Device Modeling Report

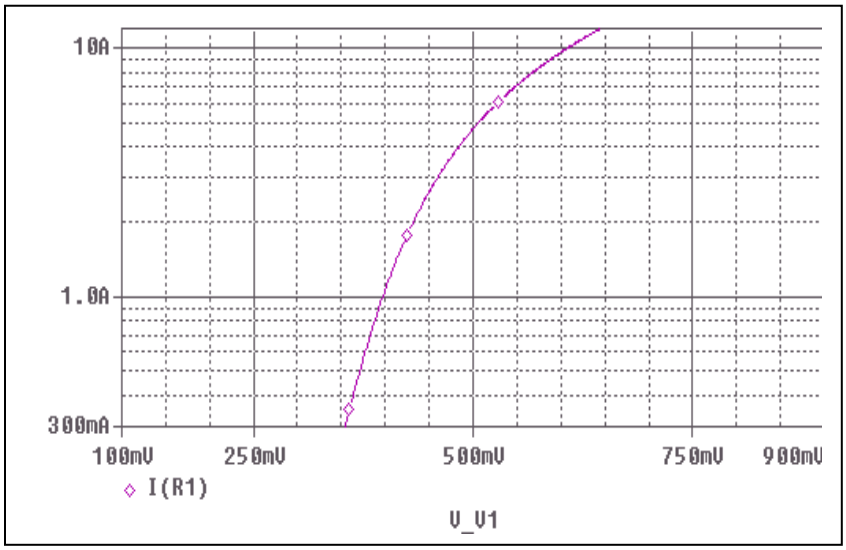
COMPONENTS:
DIODE/ SCHOOTTKY RECTIFIER / STANDARD
PART NUMBER: 31DQ03L
MANUFACTURER: NIEC

Bee Technologies Inc.

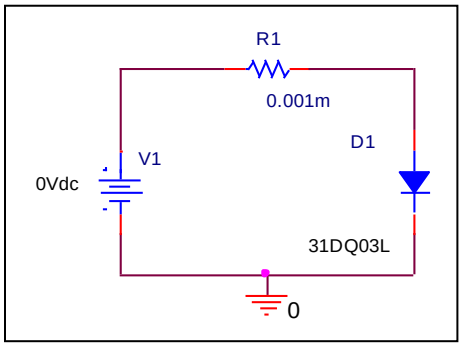
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

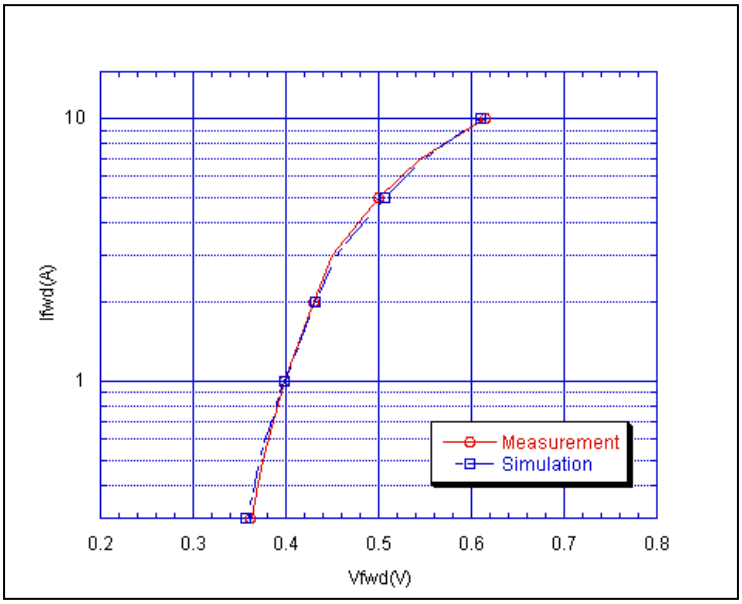


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

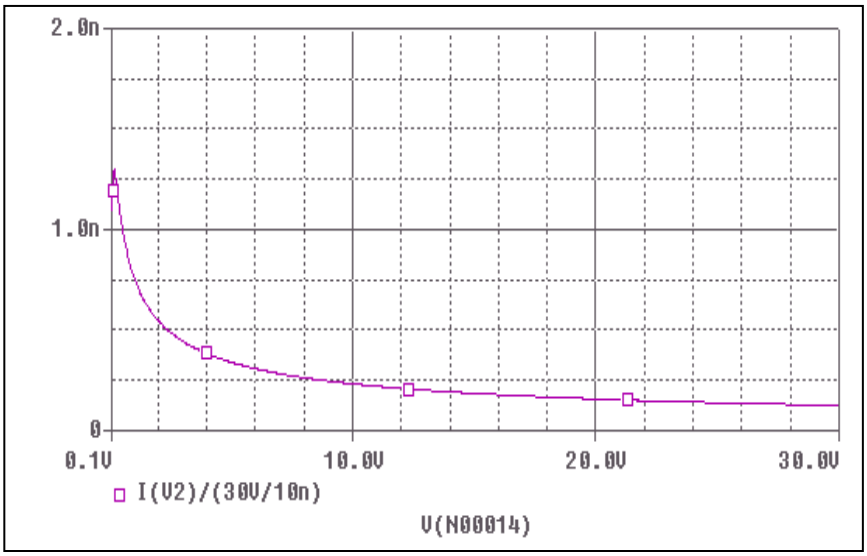


Simulation Result

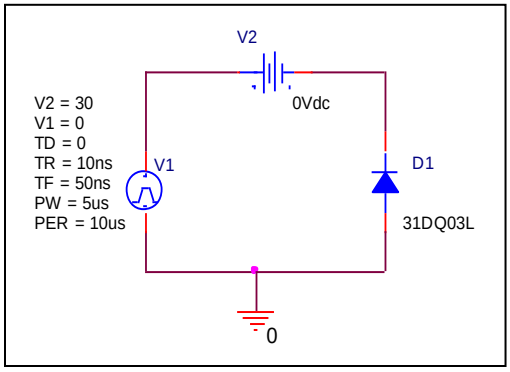
Ifwd(A)	Vfwd(V) Measurement	Vfwd(V) Simulation	%Error
0.5	0.375	0.371	-1.07
1	0.398	0.398	0.00
2	0.430	0.432	0.47
5	0.500	0.506	1.20
10	0.62	0.61	-0.81

Capacitance Characteristic

Circuit Simulation Result

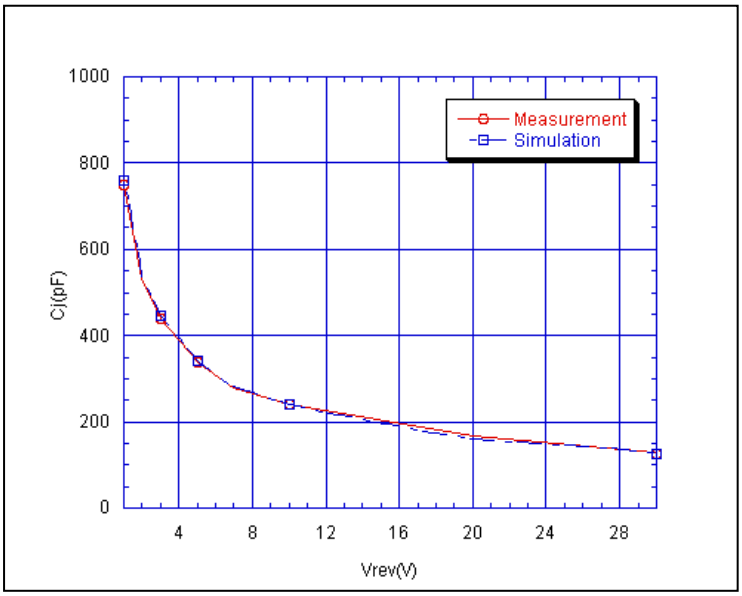


\Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

Vrev(V)	Cj(pF) Measurement	Cj(pF) Simulation	%Error
1	749.00	760.00	1.47
2	532.00	541.00	1.69
3	439.00	445.00	1.37
5	338.00	340.00	0.59
7	280.00	284.00	1.43
10	239.00	238.00	-0.42
20	168.00	159.00	-5.36