

Device Modeling Report

COMPONENTS:
DIODE/ SCHOOTTKY RECTIFIER / STANDARD
PART NUMBER: DF10SC9
MANUFACTURER: SHINDENGEN

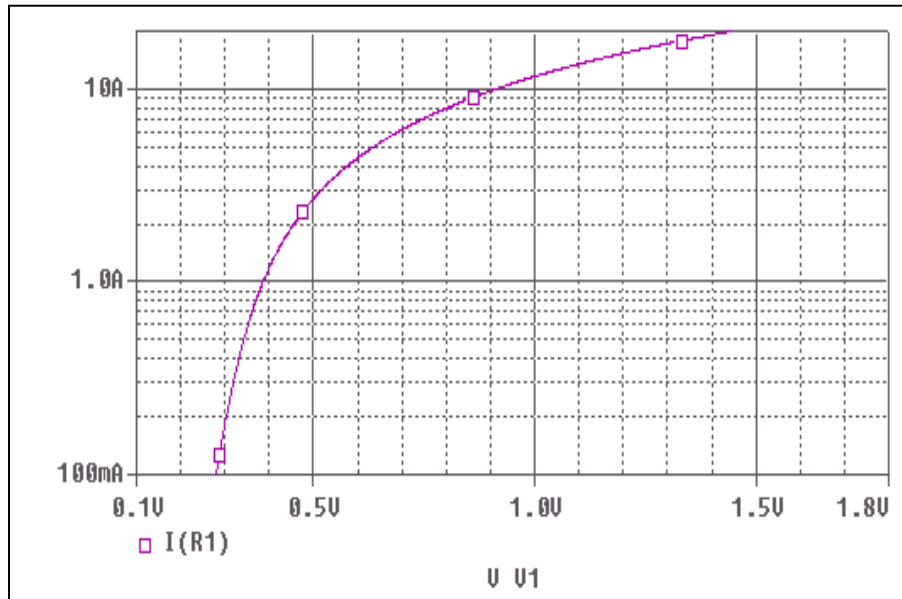


Bee Technologies Inc.

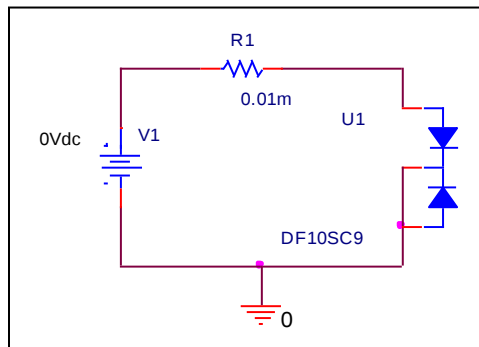
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

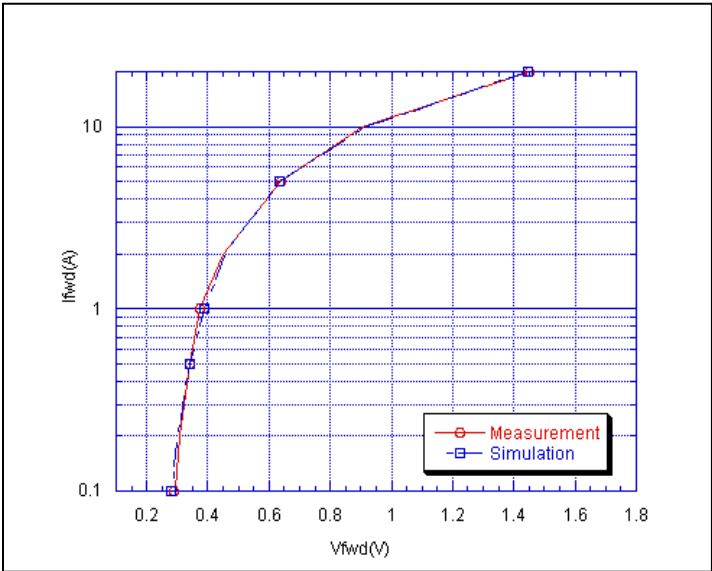


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

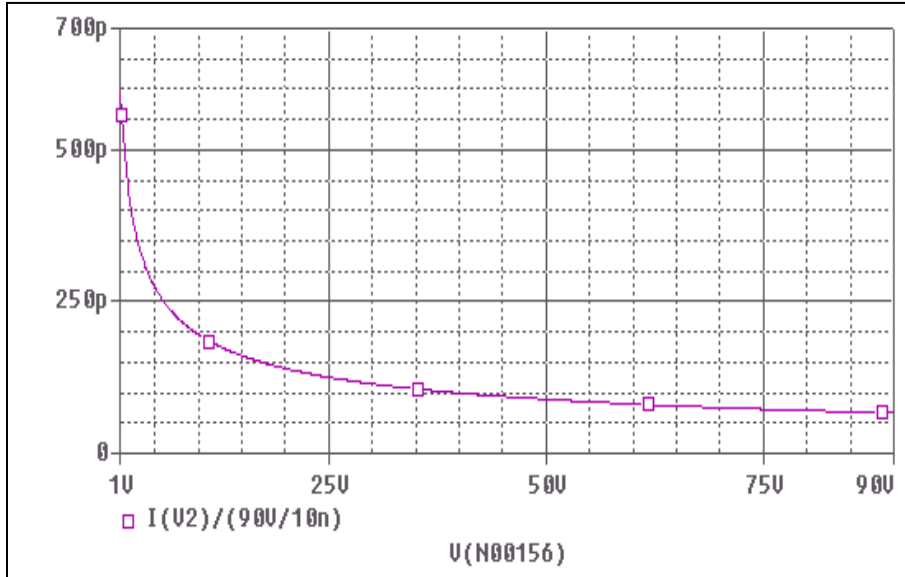


Simulation Result

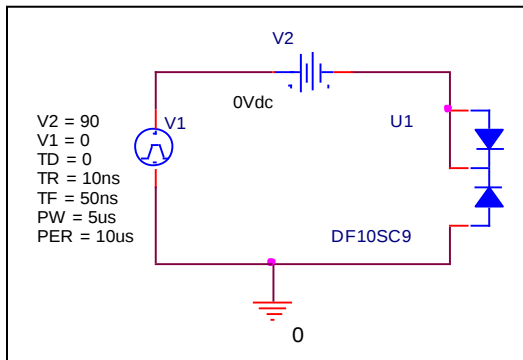
Ifwd(A)	Vfwd(V) Measurement	Vfwd(V) Simulation	%Error
0.1	0.290	0.280	-3.45
0.2	0.310	0.303	-2.29
0.5	0.340	0.342	0.65
1	0.375	0.386	2.93
2	0.450	0.456	1.27
5	0.640	0.635	-0.83
10	0.905	0.913	0.92
20	1.450	1.447	-0.19

Junction Capacitance Characteristic

Circuit Simulation Result

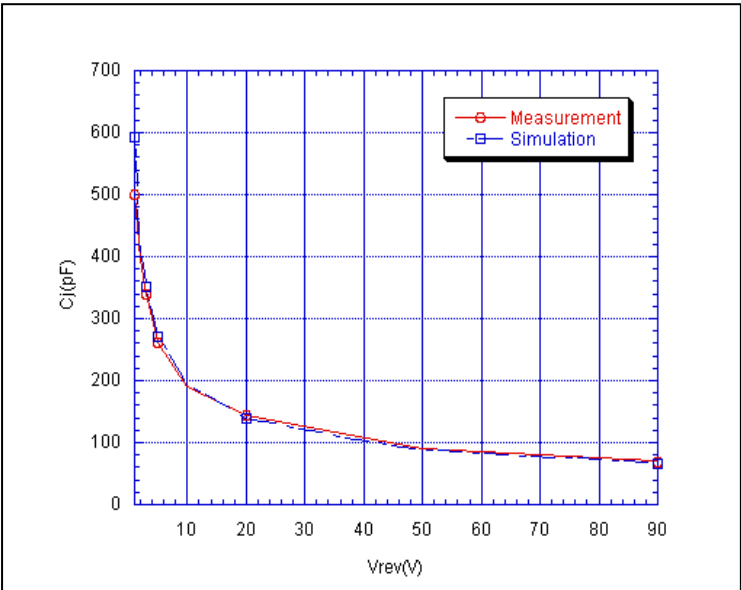


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

Vrev(V)	Cj(pF) Measurement	Cj(pF) Simulation	%Error
1	500.00	592.20	18.44
2	395.00	410.00	3.80
5	260.00	270.00	3.85
10	190.00	195.90	3.11
20	143.00	139.90	-2.17
50	90.00	89.00	-1.11
90	68.00	66.60	-2.06