

Device Modeling Report

COMPONENTS:
DIODE/ SCHOOTTKY RECTIFIER / STANDARD
PART NUMBER: KSQ30A04B
MANUFACTURER: NIEC

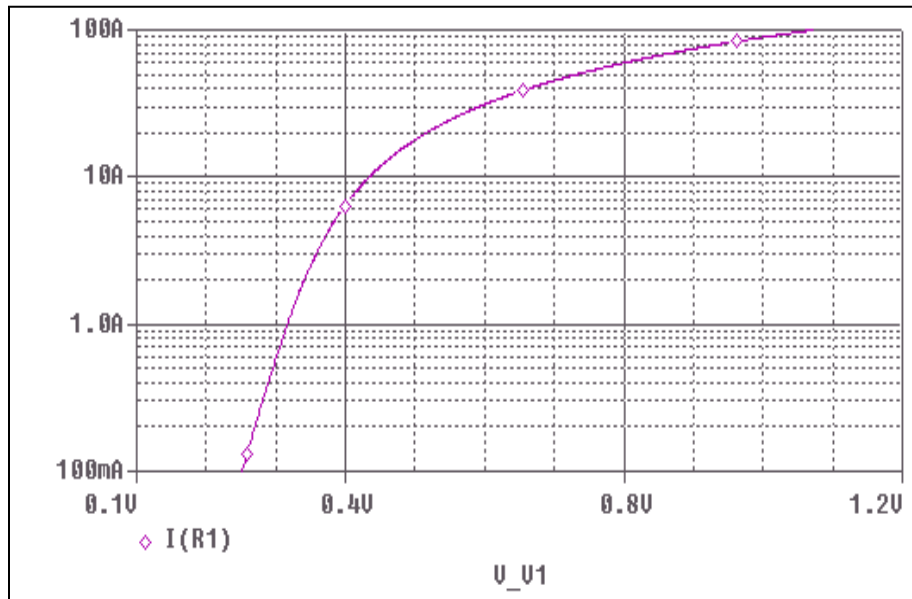


Bee Technologies Inc.

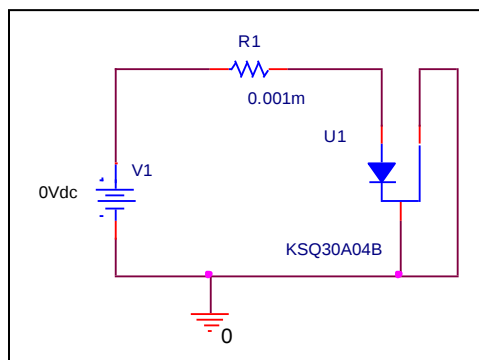
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

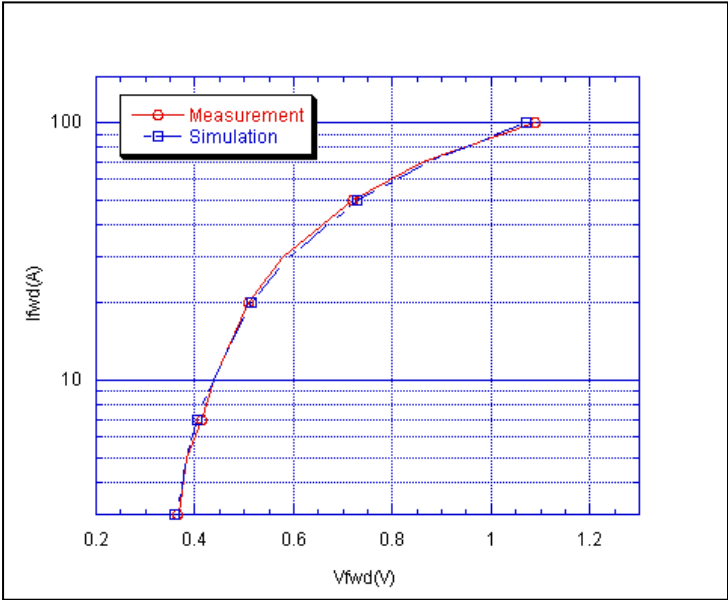


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

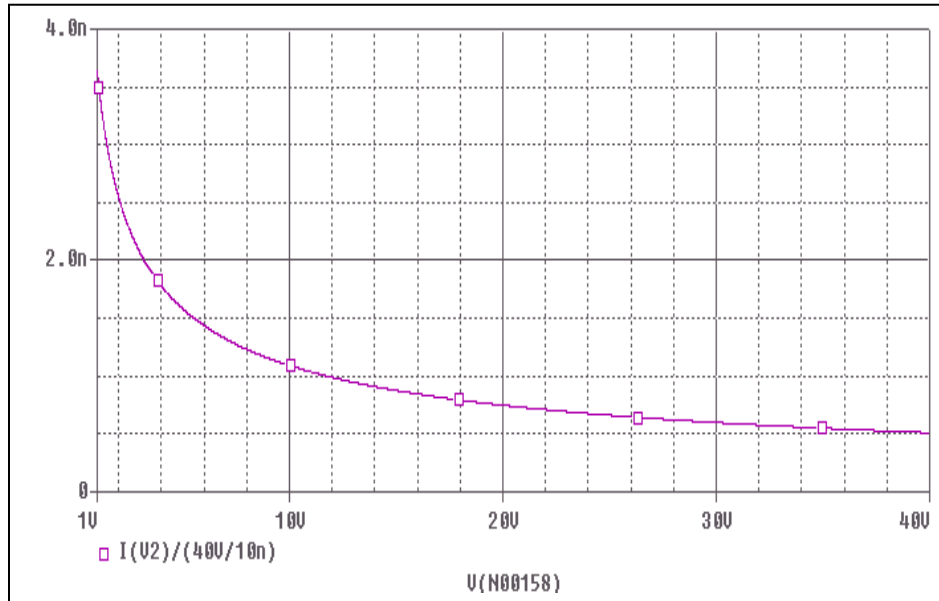


Simulation Result

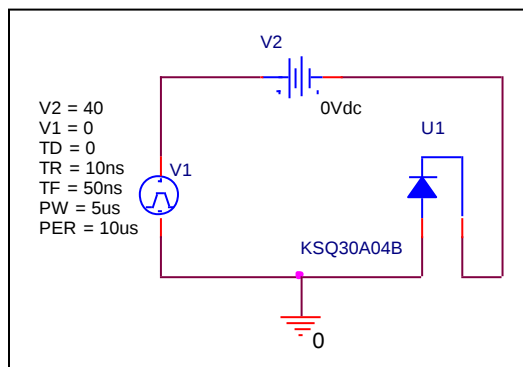
Ifwd(A)	Vfwd(V) Measurement	Vfwd(V) Simulation	%Error
3	0.365	0.360	-1.37
5	0.385	0.384	-0.26
10	0.440	0.438	-0.45
20	0.510	0.514	0.78
50	0.720	0.730	1.39
100	1.090	1.070	-1.83

Junction Capacitance Characteristic

Circuit Simulation Result

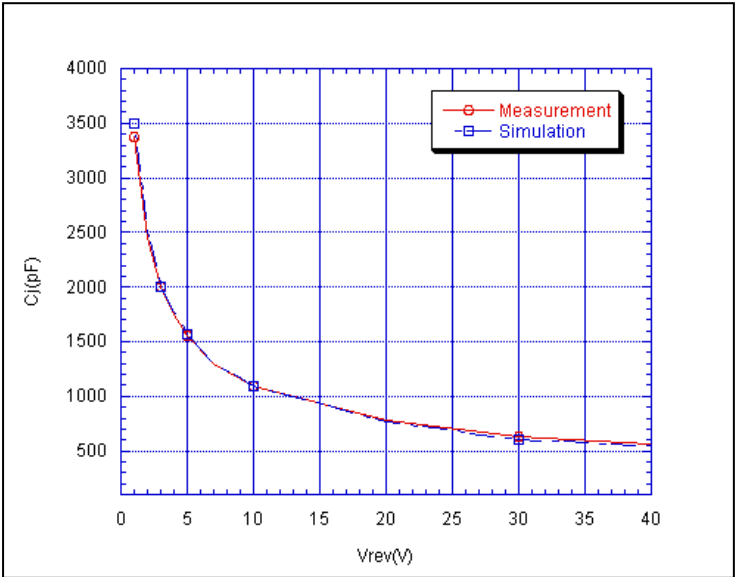


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

Vrev(V)	Cj(pF) Measurement	Cj(pF) Simulation	%Error
1	3380.000	3500.000	3.55
2	2450.000	2500.000	2.04
5	1550.000	1570.000	1.29
10	1097.000	1093.000	-0.36
20	775.000	760.000	-1.94
40	550.000	535.000	-2.73