

Device Modeling Report

COMPONENTS:

DIODE/ SCHOOTKY RECTIFIER /STANDARD

PART NUMBER: U2GWJ44

MANUFACTURER: TOSHIBA

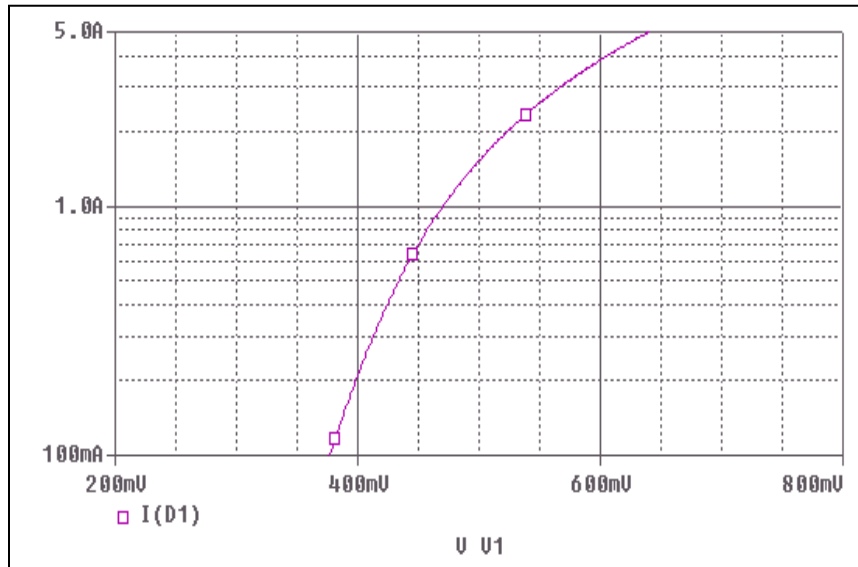


Bee Technologies Inc.

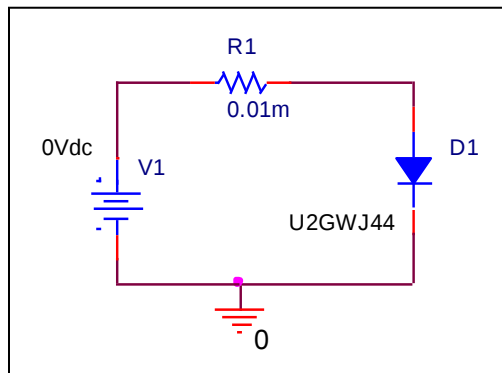
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

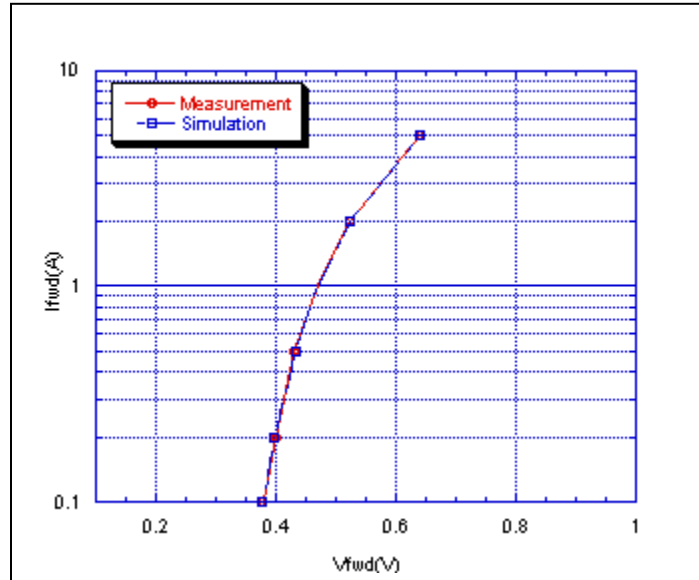


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

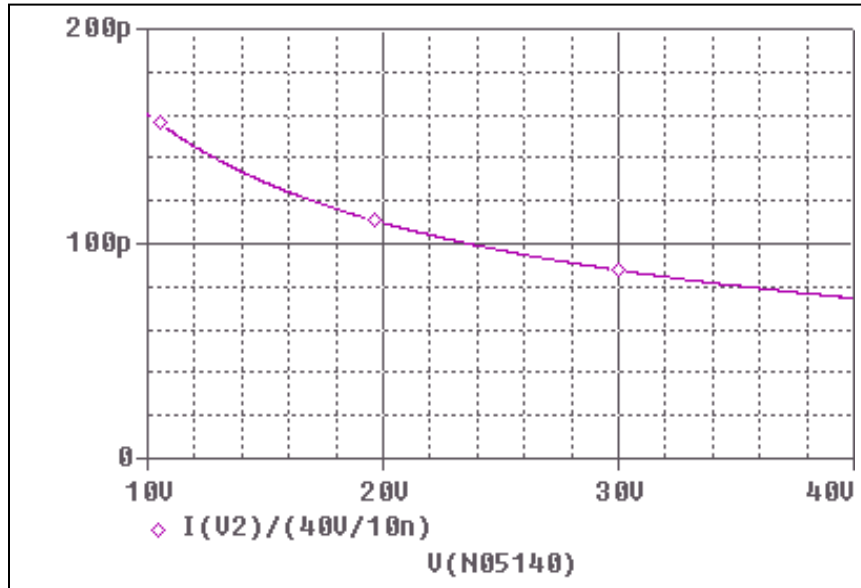


Simulation Result

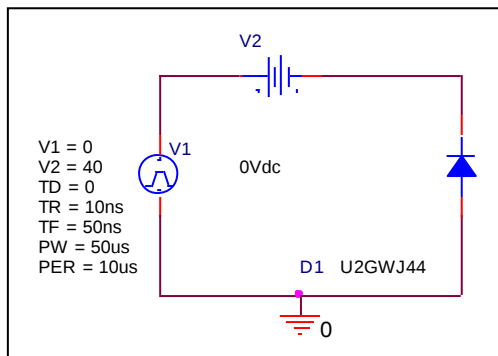
I_{fwd} (A)	V_{fwd} (V) Measurement	V_{fwd} (V) Simulation	%Error
0.1	0.377	0.376	-0.19
0.2	0.400	0.398	-0.48
0.5	0.430	0.433	0.79
1	0.470	0.470	0.04
2	0.525	0.524	-0.29
5	0.640	0.640	0.05

Junction Capacitance Characteristic

Circuit Simulation Result

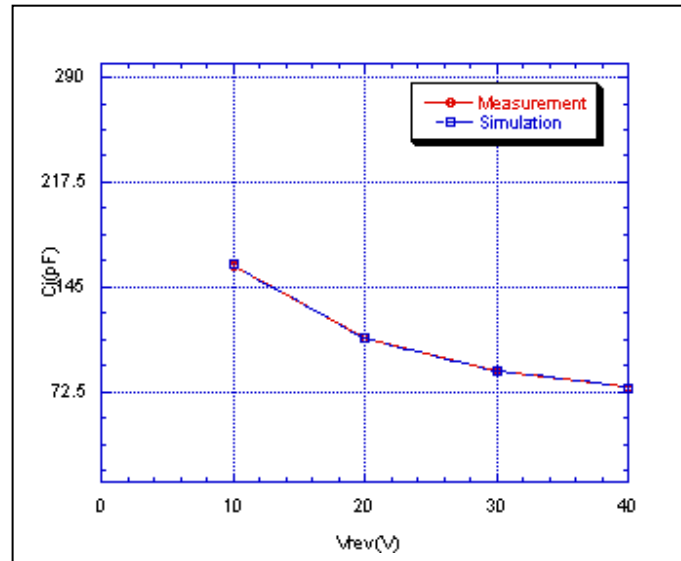


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

V_{rev} (V)	C_j (pF) Measurement	C_j (pF) Simulation	%Error
10	160.00	160.30	0.19
20	110.00	109.70	-0.27
30	87.00	87.60	0.69
40	75.00	74.70	-0.40