

Device Modeling Report

COMPONENTS:
DIODE/ SCHOOTKY RECTIFIER / STANDARD
PART NUMBER: DG1M3
MANUFACTURER: SHINDENGEN

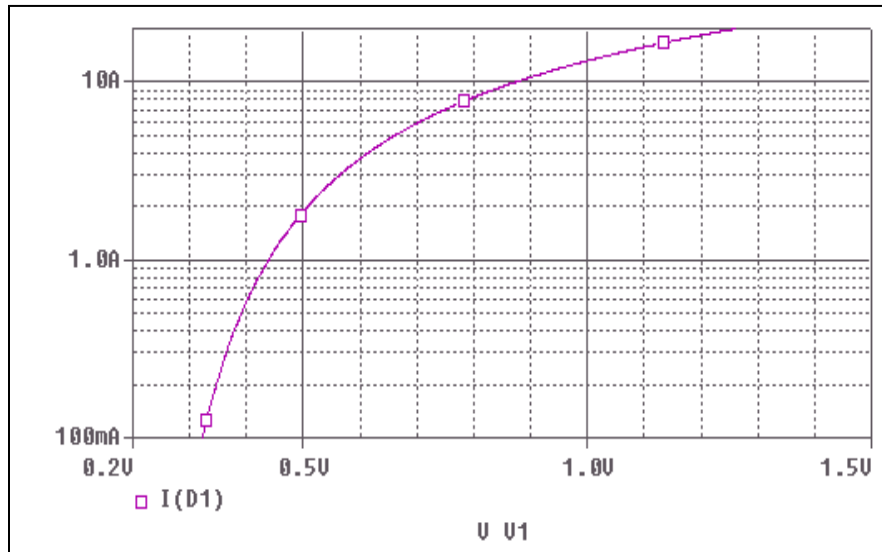


Bee Technologies Inc.

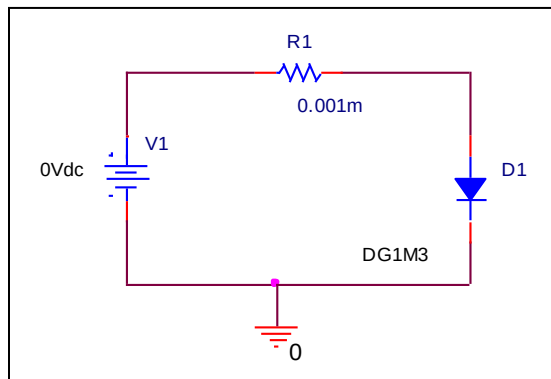
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

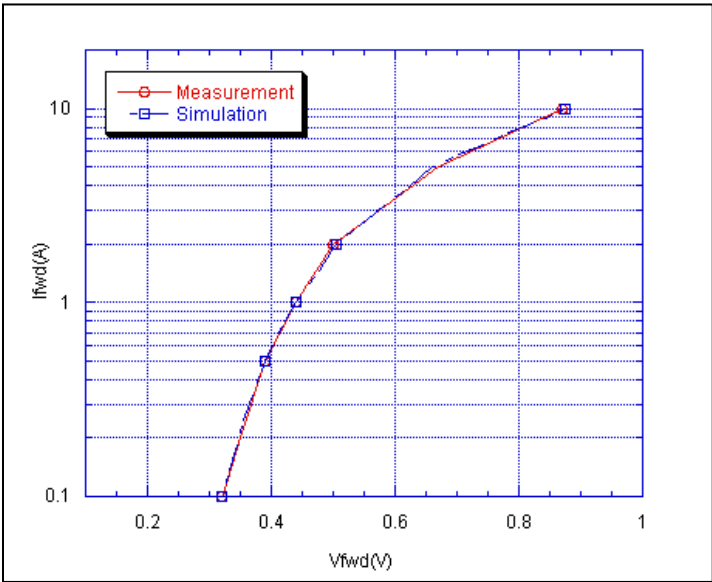


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

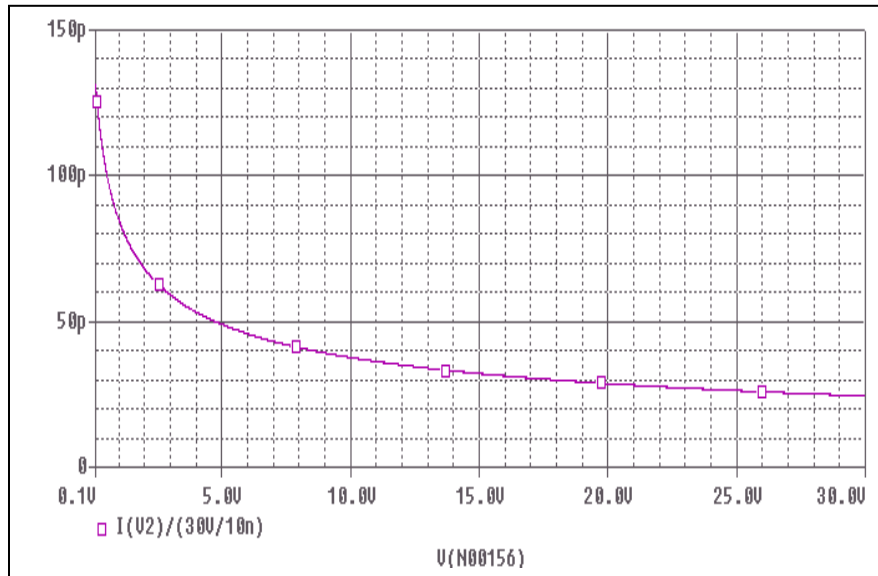


Simulation Result

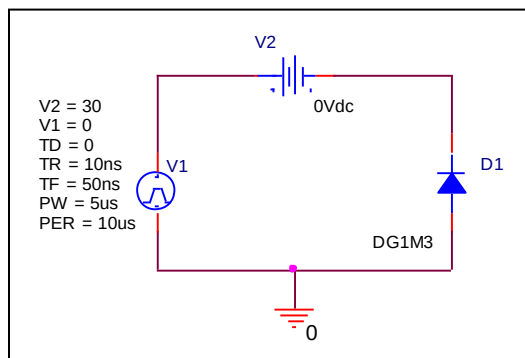
I_{fwd} (A)	V_{fwd} (V) Measurement	V_{fwd} (V) Simulation	%Error
0.1	0.320	0.321	0.31
0.2	0.350	0.347	-0.86
0.5	0.392	0.390	-0.51
1	0.440	0.439	-0.23
2	0.500	0.505	1.00
5	0.670	0.660	-1.49
10	0.870	0.874	0.46

Junction Capacitance Characteristic

Circuit Simulation Result

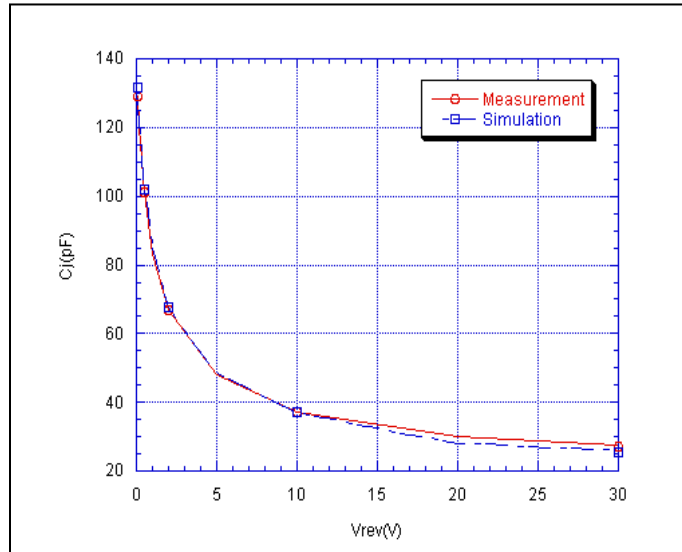


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

V_{rev} (V)	C_j (pF) Measurement	C_j (pF) Simulation	%Error
0.1	129.00	131.60	2.02
0.2	120.00	121.50	1.25
0.5	101.00	102.00	0.99
1	83.00	84.80	2.17
2	67.00	67.50	0.75
5	48.00	48.40	0.83
10	37.50	37.00	-1.33
20	29.00	28.10	-3.10
30	26.50	25.40	-4.15