

Device Modeling Report

COMPONENTS:
DIODE/ SCHOOTTKY RECTIFIER / STANDARD
PART NUMBER: 11DQ04
MANUFACTURER: NIEC

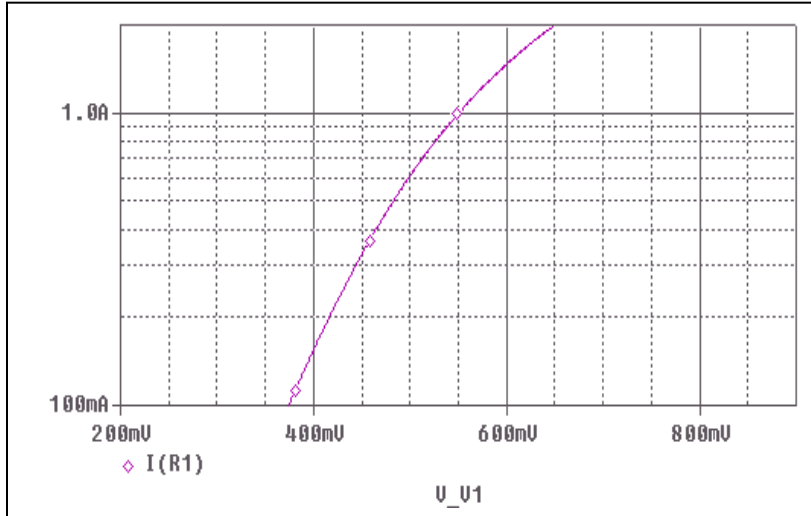


Bee Technologies Inc.

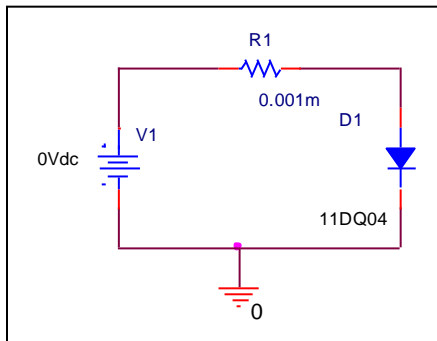
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

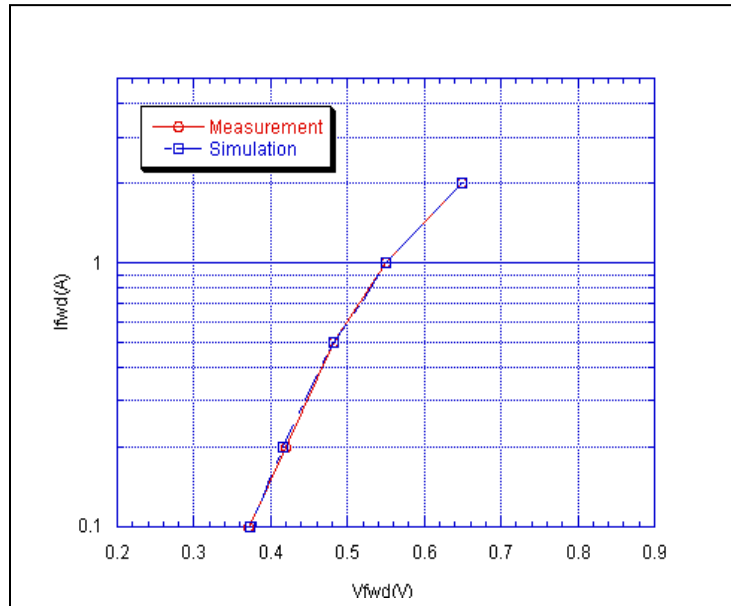


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

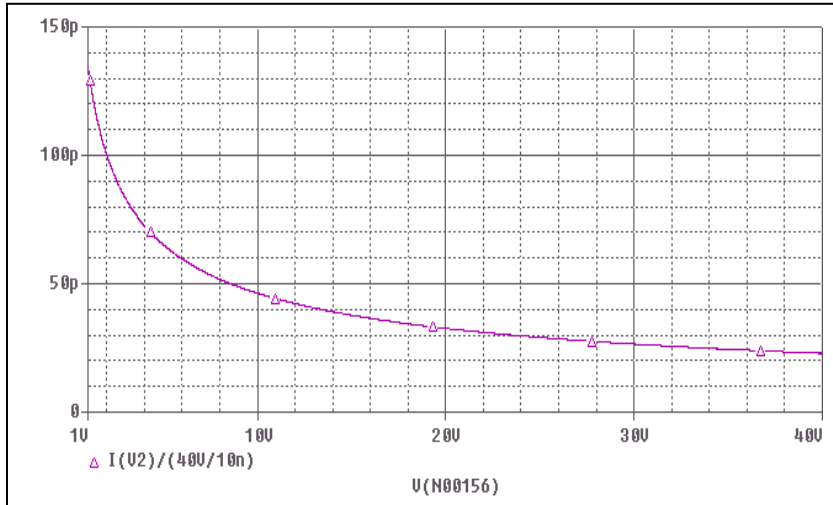


Simulation Result

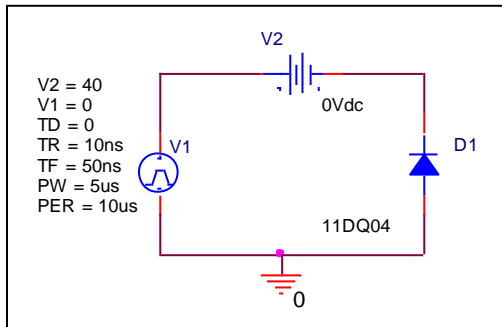
Ifwd(A)	Vfwd(V) Measurement	Vfwd(V) Simulation	%Error
0.1	0.37	0.37	0.54
0.2	0.42	0.42	-0.95
0.5	0.48	0.48	-0.21
1	0.55	0.55	-0.02
2	0.65	0.65	-0.15

Junction Capacitance Characteristic

Circuit Simulation Result

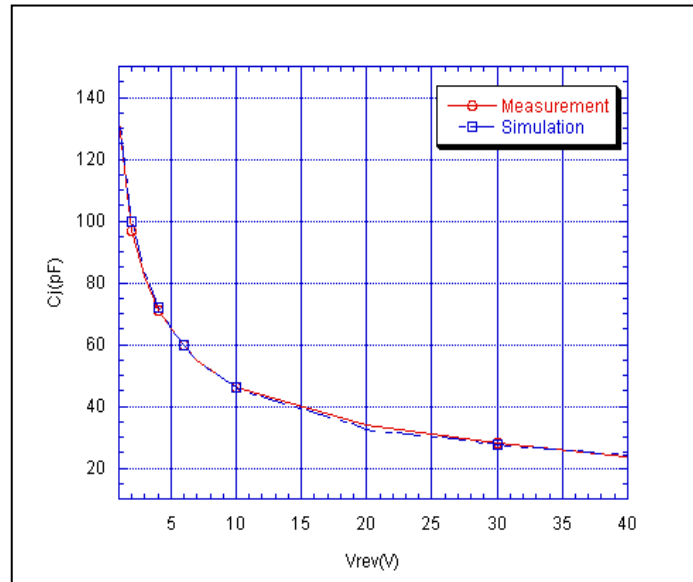


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

Vrev(V)	Cj(pF) Measurement	Cj(pF) Measurement	%Error
1	133.00	134.00	0.75
2	97.00	100.00	3.09
3	82.00	83.00	1.22
4	71.00	72.00	1.41
5	65.00	65.11	0.17
6	60.00	59.60	-0.67
7	55.00	55.21	0.39
10	46.00	46.02	0.05
20	34.00	32.70	-3.82
30	28.00	27.40	-2.14
40	23.00	23.50	2.17