

Device Modeling Report

COMPONENTS:

DIODE/ SCHOTTKY RECTIFIER / STANDARD

PART NUMBER: DG1H3

MANUFACTURER: SHINDENGEN

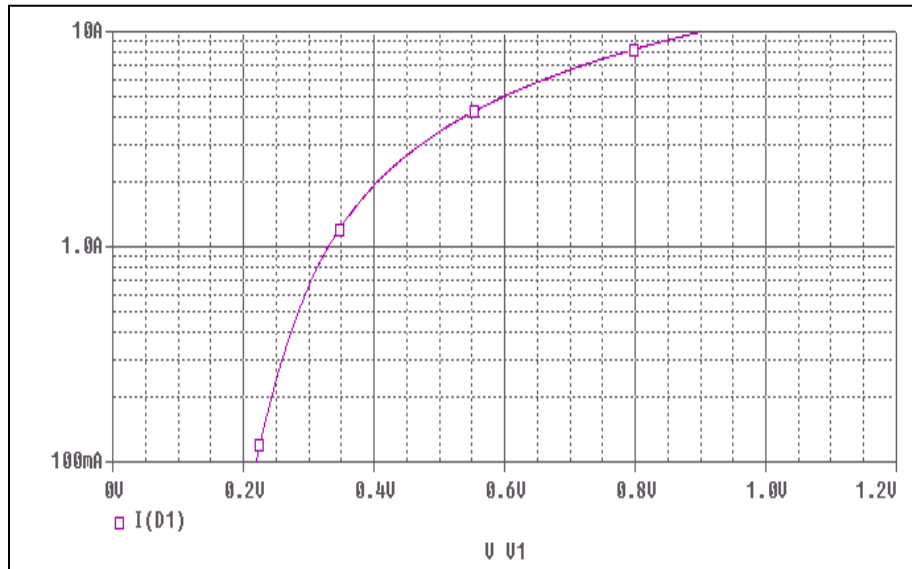


Bee Technologies Inc.

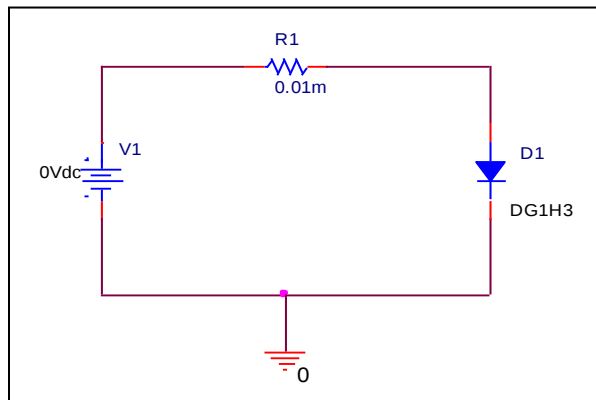
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

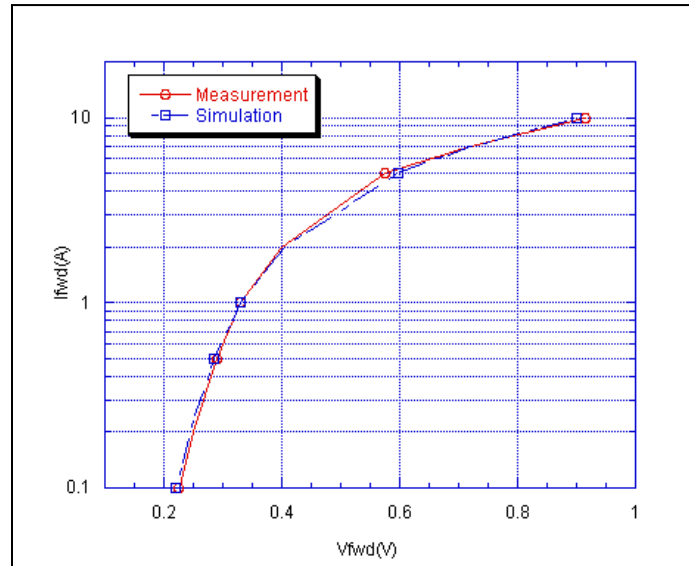


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

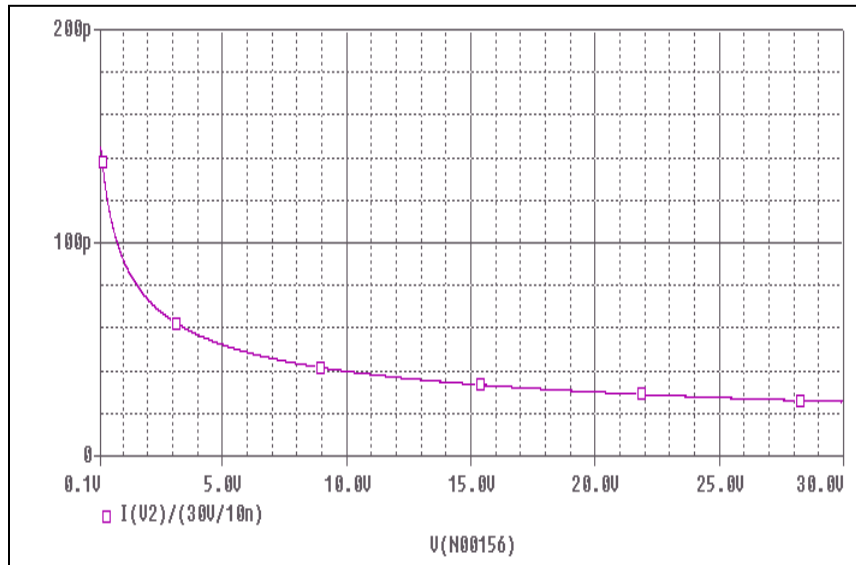


Simulation Result

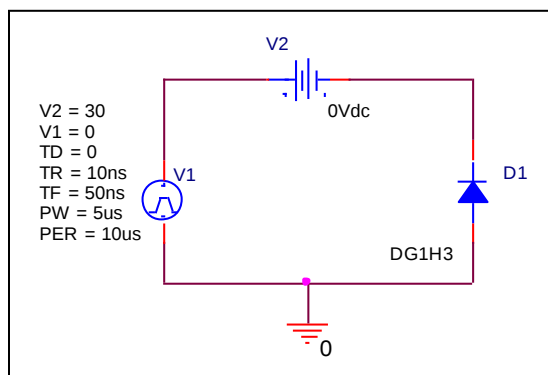
Ifwd(A)	Vfwd(V) Measurement	Vfwd(V) Simulation	%Error
0.1	0.225	0.220	-2.22
0.2	0.250	0.244	-2.40
0.5	0.290	0.284	-2.07
1	0.330	0.331	0.30
2	0.400	0.404	1.00
5	0.577	0.597	3.47
10	0.915	0.901	-1.53

Junction Capacitance Characteristic

Circuit Simulation Result

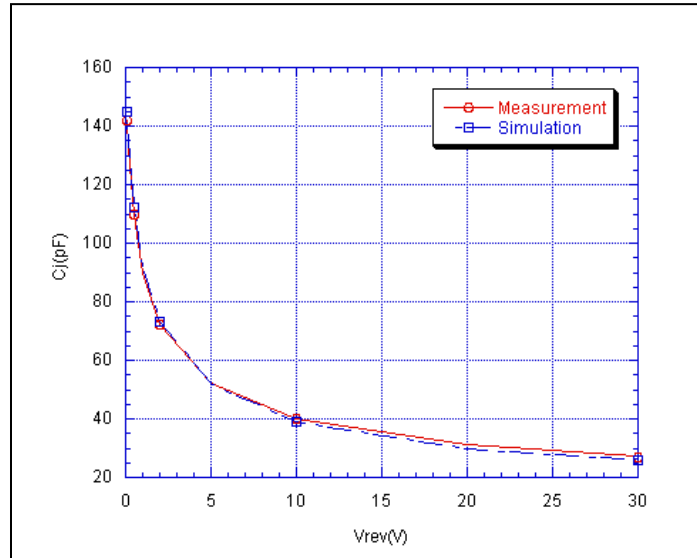


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

V_{rev} (V)	C_j (pF) Measurement	C_j (pF) Simulation	%Error
0.1	142.00	145.00	2.11
0.2	132.00	135.00	2.27
0.5	110.00	112.00	1.82
1	90.00	92.00	2.22
2	72.00	73.00	1.39
5	52.00	52.00	0.00
10	40.00	39.00	-2.50
20	31.00	30.00	-3.23
30	27.00	26.00	-3.70