

Device Modeling Report

COMPONENTS:
DIODE/ SCHOTTKY RECTIFIER /STANDARD
PART NUMBER: TPCF8E02
MANUFACTURER: TOSHIBA

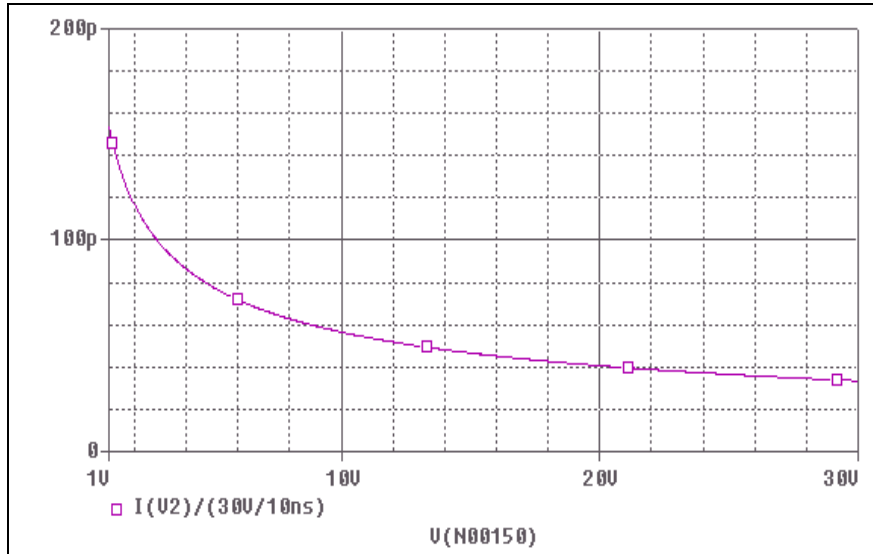


Bee Technologies Inc.

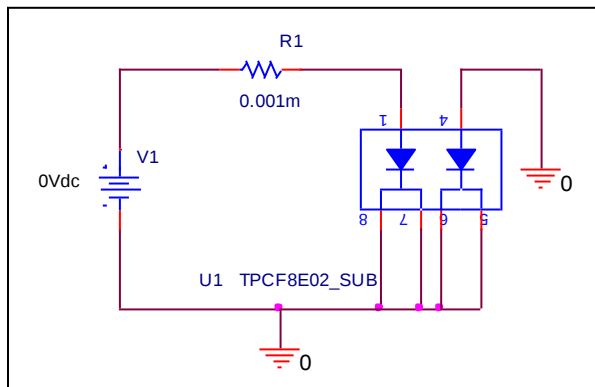
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

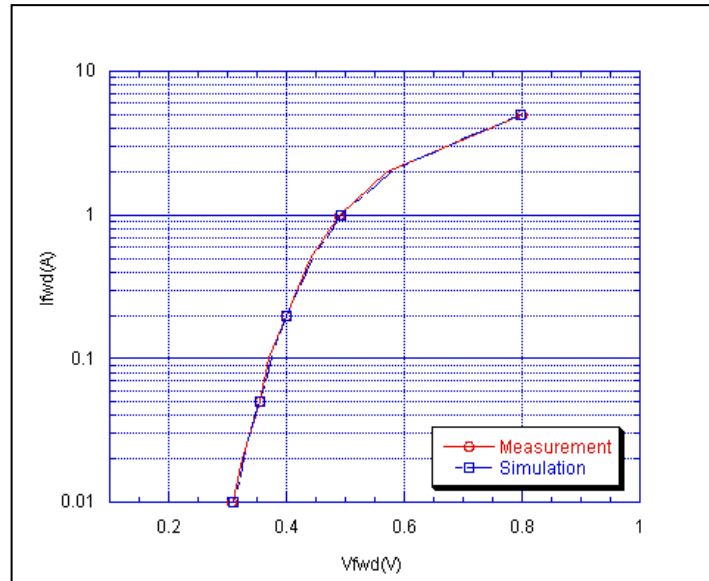


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

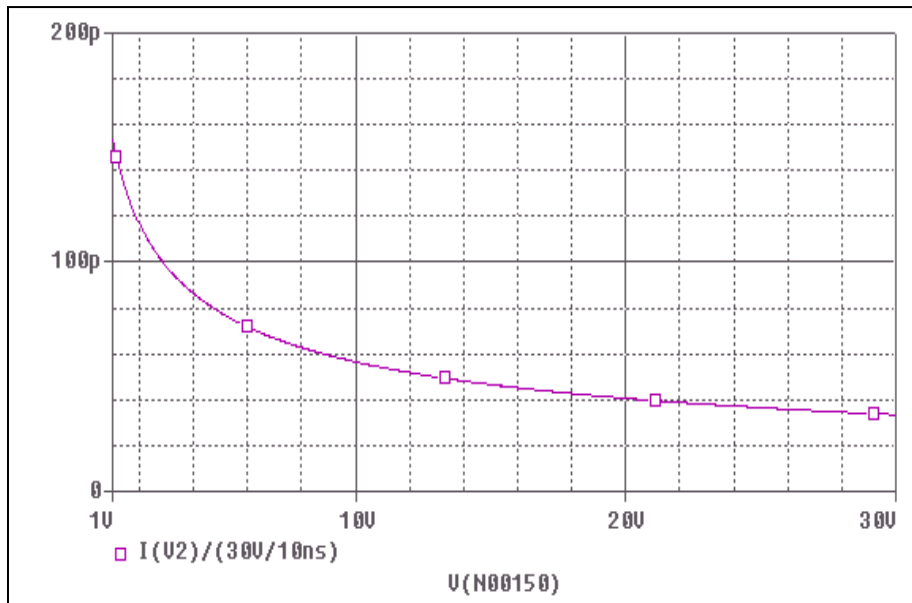


Simulation Result

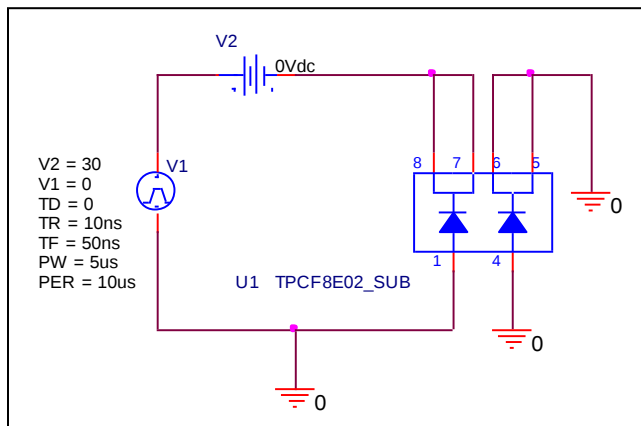
Ifwd(A)	Vfwd(V) Measurement	Vfwd(V) Simulation	%Error
0.01	0.308	0.309	0.32
0.02	0.325	0.328	0.92
0.05	0.355	0.354	-0.28
0.1	0.370	0.375	1.43
0.2	0.399	0.400	0.20
0.5	0.440	0.443	0.70
1	0.490	0.494	0.76
2	0.570	0.577	1.25
5	0.800	0.797	-0.38

Junction Capacitance Characteristic

Circuit Simulation Result

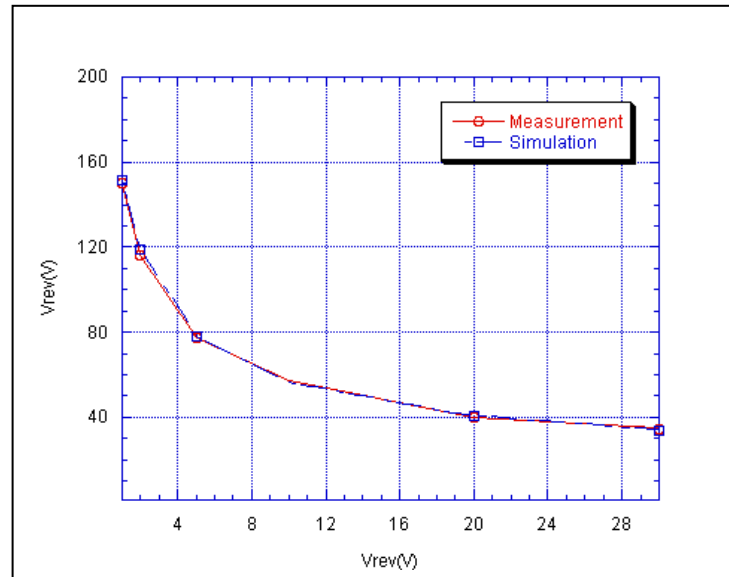


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

Vrev(V)	Cj(pF) Measurement	Cj(pF) Simulation	%Error
1	150.00	151.30	0.87
2	116.00	118.60	2.24
5	77.00	77.70	0.91
10	57.00	56.50	-0.88
20	40.00	40.60	1.50
30	34.00	33.40	-1.76