

Device Modeling Report

COMPONENTS:
DIODE/ SCHOOTTKY RECTIFIER / STANDARD
PART NUMBER: D1FM3
MANUFACTURER: SHINDENGEN

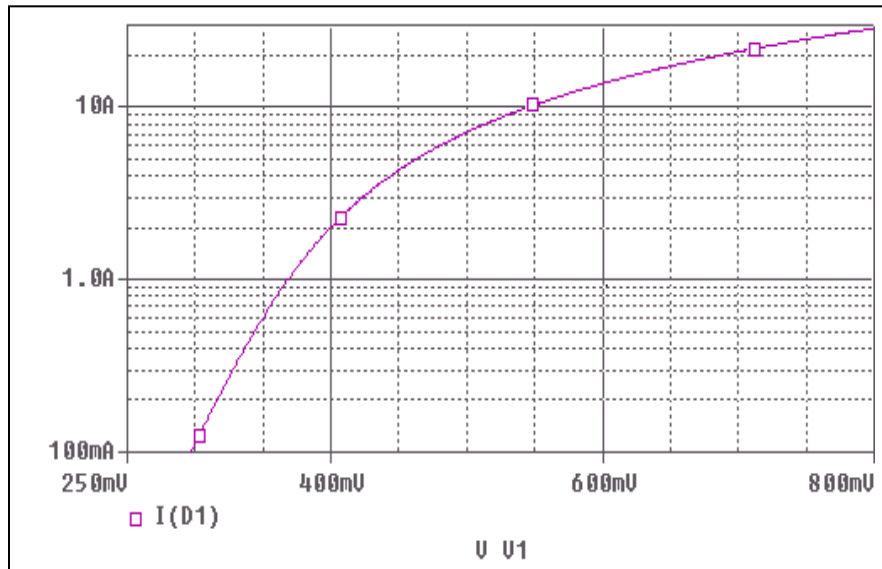


Bee Technologies Inc.

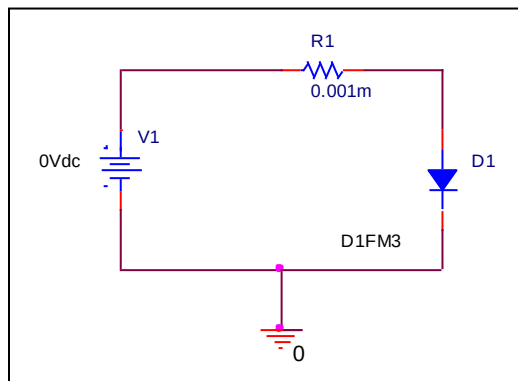
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

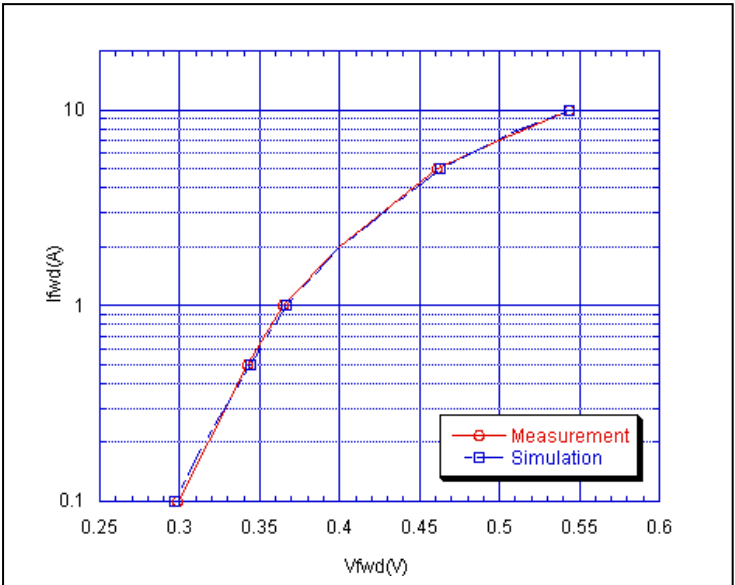


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

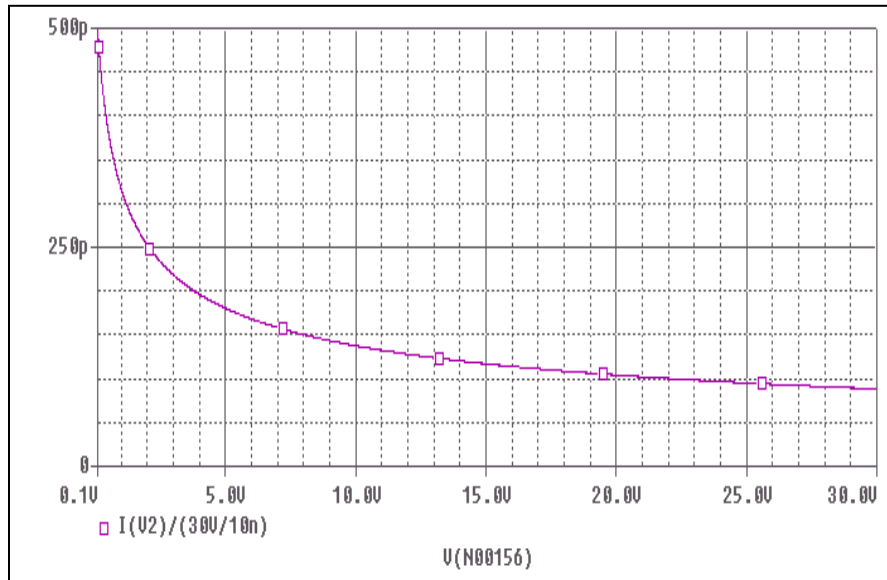


Simulation Result

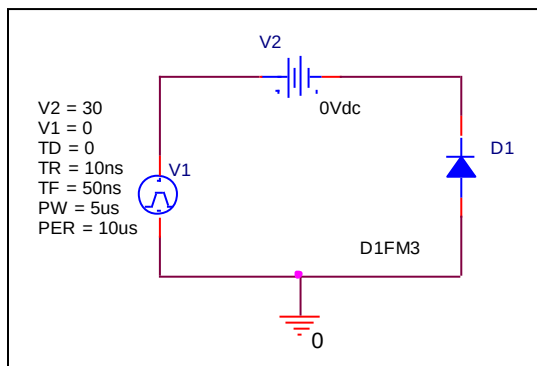
Ifwd(A)	Vfwd(V) Measurement	Vfwd(V) Simulation	%Error
0.1	0.299	0.297	-0.67
0.2	0.318	0.316	-0.63
0.5	0.342	0.344	0.58
1	0.365	0.367	0.55
2	0.398	0.400	0.50
5	0.461	0.463	0.43
10	0.543	0.544	0.18

Junction Capacitance Characteristic

Circuit Simulation Result

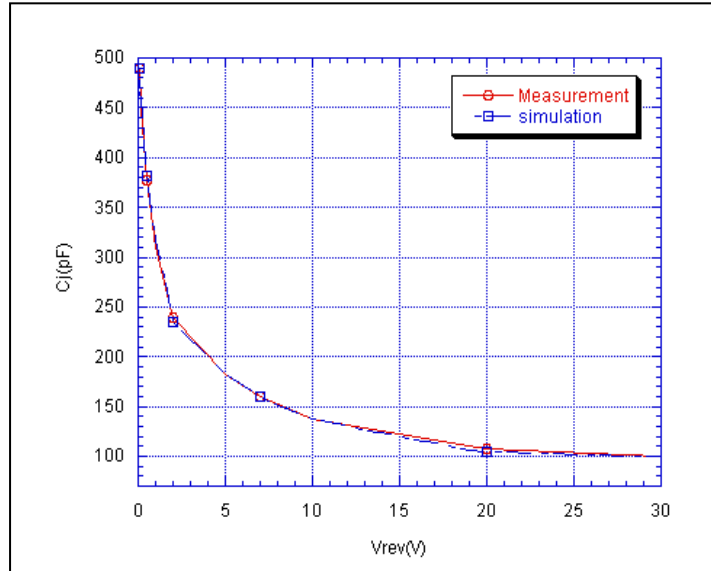


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

Vrev(V)	Cj(pF) Measurement	Cj(pF) Simulation	%Error
0.1	489.000	490.000	0.20
0.2	450.000	458.000	1.78
0.5	377.000	381.000	1.06
1	310.000	317.000	2.26
2	240.000	235.000	-2.08
5	183.000	182.000	-0.55
10	136.000	137.000	0.74
20	108.000	105.000	-2.78
30	97.500	98.000	0.51