

Device Modeling Report

COMPONENTS:

DIODE/ SCHOOTTKY RECTIFIER / STANDARD

PART NUMBER: 5GWJ2C48C

MANUFACTURER: TOSHIBA

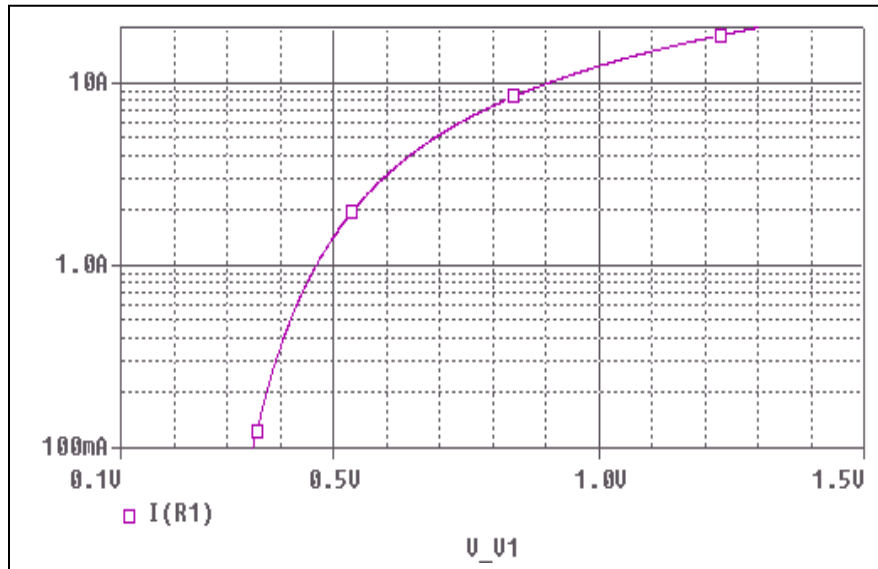


Bee Technologies Inc.

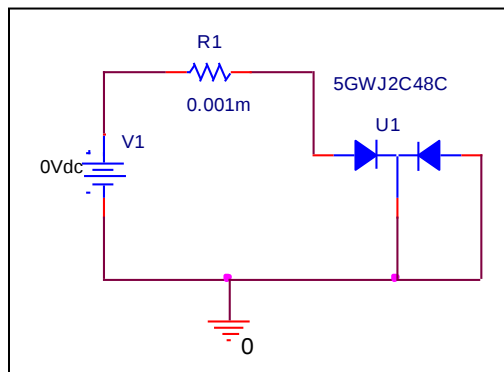
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

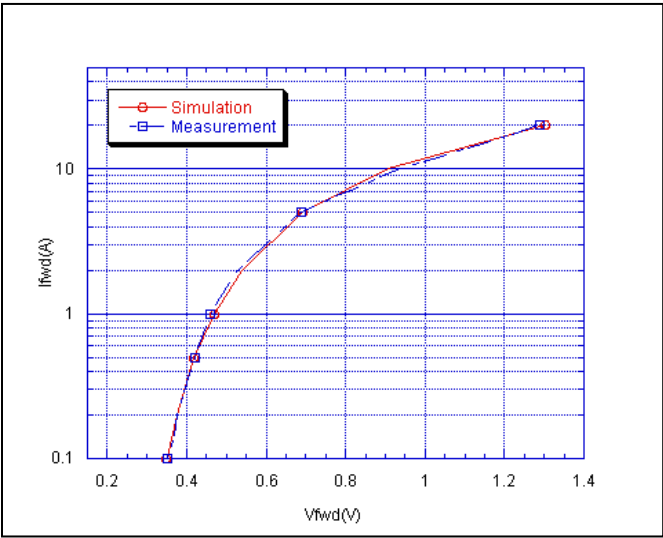


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

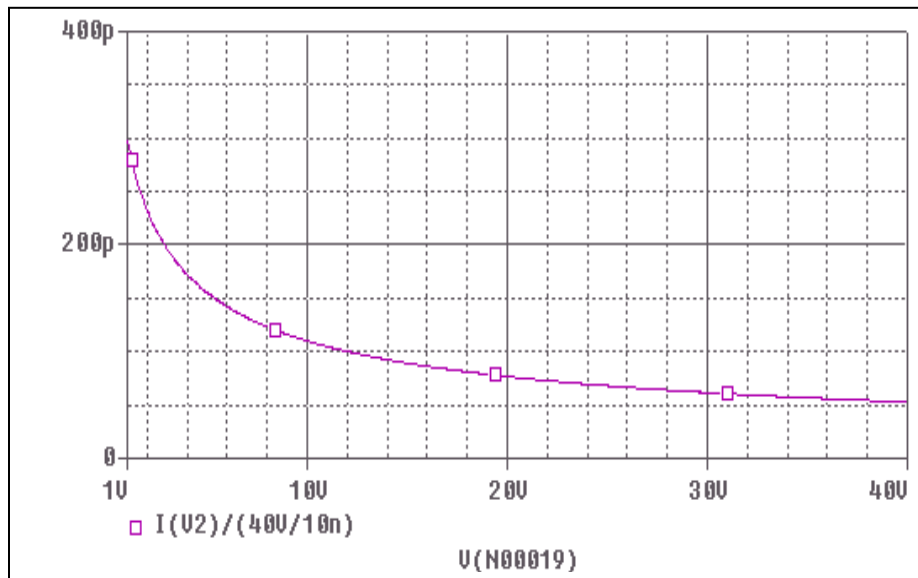


Simulation Result

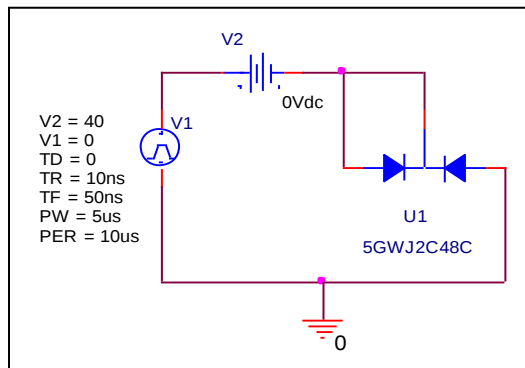
Ifwd(A)	Vfwd(V) Measurement	Vfwd(V) Simulation	%Error
0.1	0.35	0.35	-0.46
0.2	0.38	0.37	-0.21
0.5	0.42	0.42	-0.19
1	0.46	0.47	1.74
2	0.53	0.54	1.57
5	0.69	0.69	0.46
10	0.940	0.909	-3.35
20	1.290	1.304	1.06

Junction Capacitance Characteristic

Circuit Simulation Result

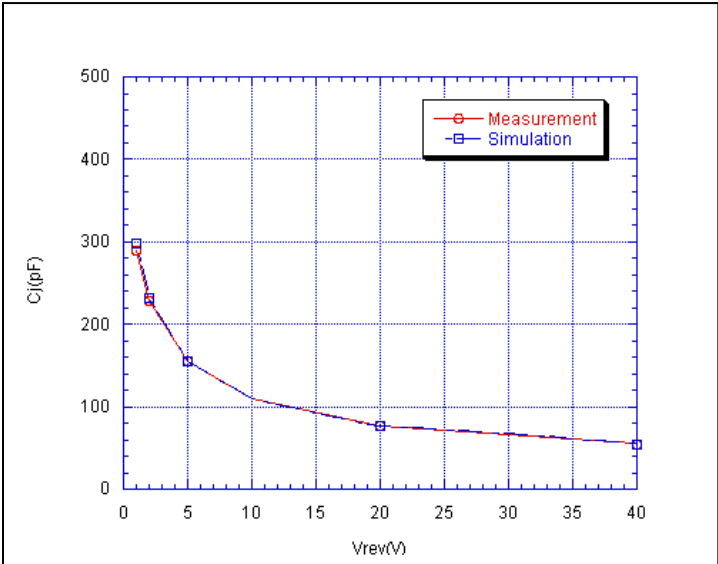


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

V_{rev} (V)	C_j (pF) Measurement	C_j (pF) Simulation	%Error
1	290.00	297.65	2.64
2	229.00	232.04	1.33
5	155.00	155.09	0.06
10	110.00	110.04	0.04
20	77.00	76.67	-0.43
40	54.00	53.30	-1.30