

Device Modeling Report

COMPONENTS:

DIODE/ SCHOOTTKY RECTIFIER / STANDARD

PART NUMBER: EC31QS04

MANUFACTURER: NIEC

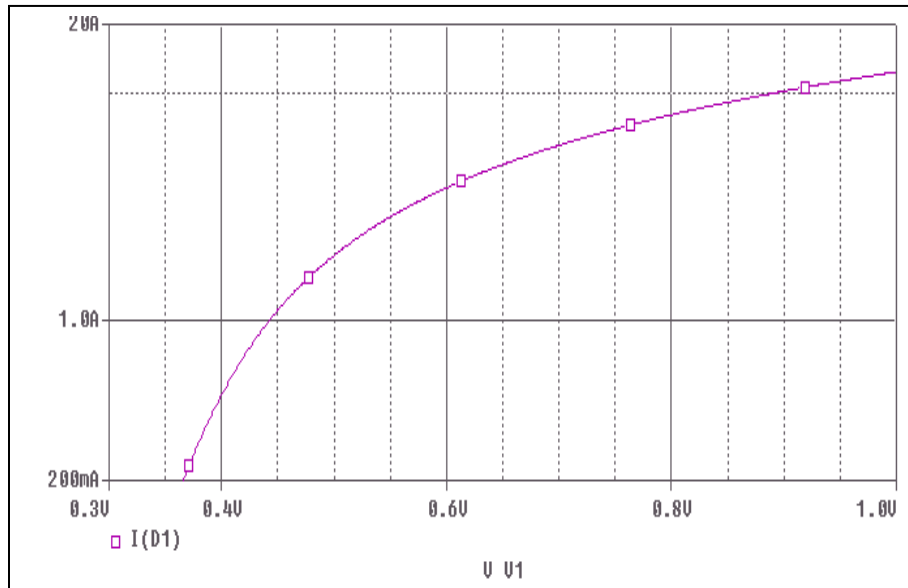


Bee Technologies Inc.

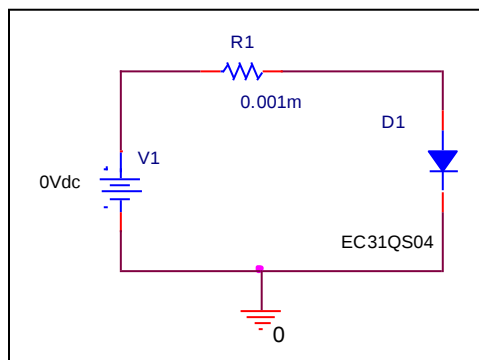
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

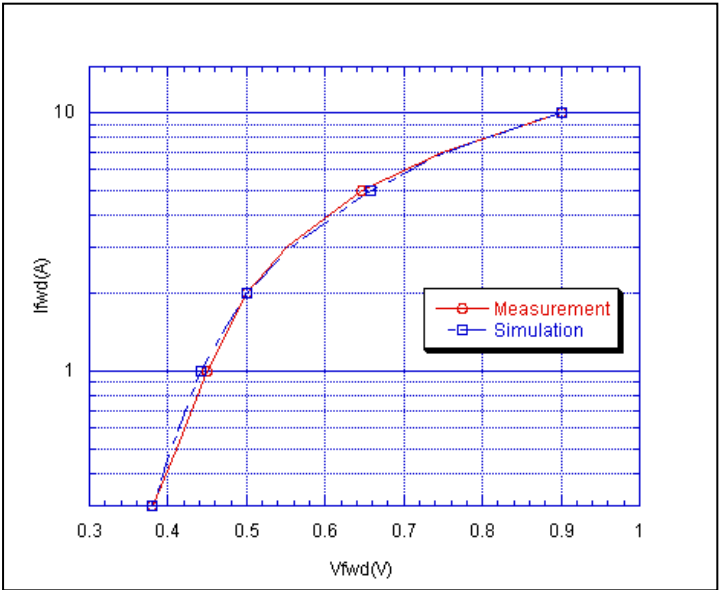


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

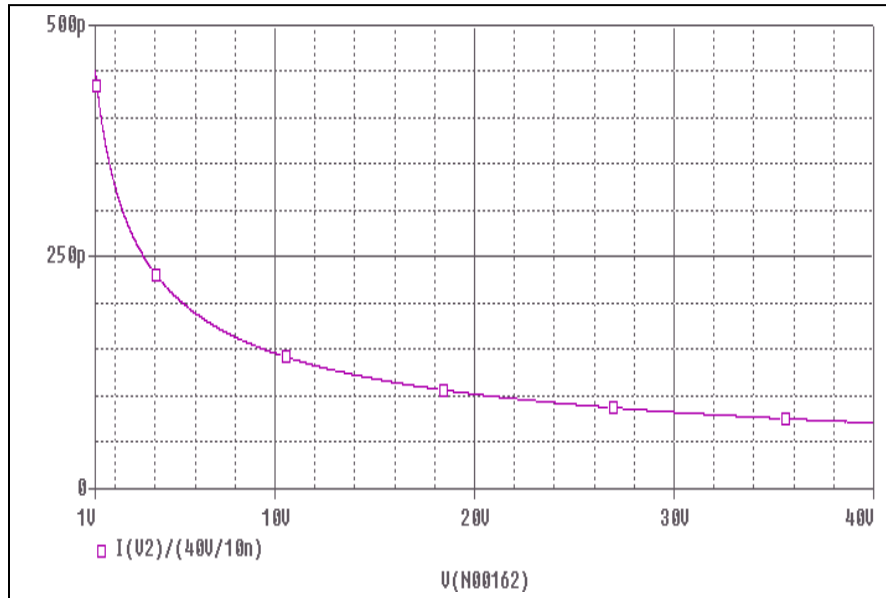


Simulation Result

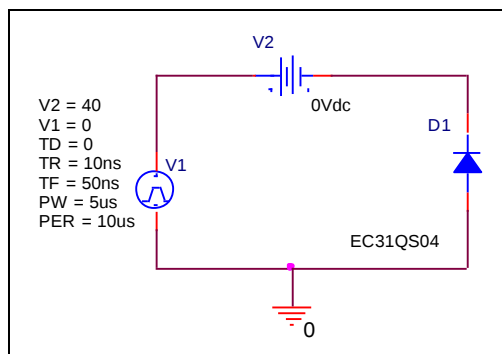
Ifwd(A)	Vfwd(V) Measurement	Vfwd(V) Simulation	%Error
0.3	0.380	0.378	-0.53
0.5	0.410	0.403	-1.71
1	0.450	0.442	-1.78
2	0.500	0.498	-0.40
5	0.646	0.657	1.70
10	0.900	0.899	-0.11

Junction Capacitance Characteristic

Circuit Simulation Result

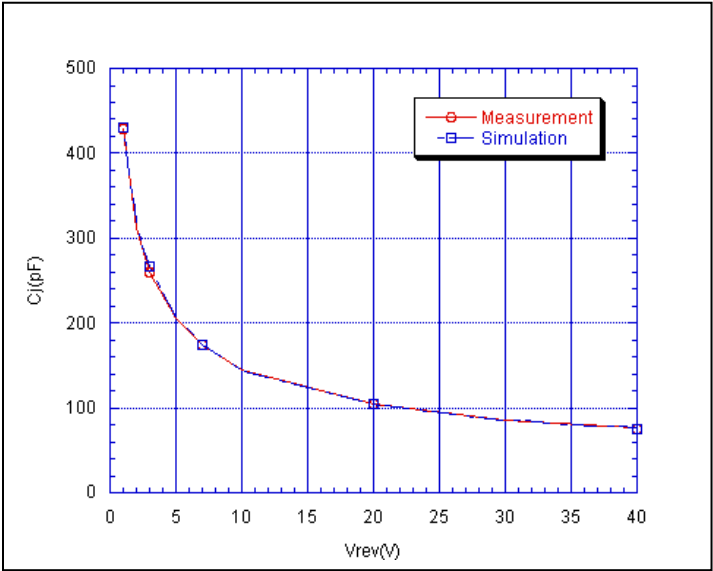


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

Vrev(V)	Cj(pF) Measurement	Cj(pF) Simulation	%Error
1	428.000	430.000	0.47
2	312.000	315.000	0.96
5	205.000	207.000	0.98
10	145.000	144.000	-0.69
20	105.000	104.000	-0.95
40	75.000	74.000	-1.33