

Device Modeling Report

COMPONENTS:
DIODE/ SCHOOTTKY RECTIFIER /STANDARD
PART NUMBER: DE10P3
MANUFACTURER: SHINDENGEN

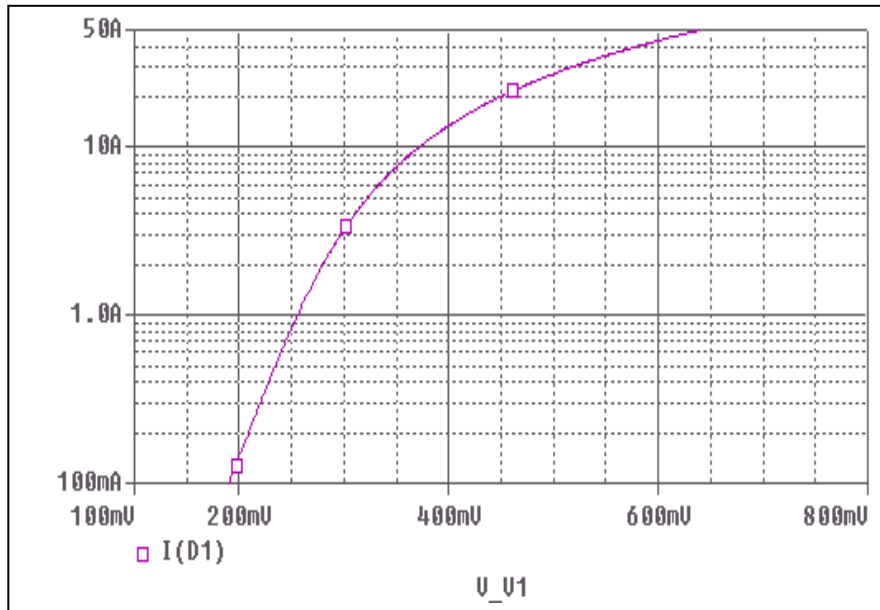


Bee Technologies Inc.

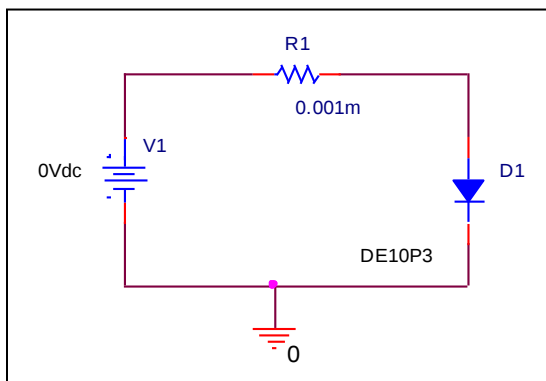
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

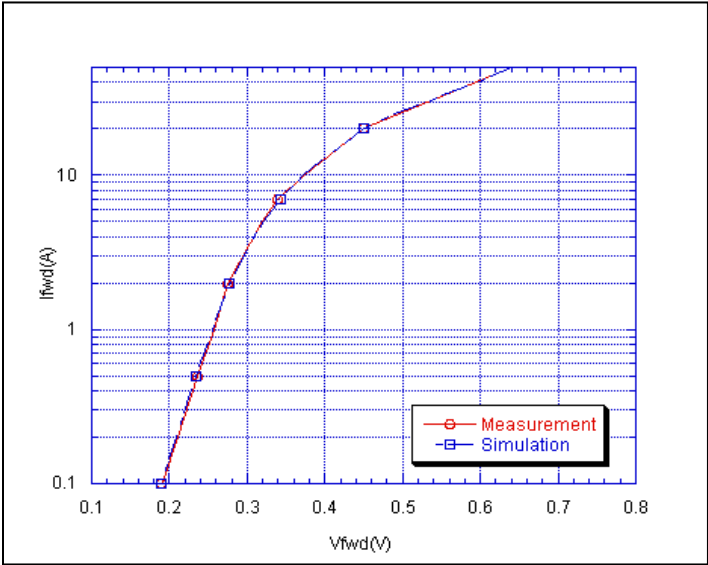


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

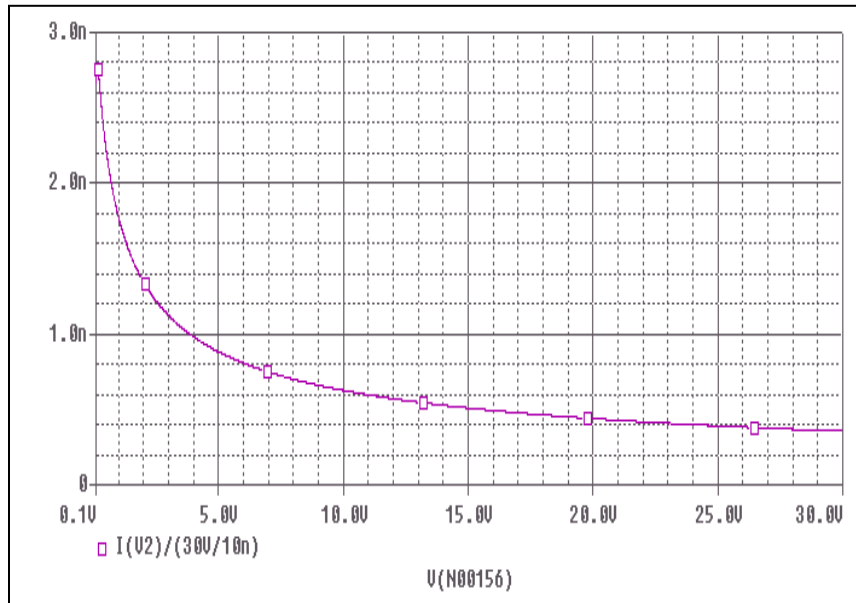


Simulation Result

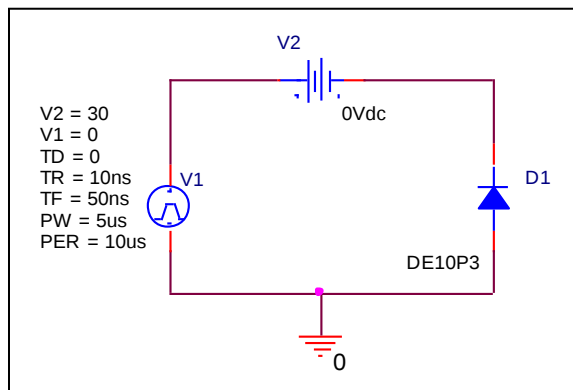
Ifwd(A)	Vfwd(V) Measurement	Vfwd(V) Simulation	%Error
0.1	0.192	0.190	-1.04
0.2	0.210	0.209	-0.48
0.5	0.237	0.235	-0.84
1	0.258	0.256	-0.78
2	0.275	0.278	1.09
5	0.320	0.321	0.31
10	0.375	0.372	-0.80
20	0.453	0.450	-0.66
50	0.640	0.641	0.16

Junction Capacitance Characteristic

Circuit Simulation Result

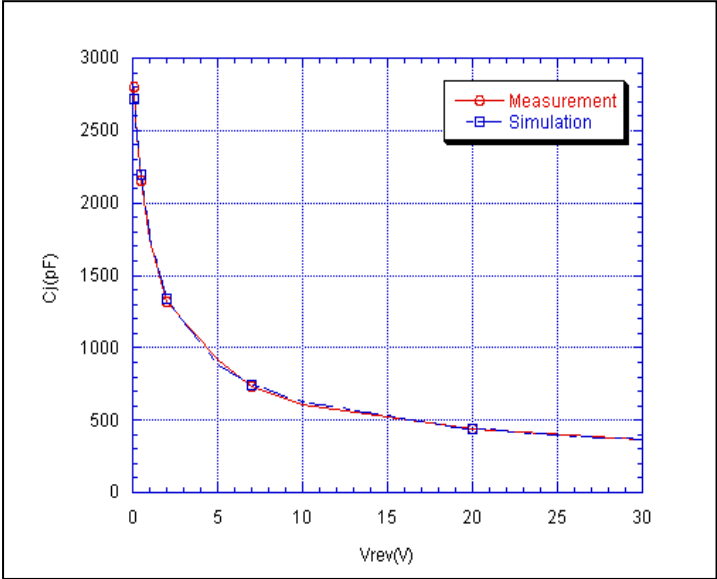


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

Vrev(V)	Cj(pF) Measurement	Cj(pF) Simulation	%Error
0.1	2800.000	2720.000	-2.86
0.2	2580.000	2600.000	0.78
0.5	2150.000	2200.000	2.33
1	1750.000	1770.000	1.14
2	1320.000	1340.000	1.52
5	920.000	890.000	-3.26
10	610.000	625.000	2.46
20	437.000	438.000	0.23
30	362.000	360.000	-0.55