

Device Modeling Report

COMPONENTS:
DIODE/ SCHOTTKY RECTIFIER / PROFESSIONAL
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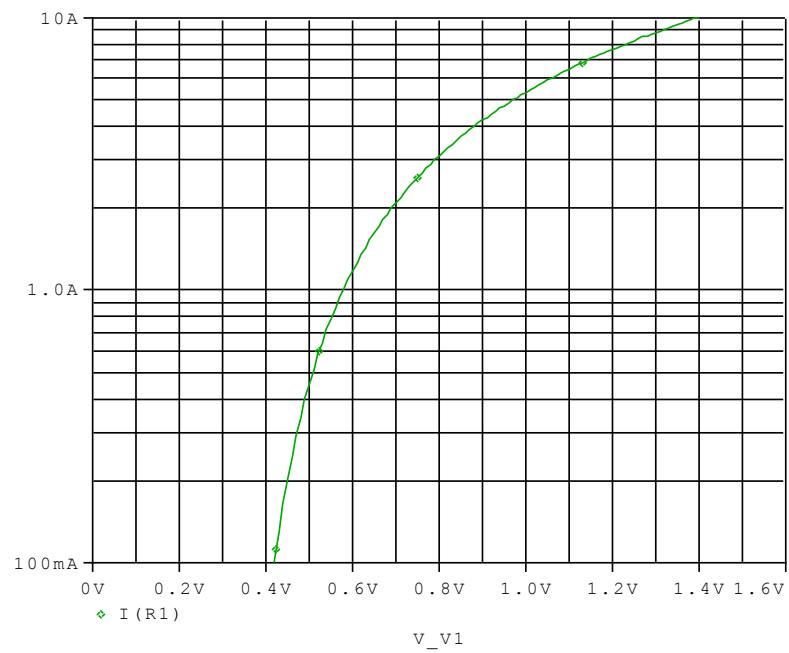


Bee Technologies Inc.

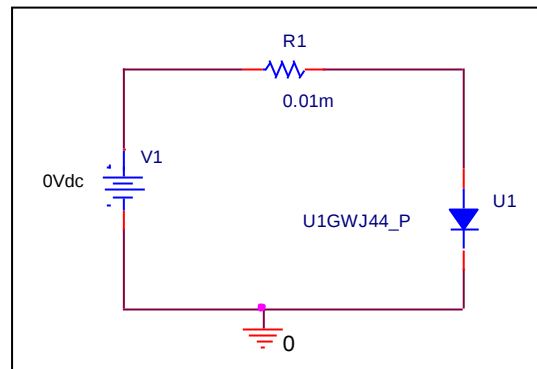
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

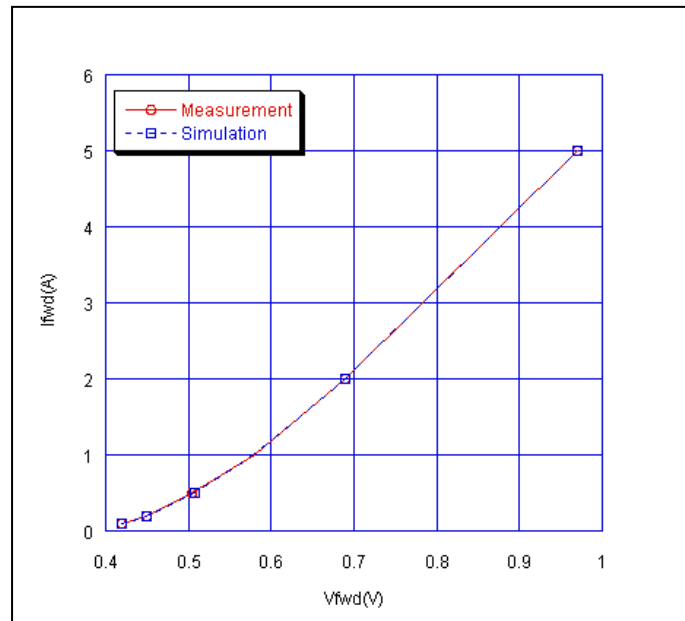


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

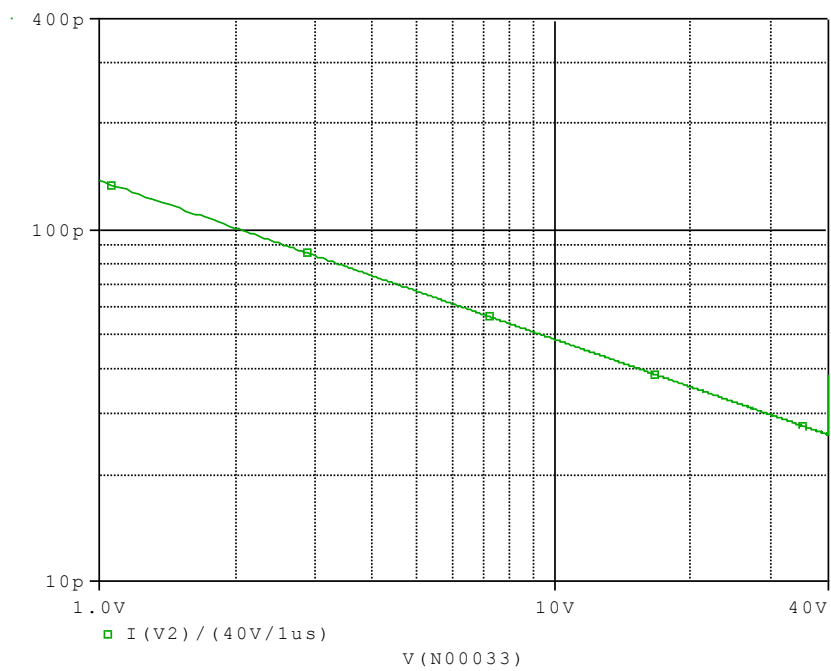


Simulation Result

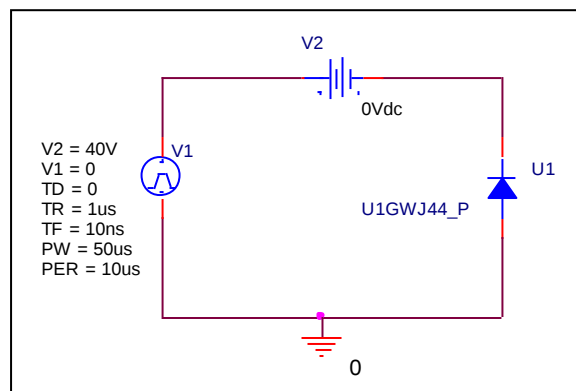
Ifwd(A)	Vfwd(V)		%Error
	Measurement	Simulation	
0.100	0.420	0.419	- 0.238
0.200	0.450	0.449	- 0.222
0.500	0.505	0.507	0.396
1.000	0.580	0.578	- 0.345
2.000	0.690	0.690	0.000
5.000	0.970	0.970	0.000

Capacitance Characteristic

Circuit Simulation Result

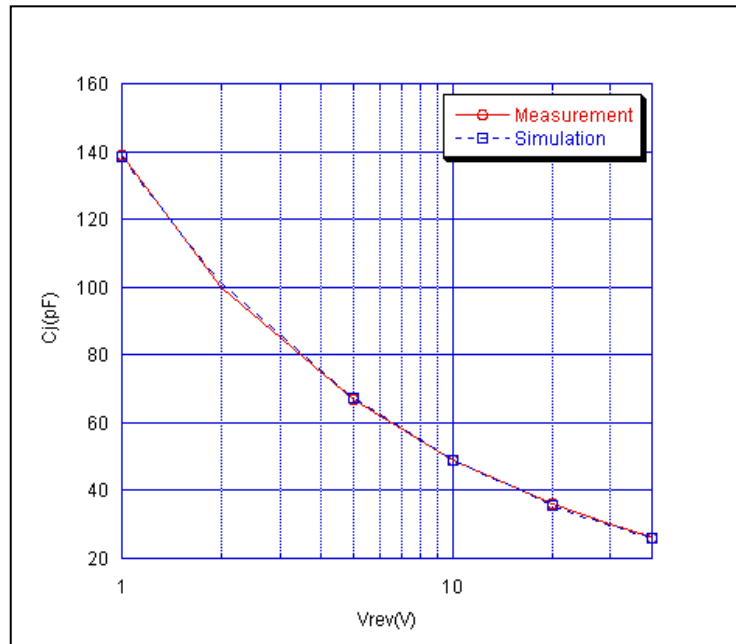


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

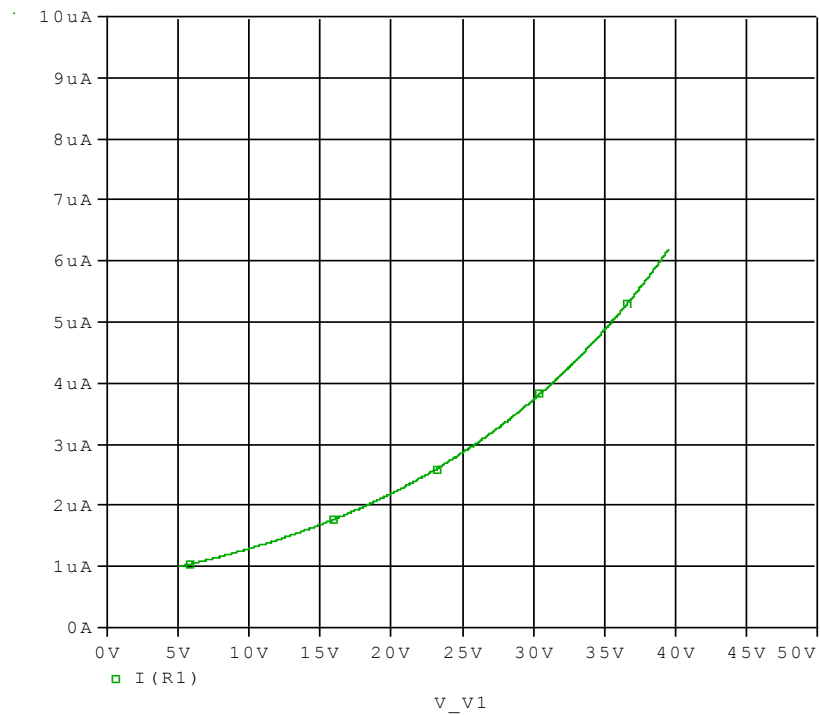


Simulation Result

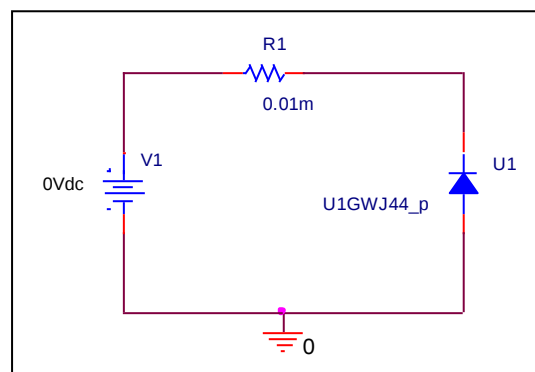
Vrev(V)	Cj(pF)		%Error
	Measurement	Simulation	
1	139.00	138.51	-0.35
2	100.00	101.18	1.18
5	67.00	67.14	0.21
10	49.00	48.82	-0.36
20	36.00	35.67	-0.91
30	30.00	29.72	-0.95
40	26.00	26.20	0.77

Reverse Characteristic

Circuit Simulation Result

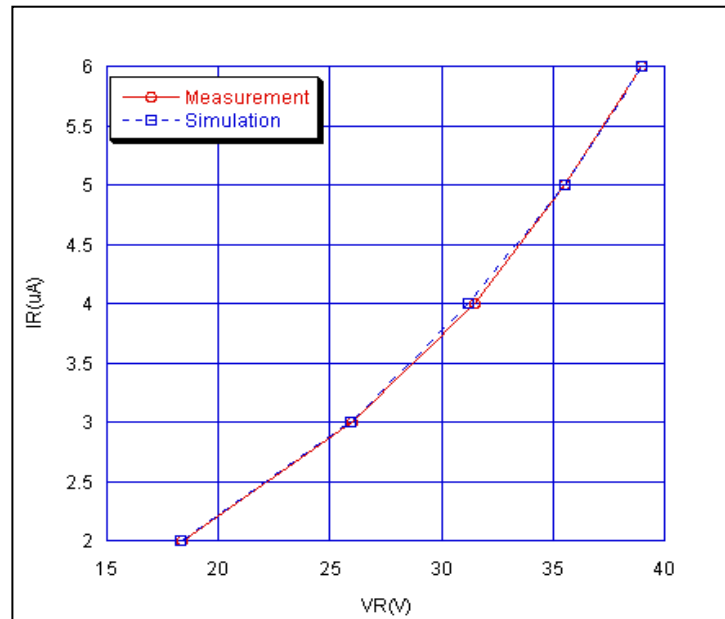


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

$I_R(\mu A)$	$V_R(V)$		Error(%)
	Measurement	Simulation	
2.000	18.380	18.273	- 0.582
3.000	26.000	25.917	- 0.319
4.000	31.500	31.237	- 0.835
5.000	35.500	35.520	0.056
6.000	39.000	38.951	- 0.126

Reverse Characteristic

Reference

