

Device Modeling Report

COMPONENTS:
DIODE/ SCHOOTKY RECTIFIER /STANDARD
PART NUMBER: U1FWJ44N
MANUFACTURER: TOSHIBA

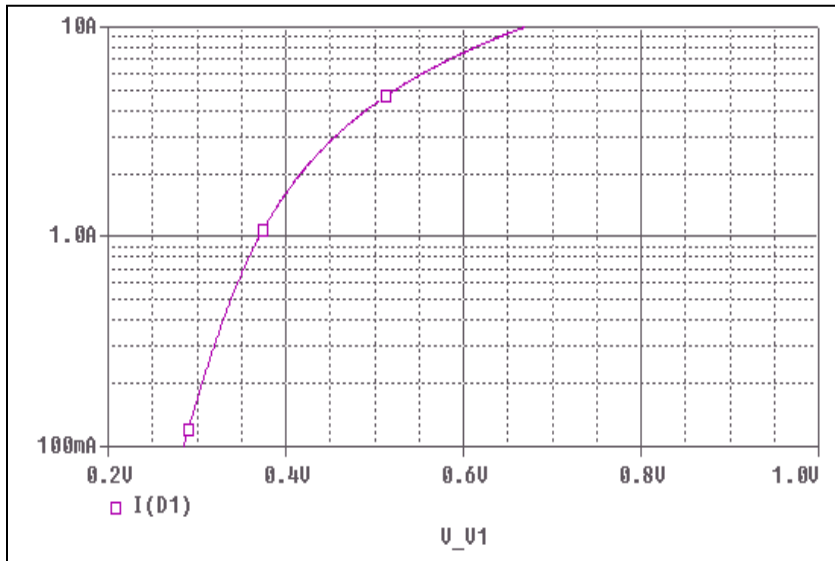


Bee Technologies Inc.

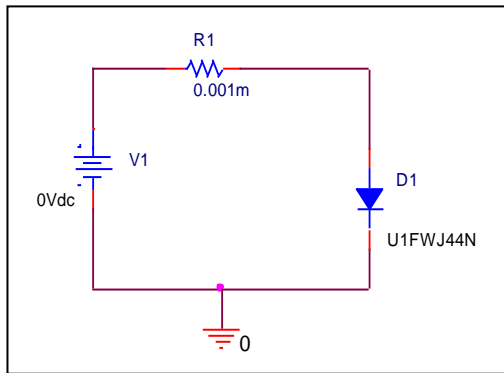
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

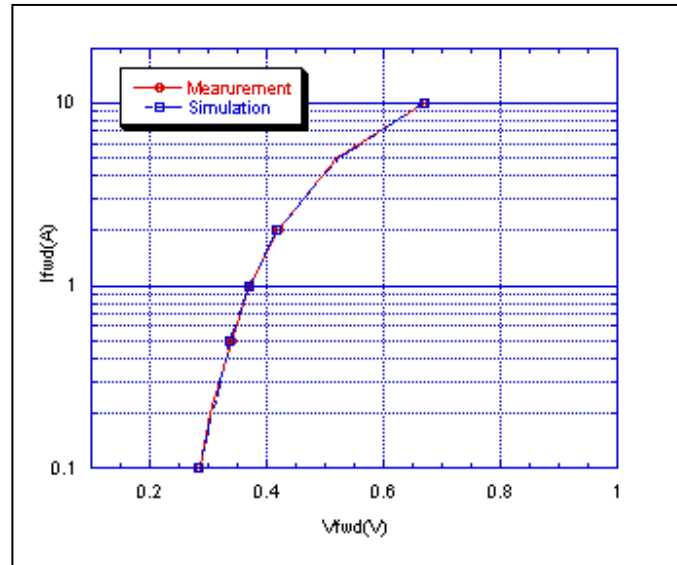


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

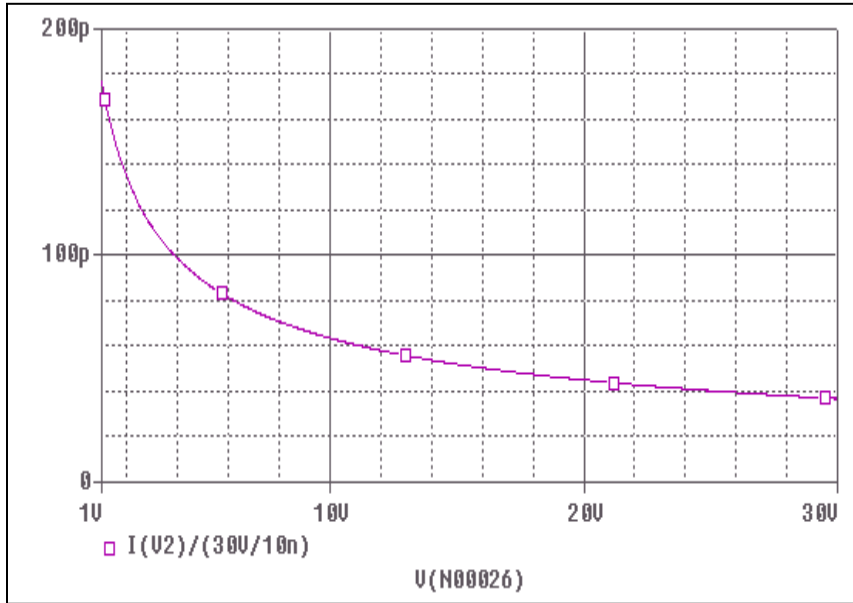


Simulation Result

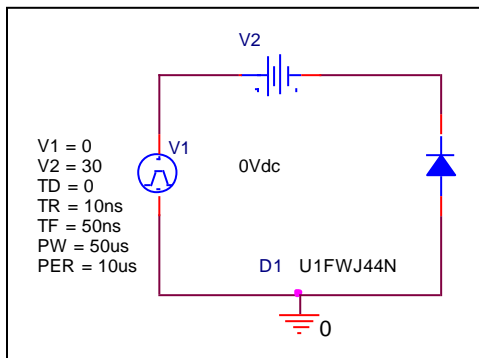
Ifwd(A)	Vfwd(V) Measurement	Vfwd(V) Simulation	%Error
0.1	0.285	0.285	-0.14
0.2	0.302	0.305	1.13
0.5	0.340	0.338	-0.62
1	0.370	0.370	0.05
2	0.420	0.417	-0.71
5	0.520	0.523	0.52
10	0.670	0.669	-0.12

Junction Capacitance Characteristic

Circuit Simulation Result

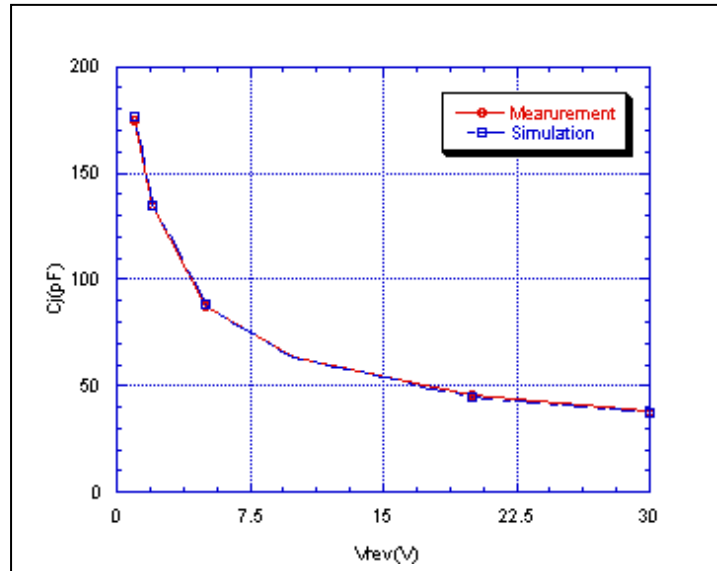


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

Vrev(V)	Cj(pF) Measurement	Cj(pF) Simulation	%Error
1	175.00	176.90	1.09
2	135.00	134.30	-0.52
5	87.50	88.80	1.49
10	63.00	63.50	0.79
20	45.50	45.00	-1.10
30	37.50	37.10	-1.07