

Device Modeling Report

COMPONENTS:
DIODE/ SCHOOTTKY RECTIFIER / STANDARD
PART NUMBER: EA20QS04-F
MANUFACTURER: NIEC

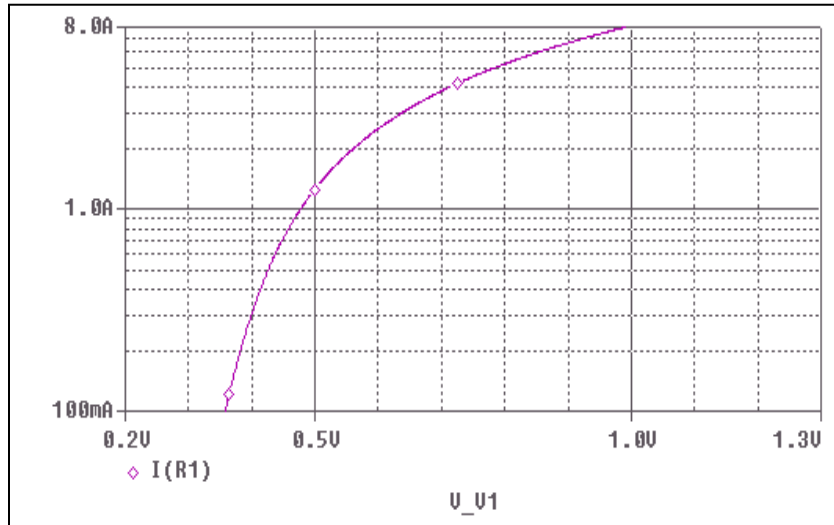


Bee Technologies Inc.

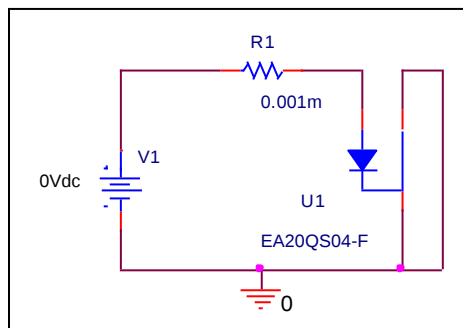
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

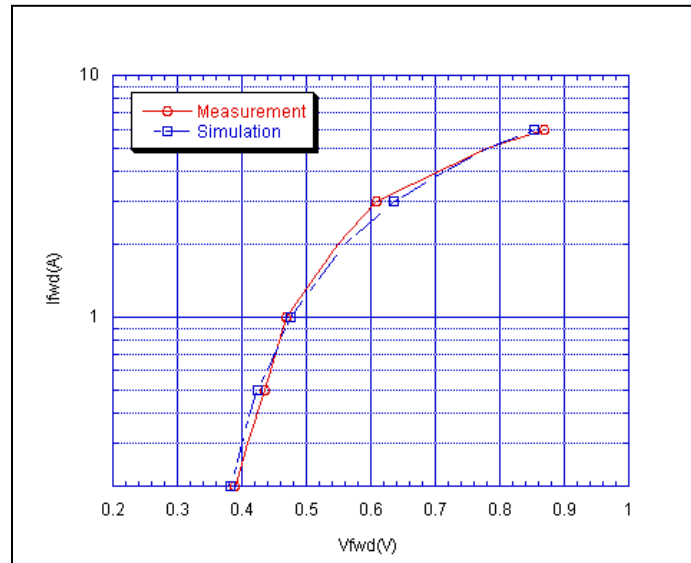


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

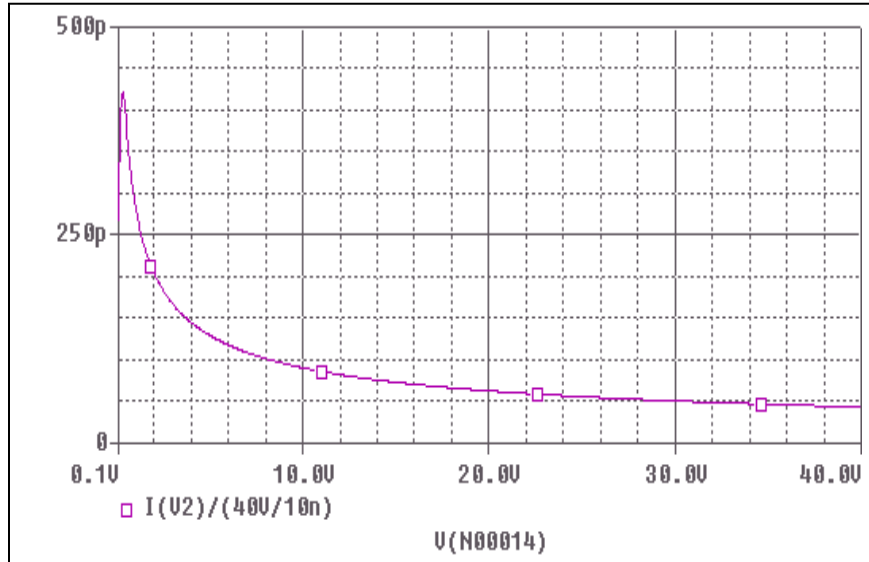


Simulation Result

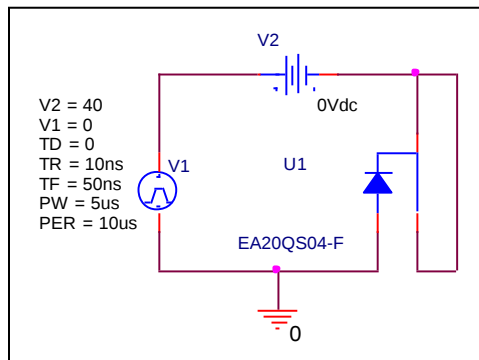
Ifwd(A)	Vfwd(V) Measurement	Vfwd(V) Simulation	%Error
0.2	0.390	0.383	-1.79
0.5	0.435	0.425	-2.30
1	0.470	0.476	1.28
2	0.550	0.560	1.82
5	0.780	0.781	0.13

Junction Capacitance Characteristic

Circuit Simulation Result

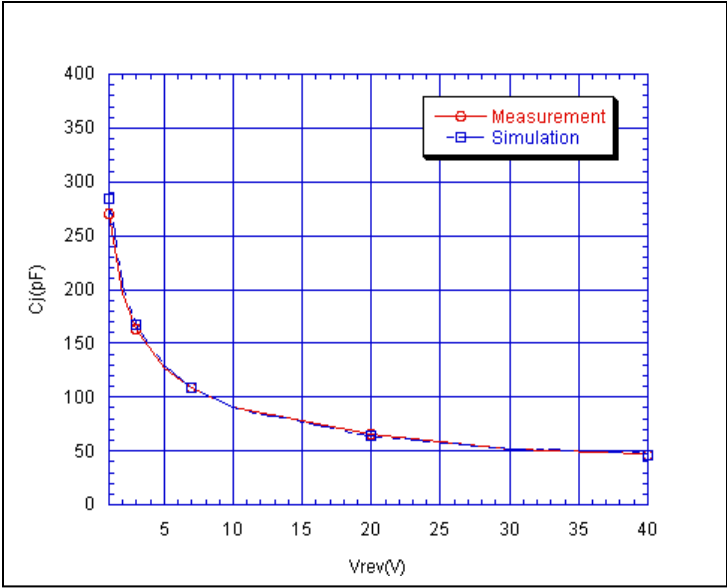


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

Vrev(V)	Cj(pF) Measurement	Cj(pF) Simulation	%Error
1	270.000	280.000	3.70
2	197.000	204.000	3.55
5	127.000	129.000	1.57
10	90.000	89.000	-1.11
20	65.000	64.000	-1.54
40	46.000	45.000	-2.17
1	270.000	280.000	3.70
2	197.000	204.000	3.55
5	127.000	129.000	1.57