

Device Modeling Report

COMPONENTS:
DIODE/ SCHOOTKY RECTIFIER / STANDARD
PART NUMBER: DG1M3A
MANUFACTURER: SHINDENGEN

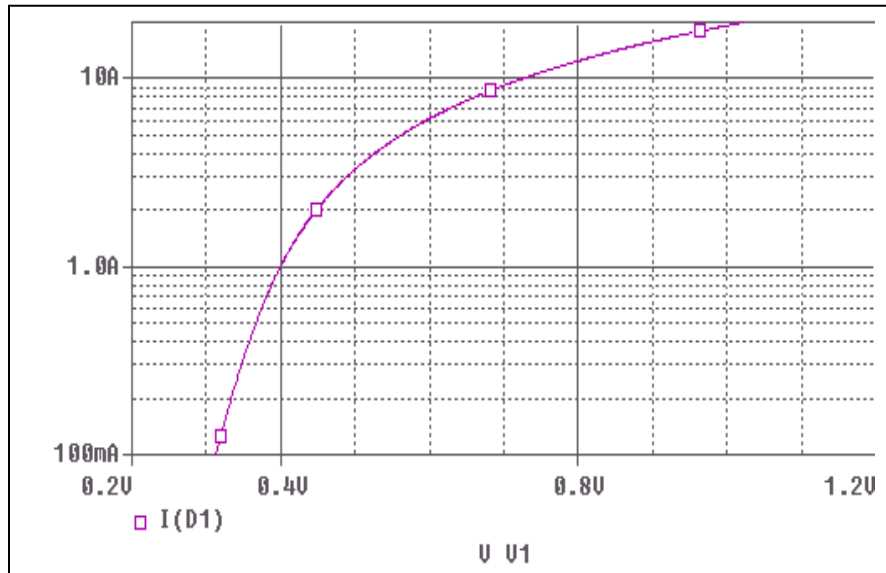


Bee Technologies Inc.

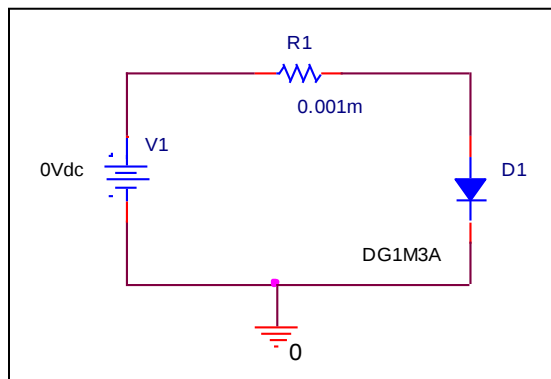
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

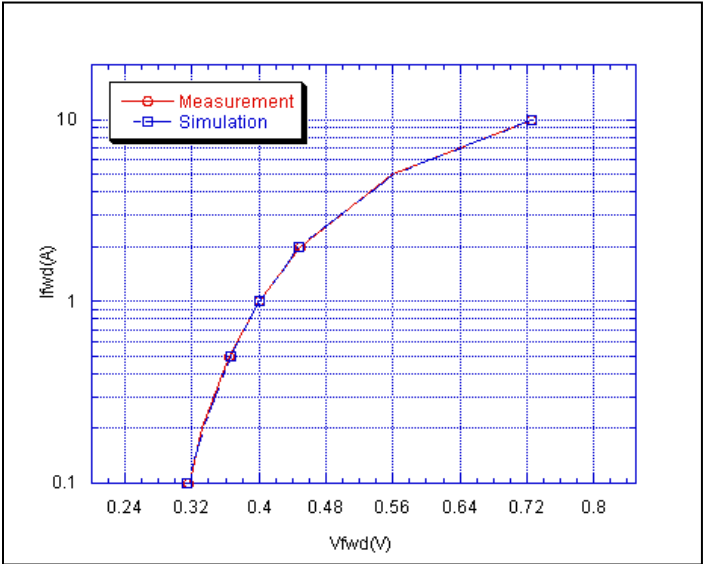


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

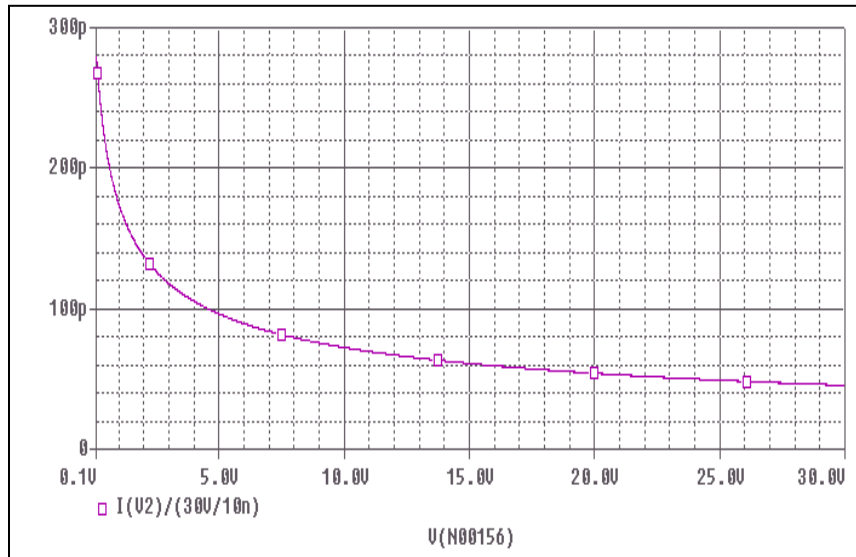


Simulation Result

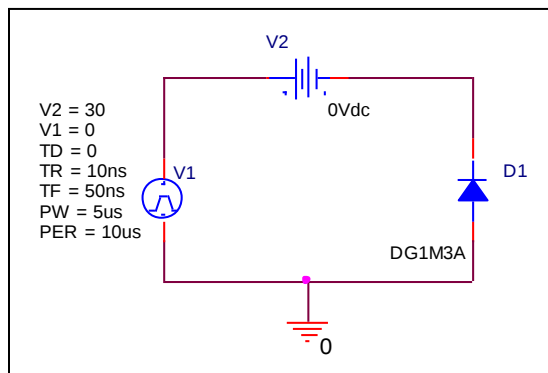
$I_{fwd}(A)$	$V_{fwd}(V)$ Measurement	$V_{fwd}(V)$ Simulation	%Error
0.1	0.315	0.313	-0.63
0.2	0.331	0.333	0.60
0.5	0.365	0.367	0.55
1	0.400	0.400	0.00
2	0.450	0.447	-0.67
5	0.560	0.561	0.18
10	0.725	0.726	0.14

Junction Capacitance Characteristic

Circuit Simulation Result

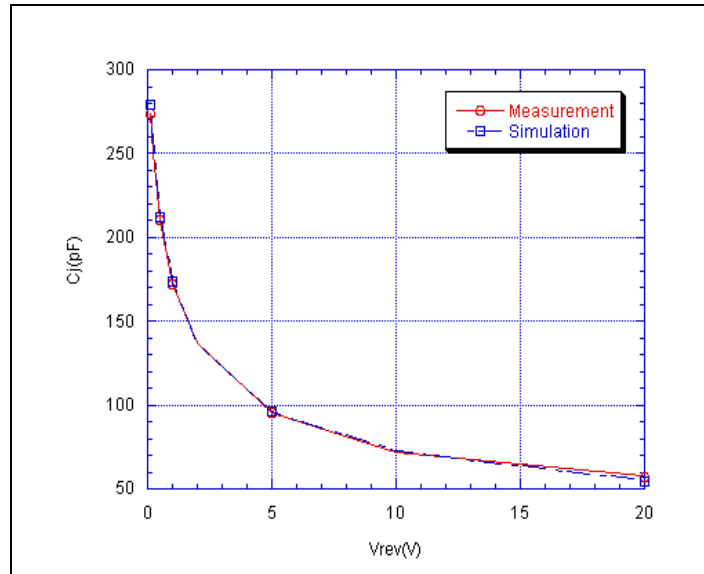


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

V_{rev} (V)	C_j (pF) Measurement	C_j (pF) Simulation	%Error
0.1	274.00	279.00	1.82
0.2	252.00	259.00	2.78
0.5	210.00	212.00	0.95
1	172.00	174.00	1.16
2	137.00	136.60	-0.29
5	95.00	96.00	1.05
10	72.00	72.40	0.56
20	56.00	54.00	-3.57