

Device Modeling Report

COMPONENTS:
DIODE/ SCHOOTKY RECTIFIER /STANDARD
PART NUMBER: FSQ05A04
MANUFACTURER: NIEC

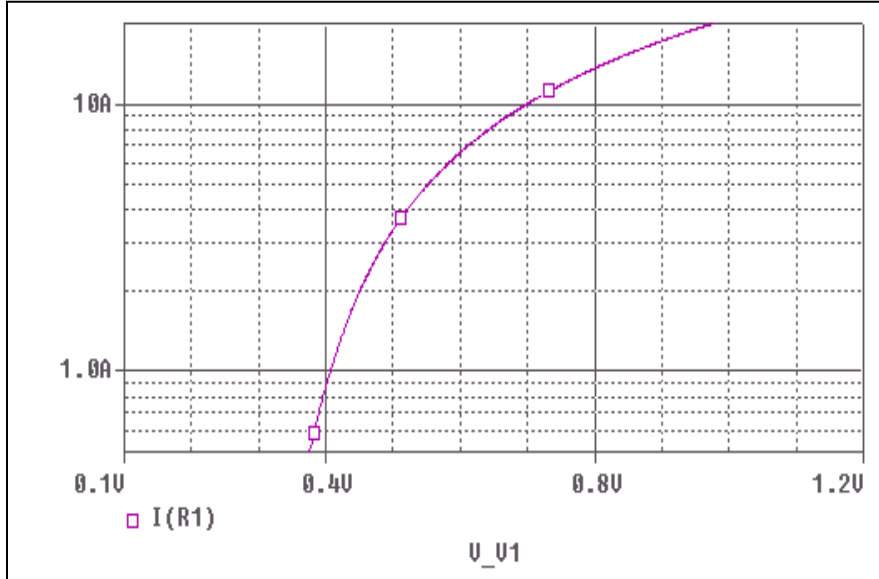


Bee Technologies Inc.

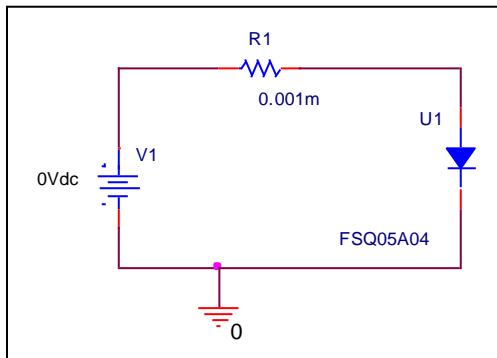
PSpice model parameter	Model description
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IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current 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

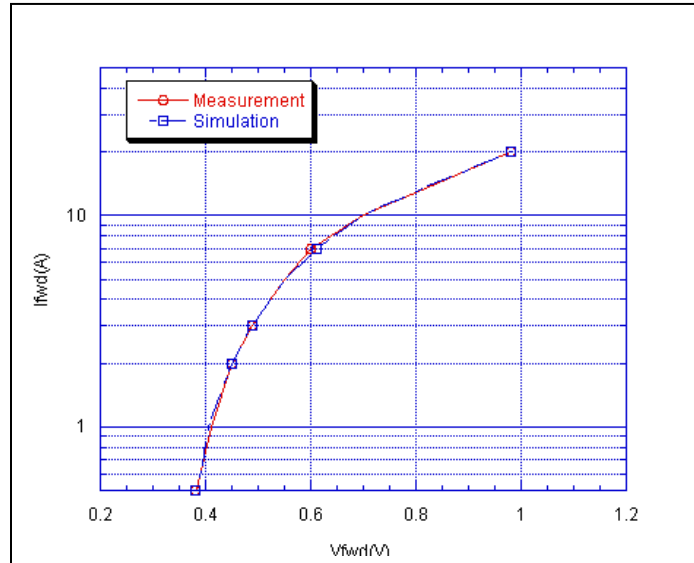


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

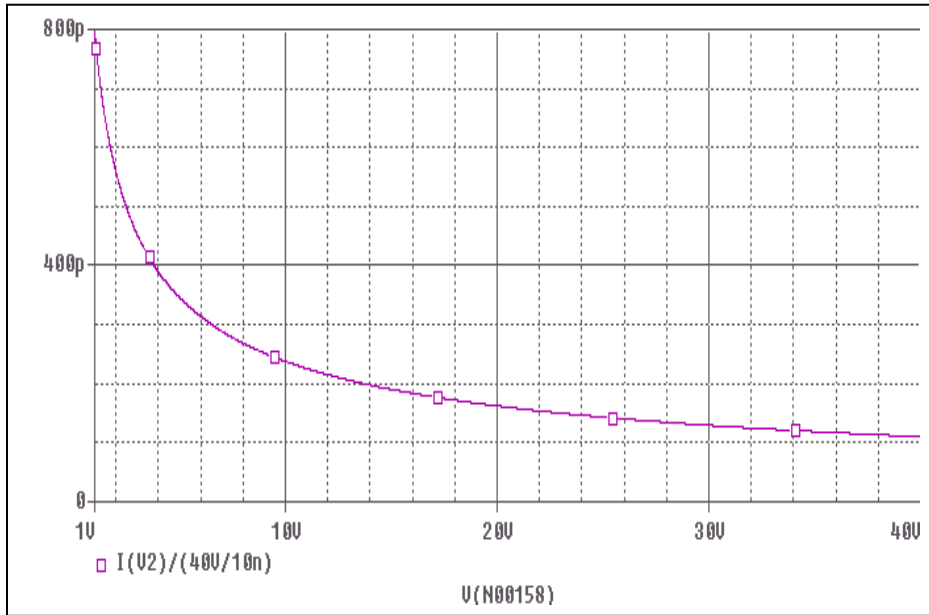


Simulation Result

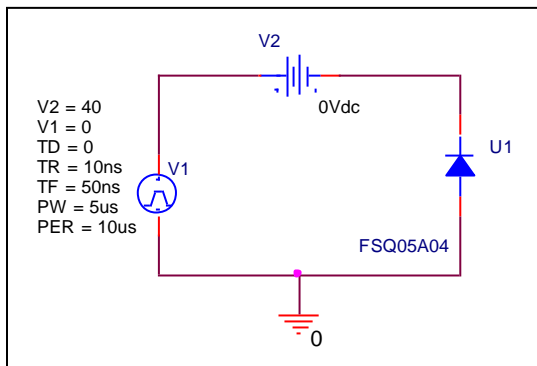
Ifwd(A)	Vfwd(V) Measurement	Vfwd(V) Simulation	%Error
1	0.410	0.407	-0.73
2	0.450	0.440	-2.22
5	0.550	0.540	-1.82
10	0.700	0.699	-0.17
20	0.980	0.978	-0.20

Junction Capacitance Characteristic

Circuit Simulation Result

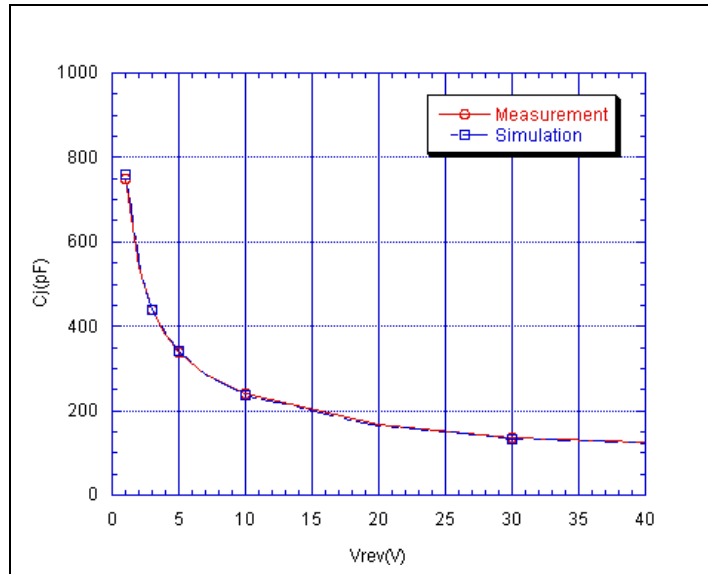


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

V_{rev} (V)	C_j (pF) Measurement	C_j (pF) Simulation	%Error
1	748.000	760.000	1.60
2	539.000	550.000	2.04
5	339.000	341.000	0.59
10	239.000	238.000	-0.42
20	169.000	165.000	-2.37
40	121.000	117.000	-3.31