

Device Modeling Report

COMPONENTS:
DIODE/ SCHOOTKY RECTIFIER / STANDARD
PART NUMBER: 5GWJ2CZ47C
MANUFACTURER: TOSHIBA

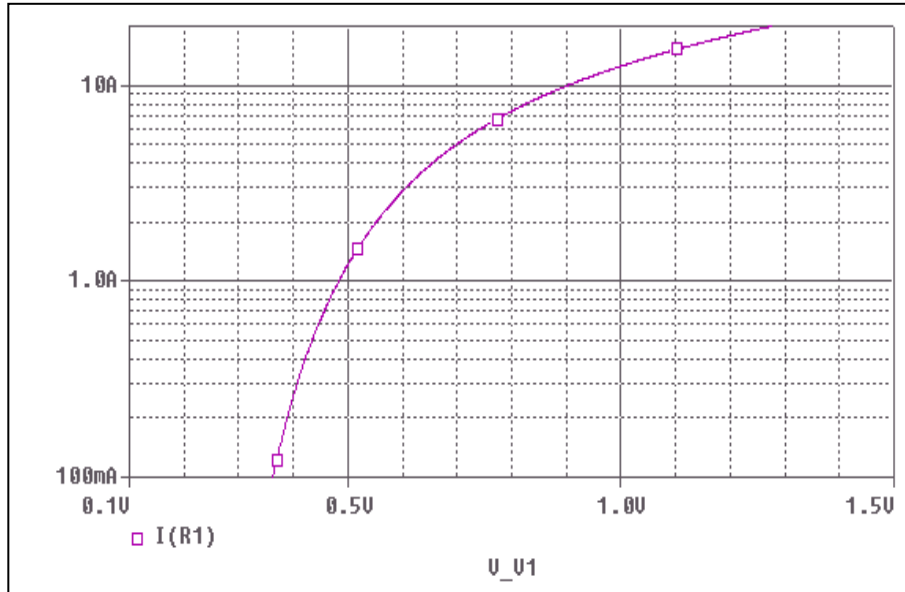


Bee Technologies Inc.

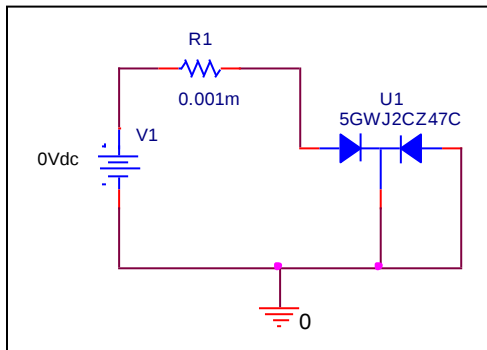
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

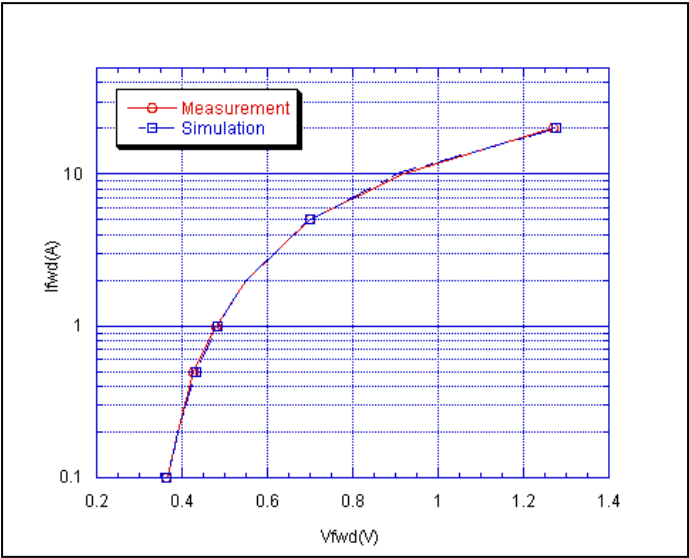


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

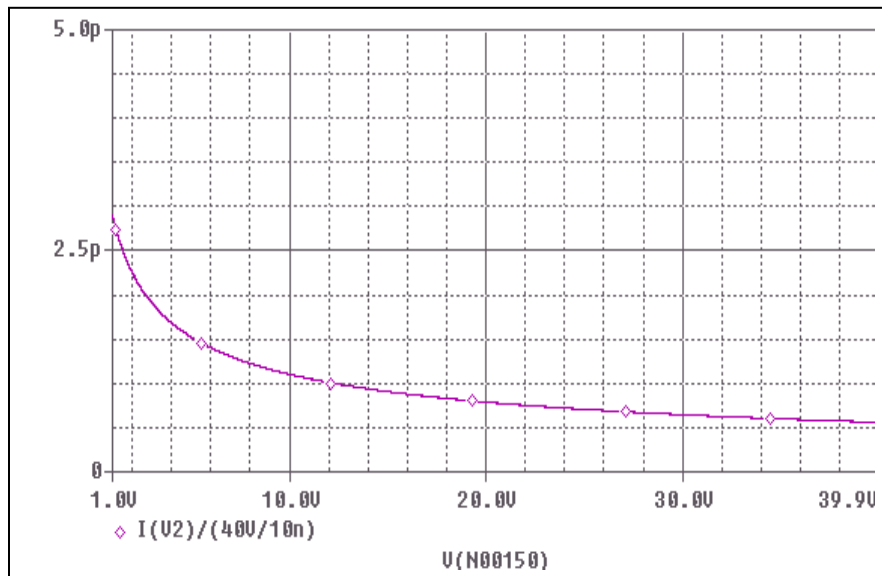


Simulation Result

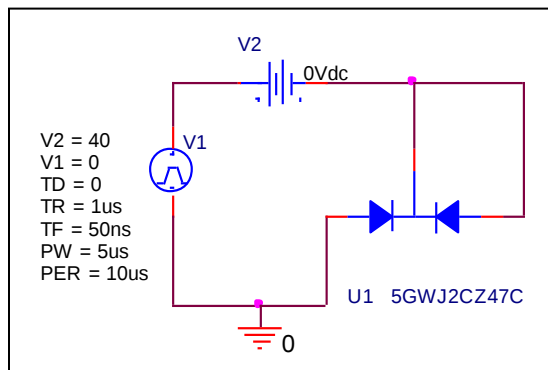
$I_{fwd}(A)$	$V_{fwd}(V)$ Measurement	$V_{fwd}(V)$ Simulation	%Error
0.1	0.365	0.363	-0.66
0.2	0.390	0.389	-0.28
0.5	0.427	0.433	1.33
1	0.480	0.483	0.63
2	0.550	0.551	0.20
5	0.700	0.700	-0.03
10	0.920	0.904	-1.72
20	1.270	1.278	0.59

Junction Capacitance Characteristic

Circuit Simulation Result

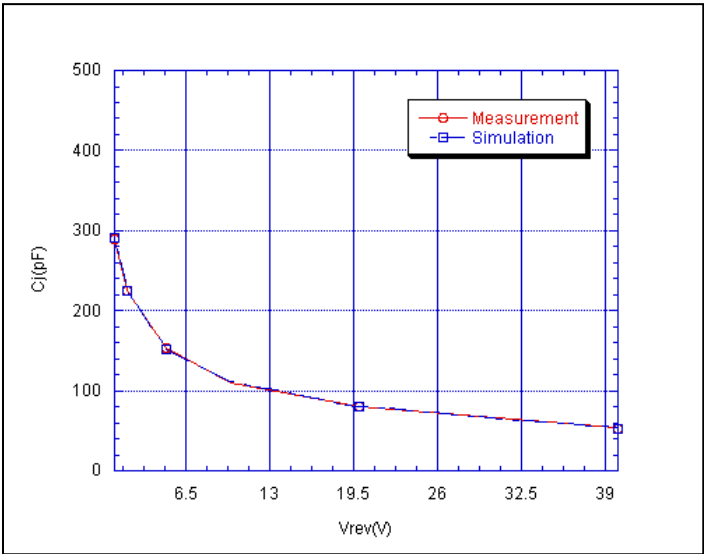


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

Vrev(V)	Cj(pF) Measurement	Cj(pF) Simulation	%Error
1	290.000	290.340	0.12
2	225.000	224.620	-0.17
5	153.000	152.380	-0.41
10	110.000	111.310	1.19
20	80.000	80.440	0.55
40	53.000	51.960	-1.96