

Device Modeling Report

COMPONENTS:
DIODE/ SCHOTTKY RECTIFIER/STANDARD
PART NUMBER: RK39
MANUFACTURER: SANKEN

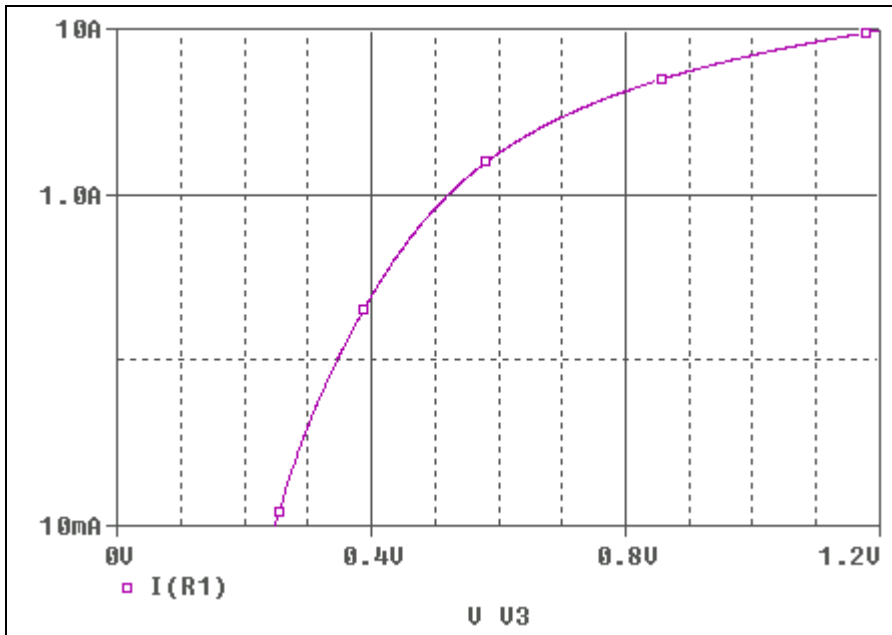


Bee Technologies Inc.

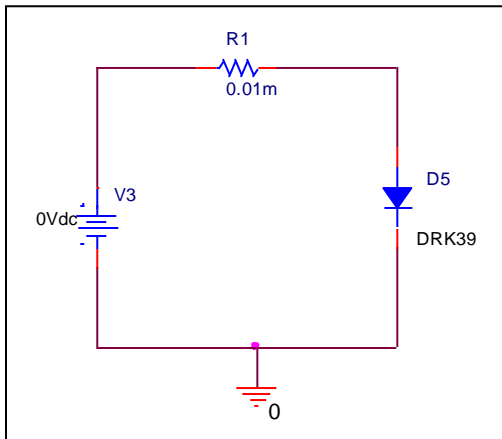
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

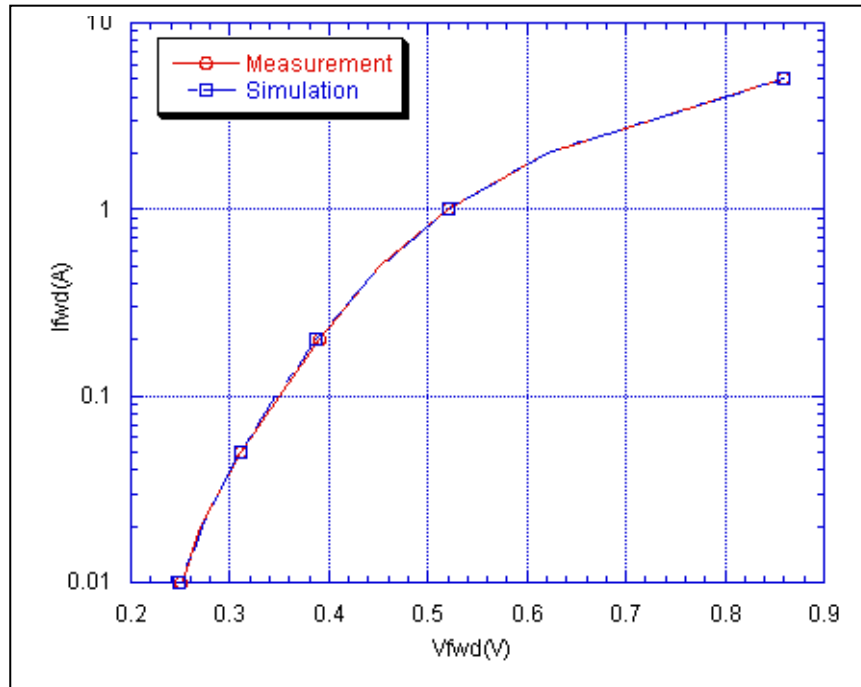


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

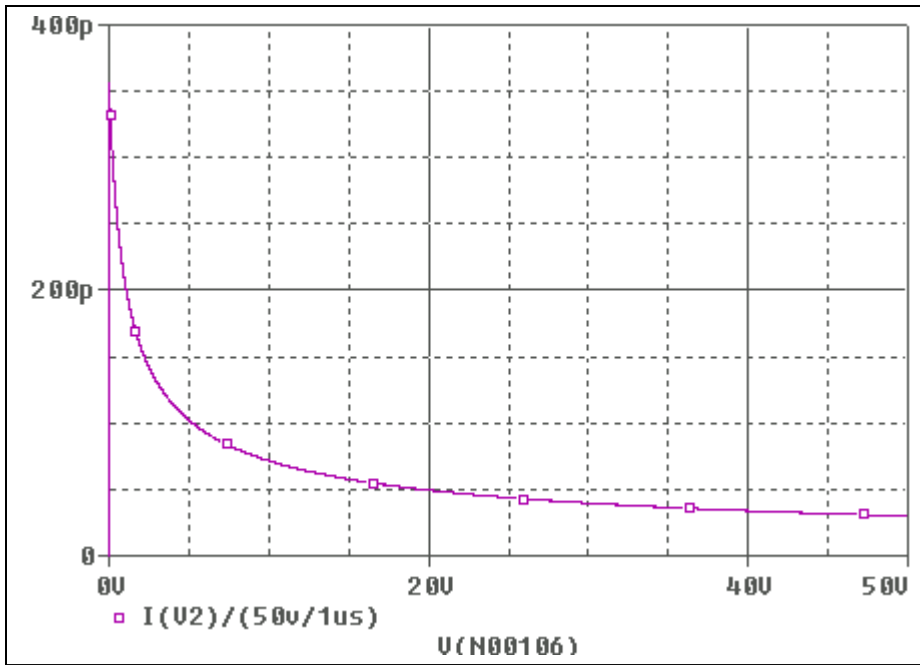


Simulation Result

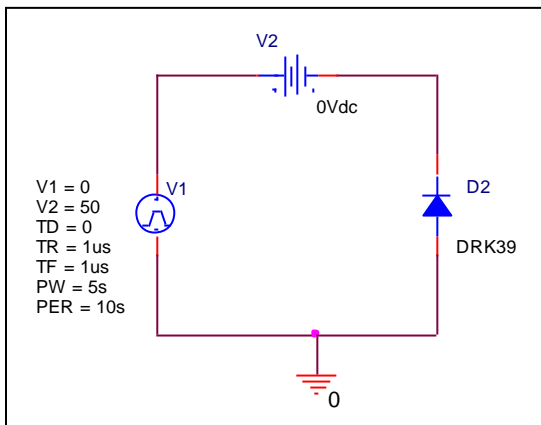
Ifwd(A)	Vfwd(V) Measurement	Vfwd(V) Simulation	%Error
0.01	0.25	0.25	-0.40
0.02	0.27	0.27	0.74
0.05	0.31	0.31	0.32
0.1	0.35	0.35	-1.43
0.2	0.39	0.39	-0.77
0.5	0.45	0.45	0.67
1	0.52	0.52	0.00
2	0.62	0.62	0.00
5	0.86	0.86	-0.12

Junction Capacitance Characteristic

Circuit Simulation Result

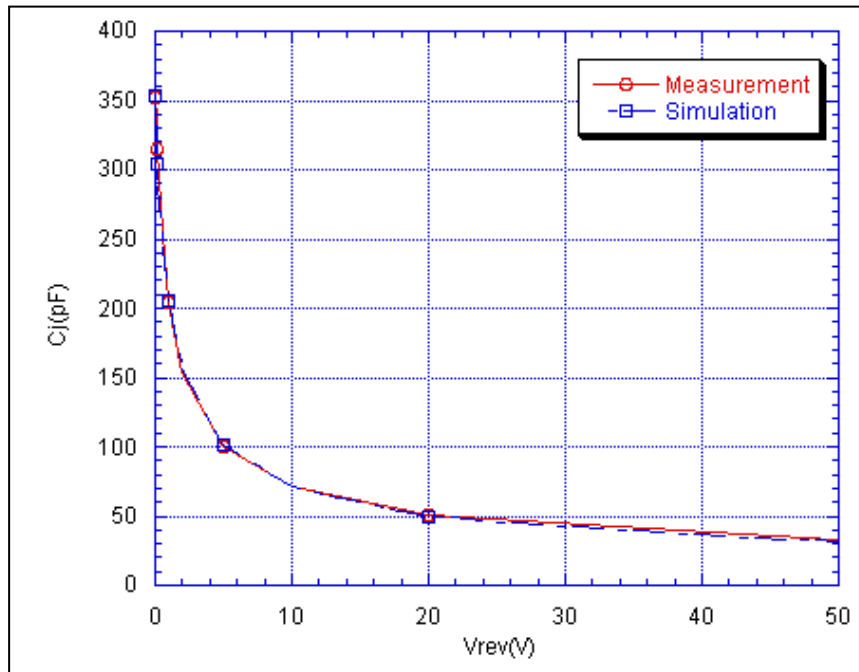


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

Vrev(V)	Cj(pF) Measurement	Cj(pF) Simulation	%Error
0	352.74	354.02	0.36
0.1	338.85	327.36	-3.39
0.2	315.71	303.74	-3.79
0.5	255.15	254.01	-0.45
1	203.82	205.06	0.61
2	154.14	155.91	1.15
5	100.19	102.10	1.91
10	71.70	71.63	-0.09
20	51.34	49.45	-3.68
50	31.15	30.02	-3.60