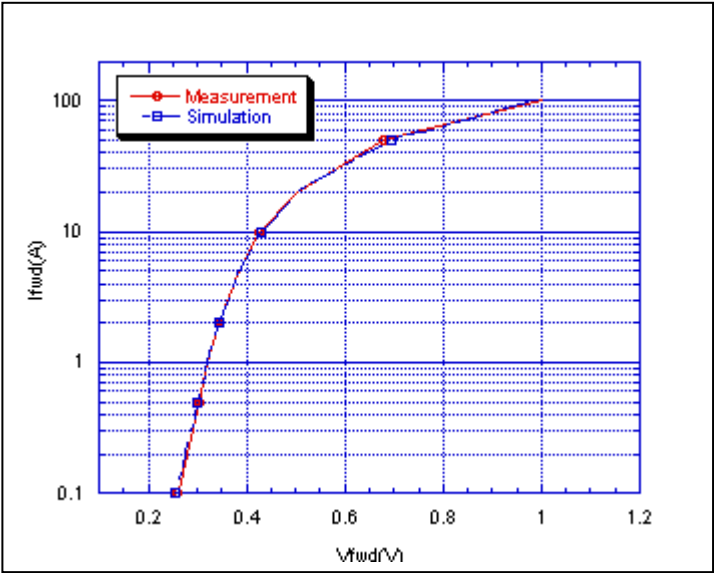


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

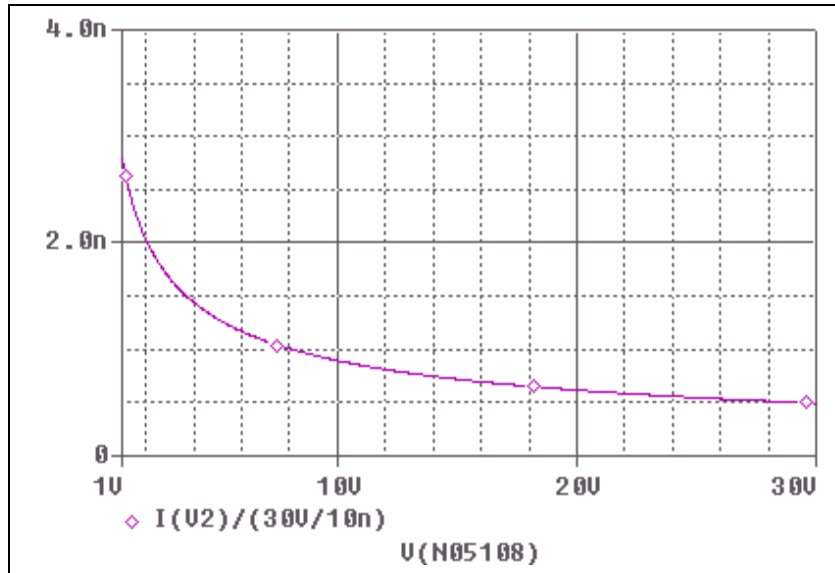


Simulation Result

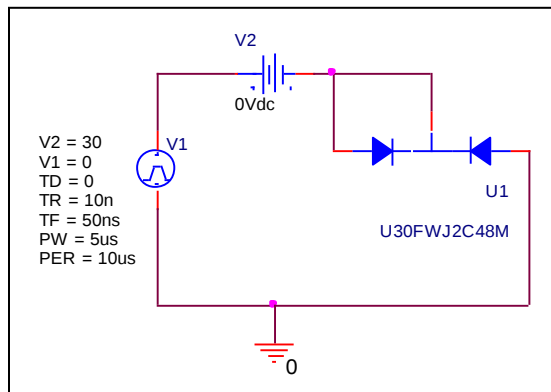
Ifwd(A)	Vfwd(V) Measurement	Vfwd(V) Simulation	%Error
0.1	0.260	0.256	-1.58
0.2	0.278	0.274	-1.29
0.5	0.303	0.300	-1.06
1	0.320	0.321	0.16
2	0.345	0.344	-0.29
5	0.385	0.385	0.03
10	0.425	0.431	1.29
20	0.505	0.504	-0.16
50	0.680	0.696	2.29
100	1.000	0.993	-0.69

Junction Capacitance Characteristic

Circuit Simulation Result

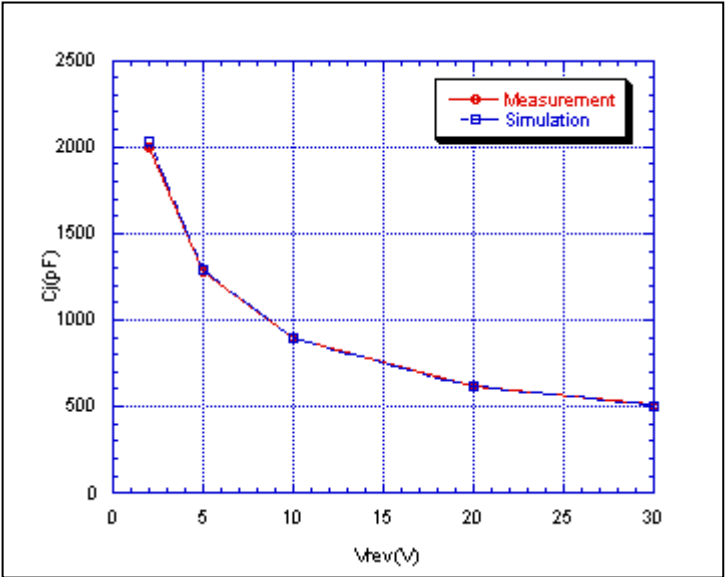


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

Vrev(V)	Cj(pF) Measurement	Cj(pF) Simulation	%Error
2	2000.00	2029.90	1.50
5	1280.00	1285.50	0.43
10	890.00	894.50	0.51
20	612.00	617.70	0.93
30	505.00	498.40	-1.31