

Device Modeling Report

COMPONENTS:
DIODE/ SCHOOTKY RECTIFIER / STANDARD
PART NUMBER: DE10S3L
MANUFACTURER: SHINDENGEN

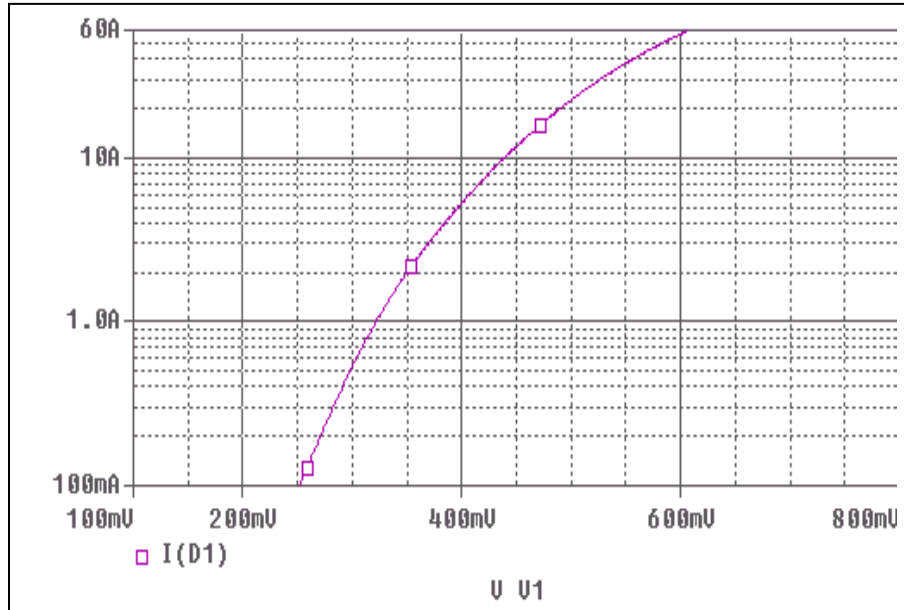


Bee Technologies Inc.

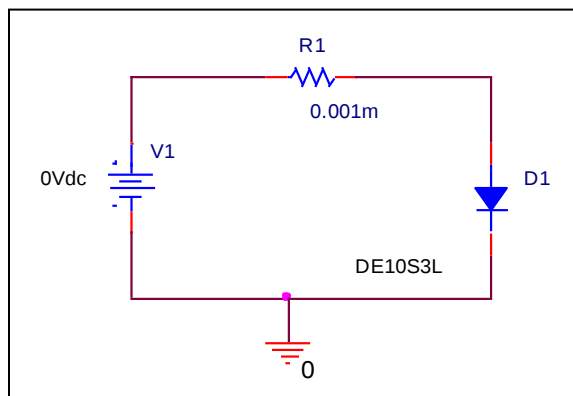
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

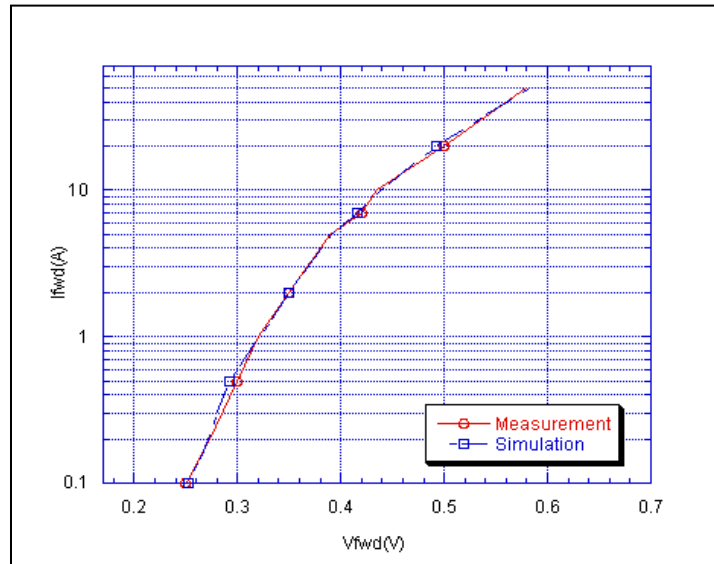


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

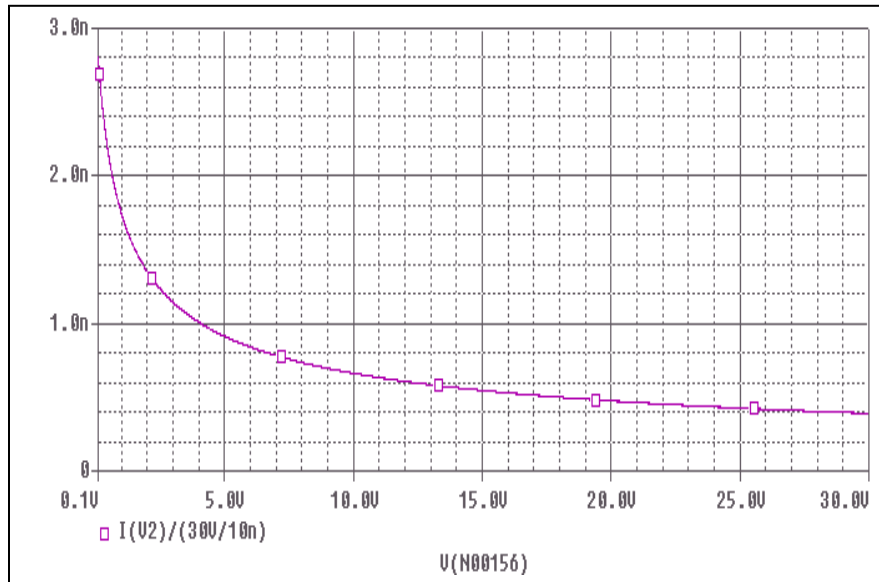


Simulation Result

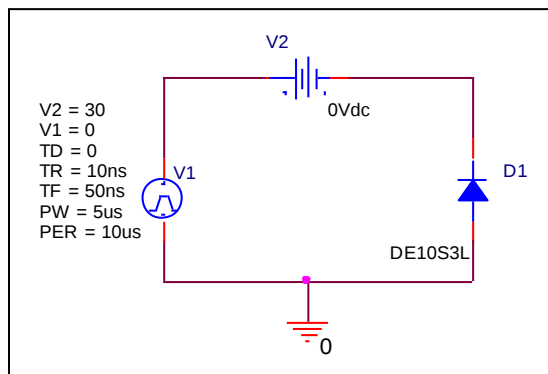
Ifwd(A)	Vfwd(V) Measurement	Vfwd(V) Simulation	%Error
0.1	0.250	0.252	0.80
0.2	0.273	0.271	-0.73
0.5	0.300	0.292	-2.67
1	0.320	0.321	0.31
2	0.351	0.350	-0.28
5	0.390	0.391	0.26
10	0.435	0.440	1.15
20	0.500	0.492	-1.60
50	0.580	0.583	0.52

Junction Capacitance Characteristic

Circuit Simulation Result

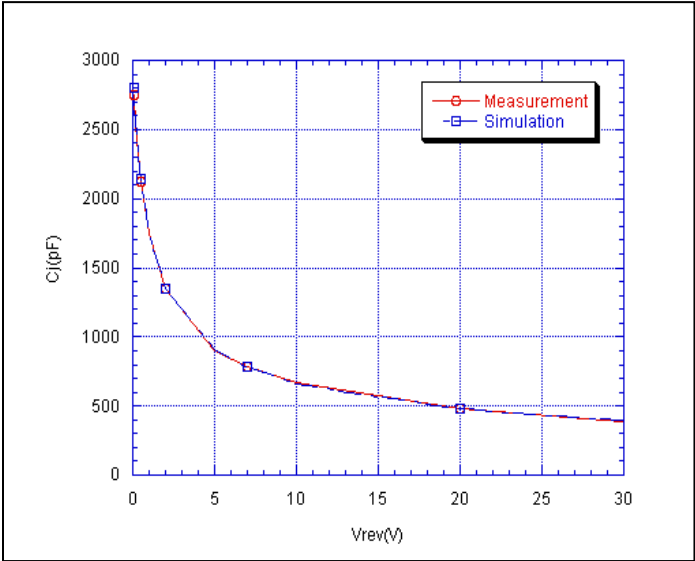


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

Vrev(V)	Cj(pF) Measurement	Cj(pF) Simulation	%Error
0.1	2750.00	2800.00	1.82
0.2	2530.00	2550.00	0.79
0.5	2120.00	2140.00	0.94
1	1760.00	1750.00	-0.57
2	1350.00	1353.00	0.22
5	900.00	913.00	1.44
10	670.00	662.00	-1.19
20	485.00	478.00	-1.44
30	380.00	392.00	3.16