

Device Modeling Report

COMPONENTS:
DIODE/ SCHOOTKY RECTIFIER / STANDARD
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MANUFACTURER: SHINDENGEN

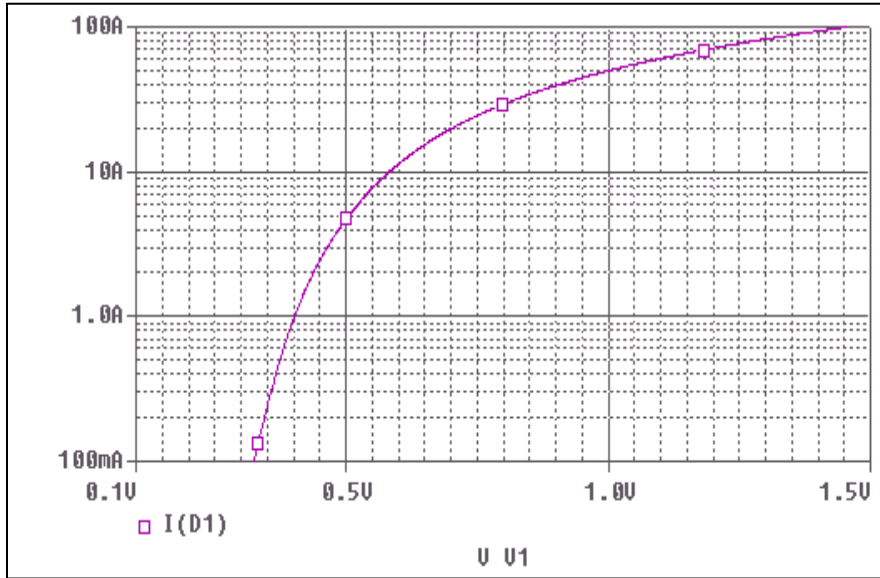


Bee Technologies Inc.

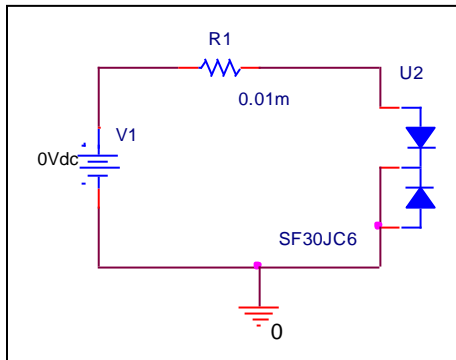
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

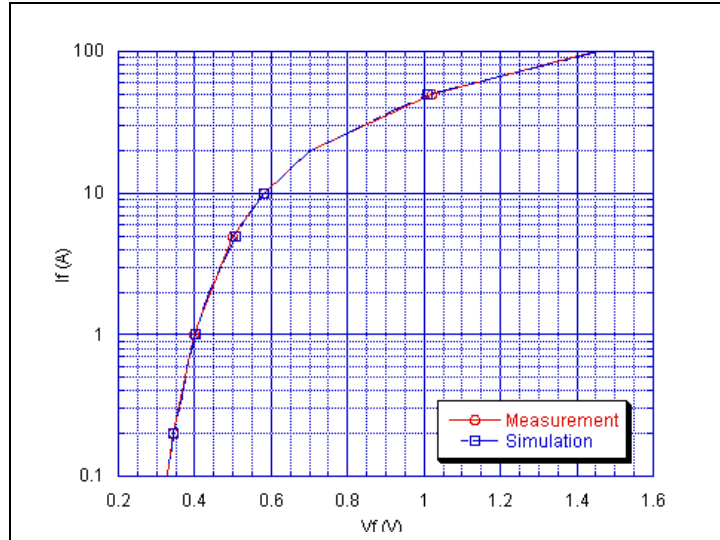


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

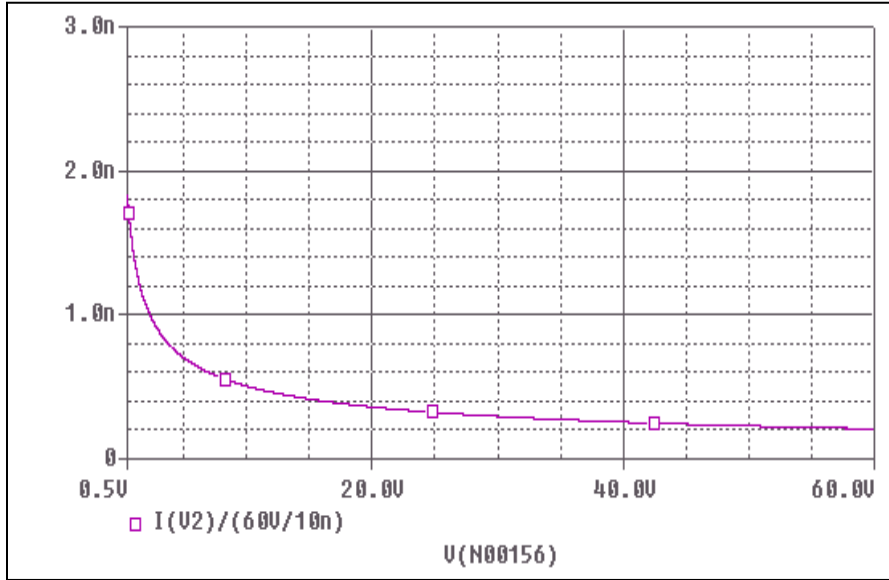


Simulation Result

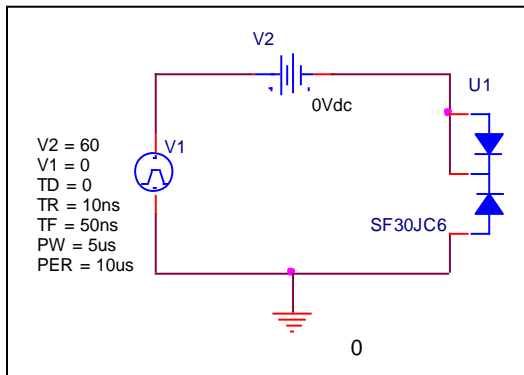
$I_{fwd}(A)$	$V_{fwd}(V)$ Measurement	$V_{fwd}(V)$ Simulation	%Error
0.1	0.325	0.324	-0.22
0.2	0.345	0.345	-0.12
0.5	0.375	0.374	-0.19
1	0.400	0.402	0.47
2	0.440	0.438	-0.48
5	0.500	0.506	1.20
10	0.580	0.583	0.52
20	0.700	0.703	0.37
50	1.020	1.010	-0.98
100	1.450	1.458	0.55

Junction Capacitance Characteristic

Circuit Simulation Result

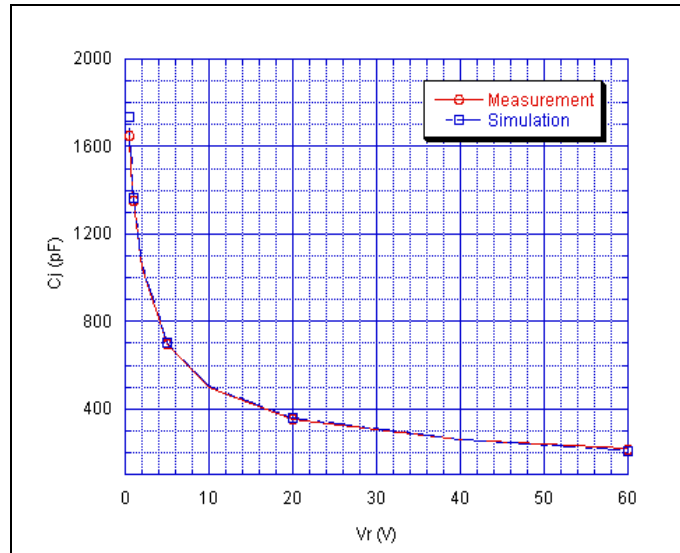


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

Vrev(V)	Cj(pF) Measurement	Cj(pF) Simulation	%Error
1	1350.00	1367.00	1.26
2	1050.00	1060.00	0.95
5	698.00	704.10	0.87
10	500.00	505.70	1.14
20	355.00	360.80	1.63
40	260.00	256.40	-1.38
60	210.00	209.50	-0.24