

Device Modeling Report

COMPONENTS:
DIODE/ SCHOOTTKY RECTIFIER /STANDARD
PART NUMBER: FSQ05A04B
MANUFACTURER: NIEC

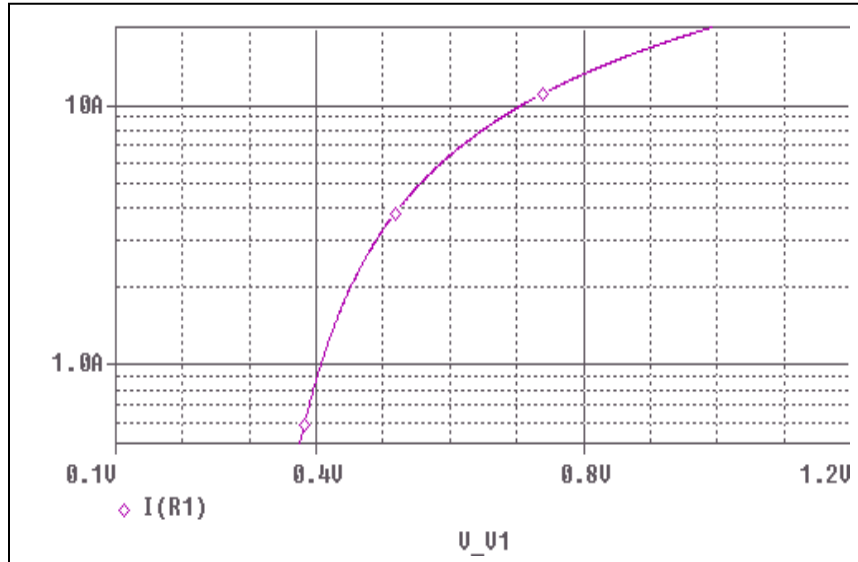


Bee Technologies Inc.

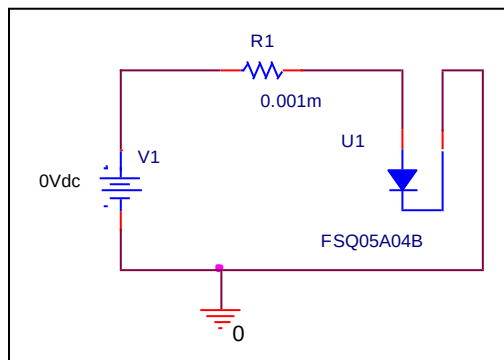
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

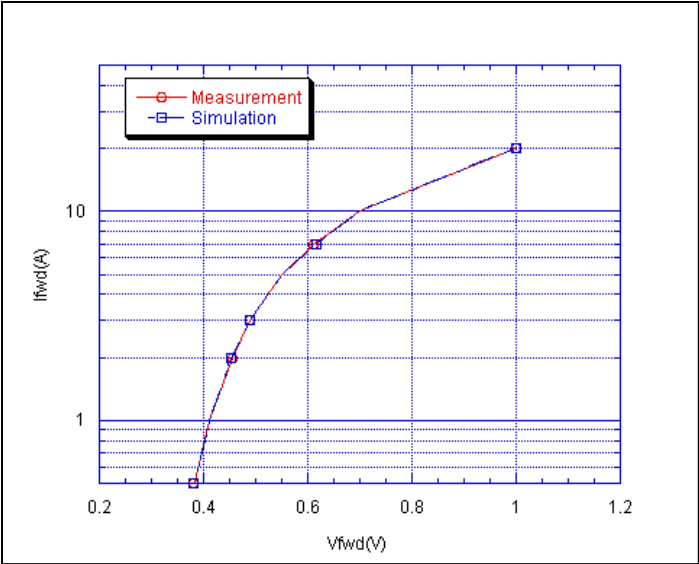


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

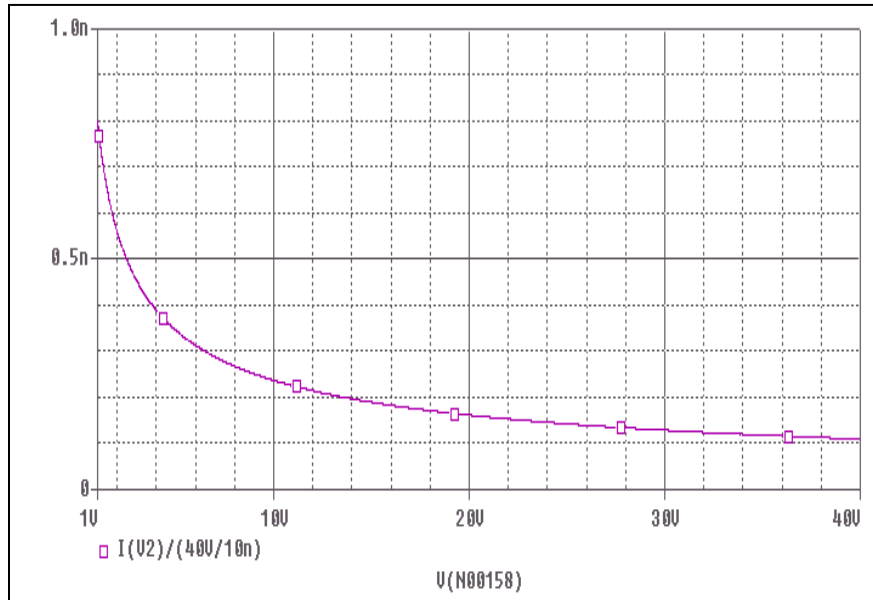


Simulation Result

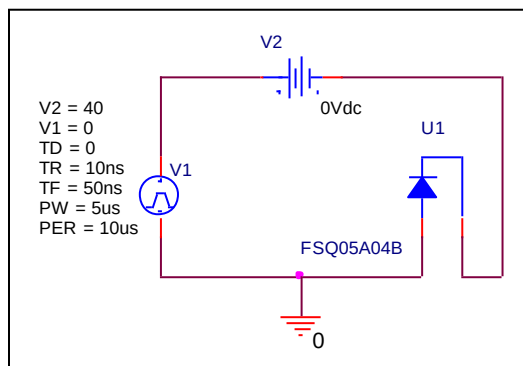
$I_{fwd}(A)$	$V_{fwd}(V)$ Measurement	$V_{fwd}(V)$ Simulation	%Error
1	0.410	0.409	-0.29
2	0.456	0.453	-0.66
5	0.550	0.548	-0.36
10	0.700	0.698	-0.31
20	1.000	0.997	-0.30

Junction Capacitance Characteristic

Circuit Simulation Result

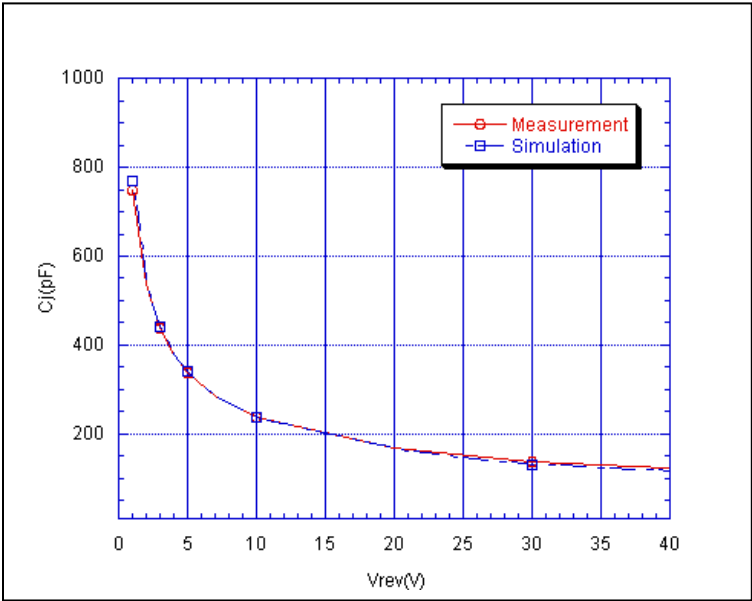


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

Vrev(V)	Cj(pF) Measurement	Cj(pF) Simulation	%Error
1	750.000	770.000	2.67
2	538.000	550.000	2.23
5	338.000	340.000	0.59
10	238.000	237.000	-0.42
20	170.000	168.000	-1.18
40	119.000	115.000	-3.36