

Device Modeling Report

COMPONENTS:
DIODE/ SCHOTTKY RECTIFIER / STANDARD
PART NUMBER: EC21QS10
MANUFACTURER: NIEC

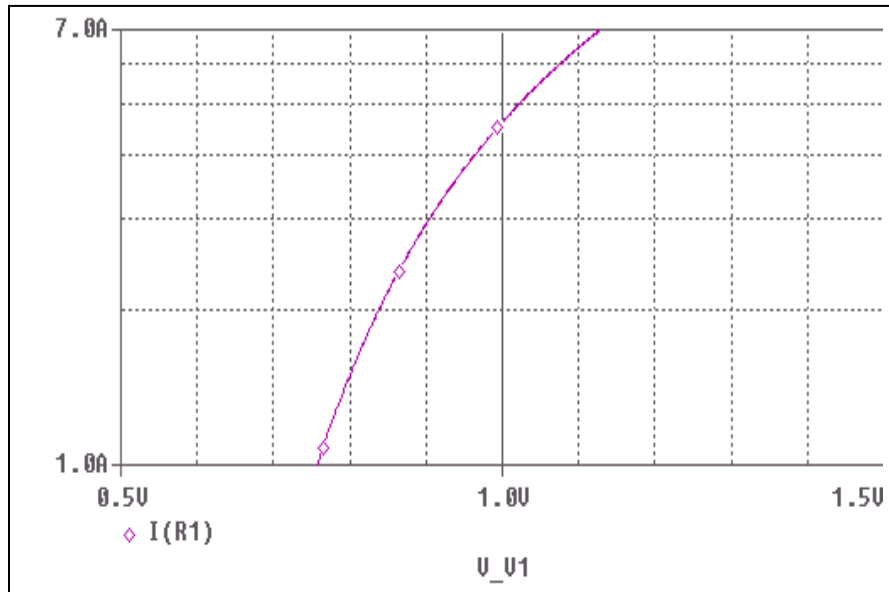


Bee Technologies Inc.

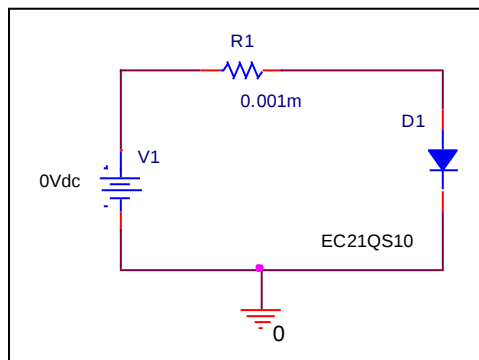
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

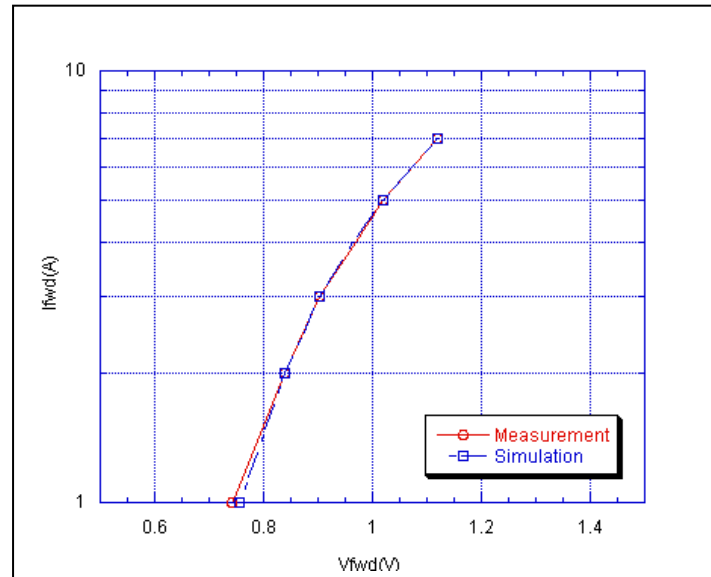


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

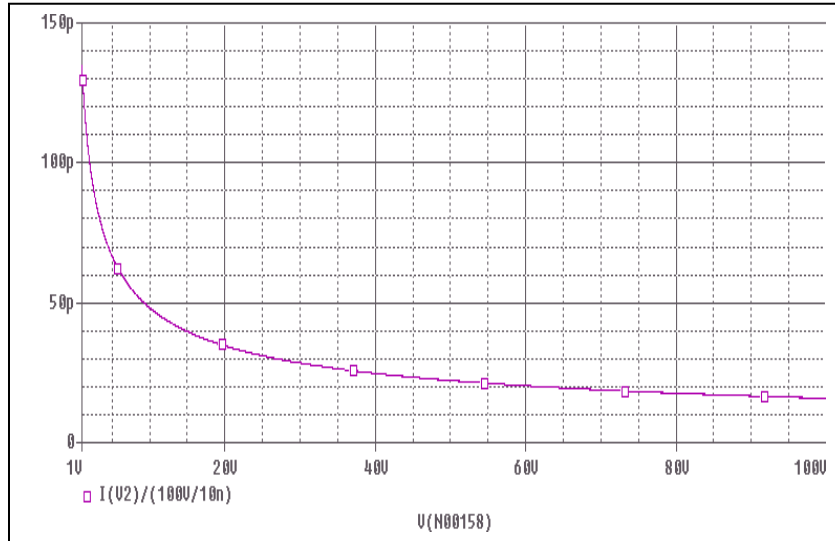


Simulation Result

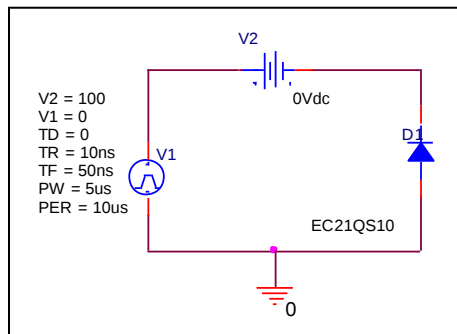
Ifwd(A)	Vfwd(V) Measurement	Vfwd(V) Simulation	%Error
1	0.742	0.757	2.02
2	0.840	0.839	-0.12
3	0.902	0.903	0.11
4	0.970	0.964	-0.62
5	1.020	1.010	-0.98
7	1.120	1.110	-0.89

Junction Capacitance Characteristic

Circuit Simulation Result

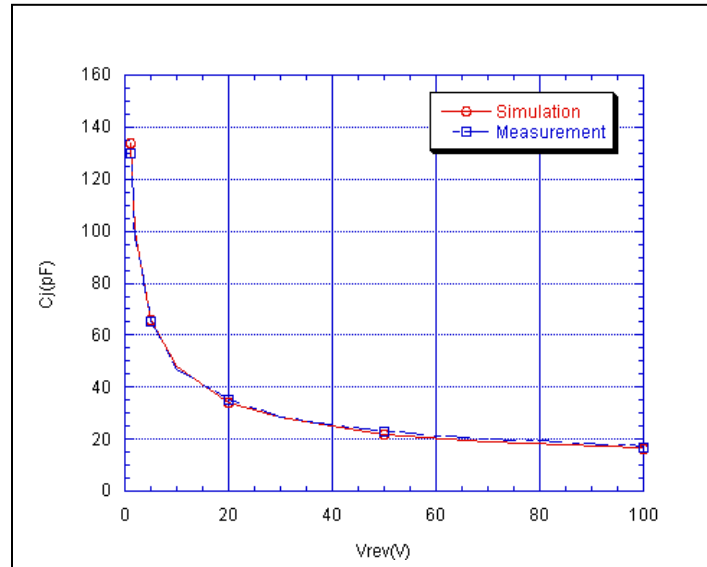


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

Vrev(V)	Cj(pF) Measurement	Cj(pF) Simulation	%Error
1	130.000	134.000	3.08
2	98.000	100.000	2.04
5	65.000	66.000	1.54
10	47.000	48.000	2.13
20	35.000	34.000	-2.86
50	23.000	22.000	-4.35
100	17.000	16.200	-4.71