

Device Modeling Report

COMPONENTS:

DIODE/ SCHOTTKY RECTIFIER/PROFESSIONAL

PART NUMBER: RK39

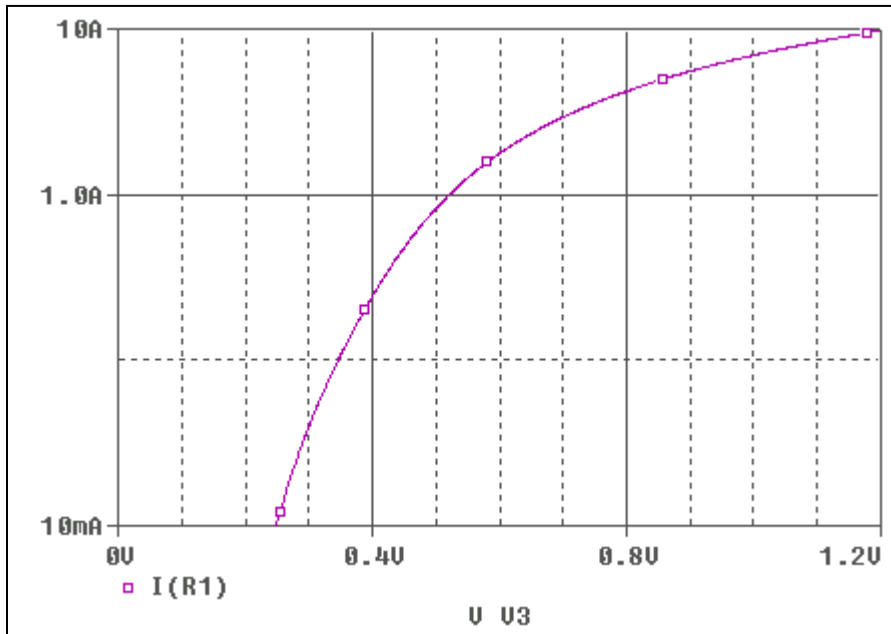
MANUFACTURER: SANKEN



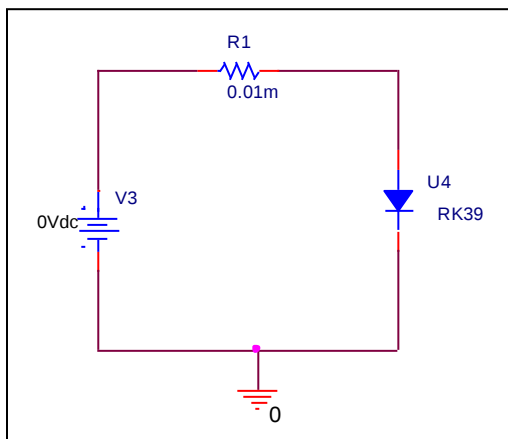
Bee Technologies Inc.

Forward Current Characteristic

Circuit Simulation Result

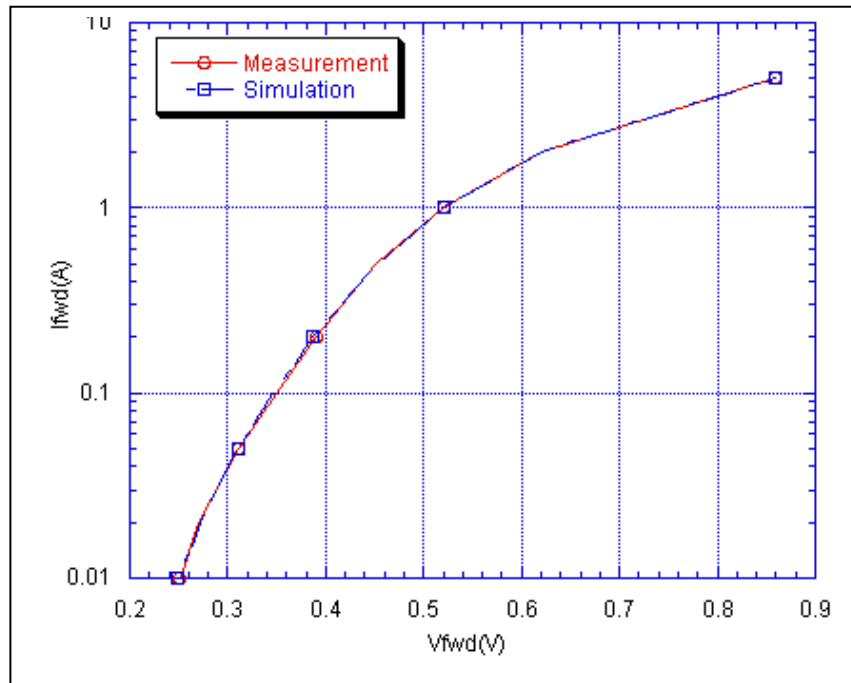


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

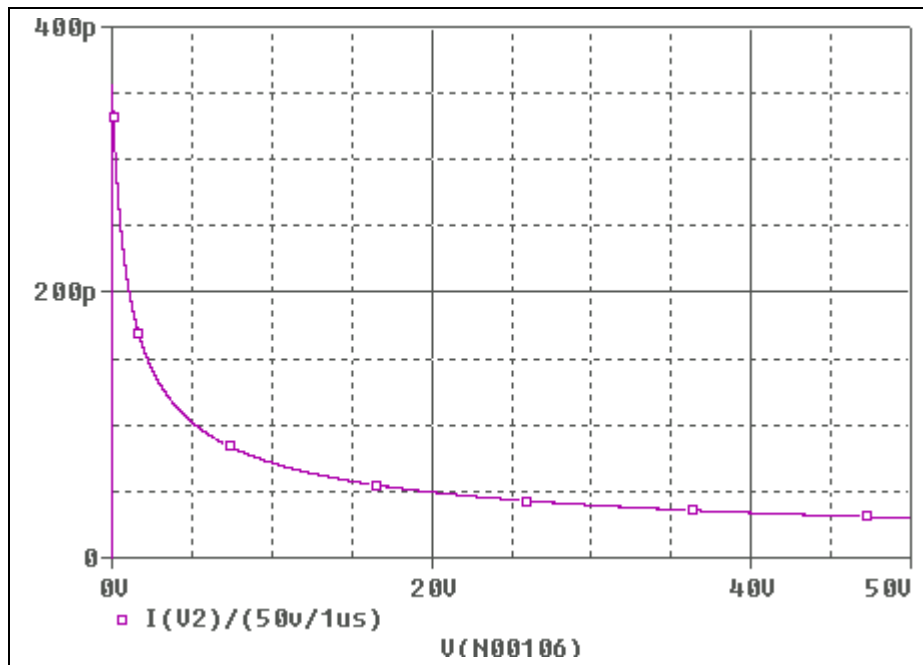


Simulation Result

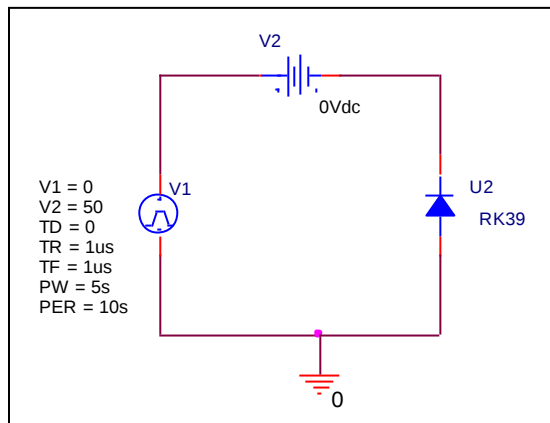
Ifwd(A)	Vfwd(V) Measurement	Vfwd(V) Simulation	%Error
0.01	0.25	0.25	-0.40
0.02	0.27	0.27	0.74
0.05	0.31	0.31	0.32
0.1	0.35	0.35	-1.43
0.2	0.39	0.39	-0.77
0.5	0.45	0.45	0.67
1	0.52	0.52	0.00
2	0.62	0.62	0.00
5	0.86	0.86	-0.12

Junction Capacitance Characteristic

Circuit Simulation Result

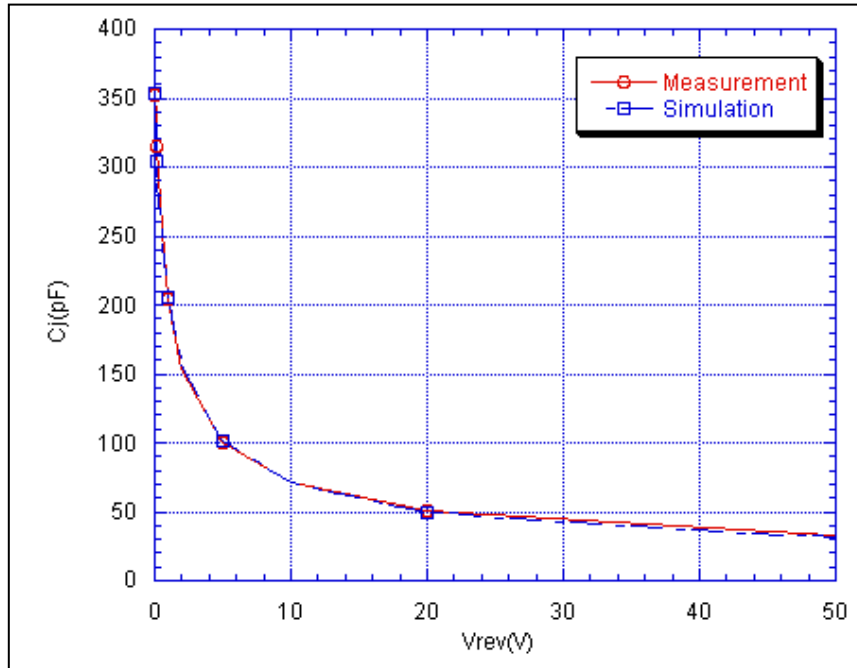


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

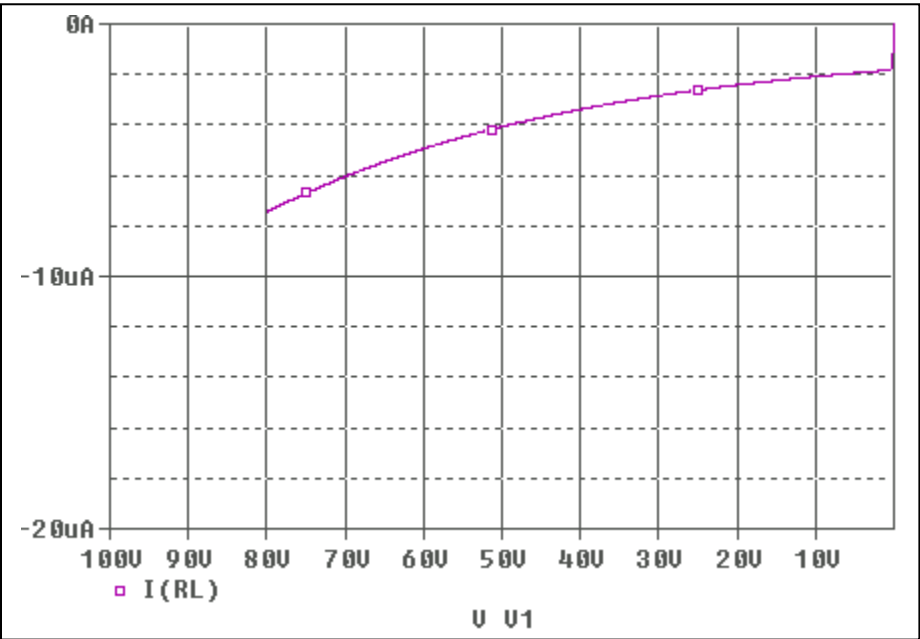


Simulation Result

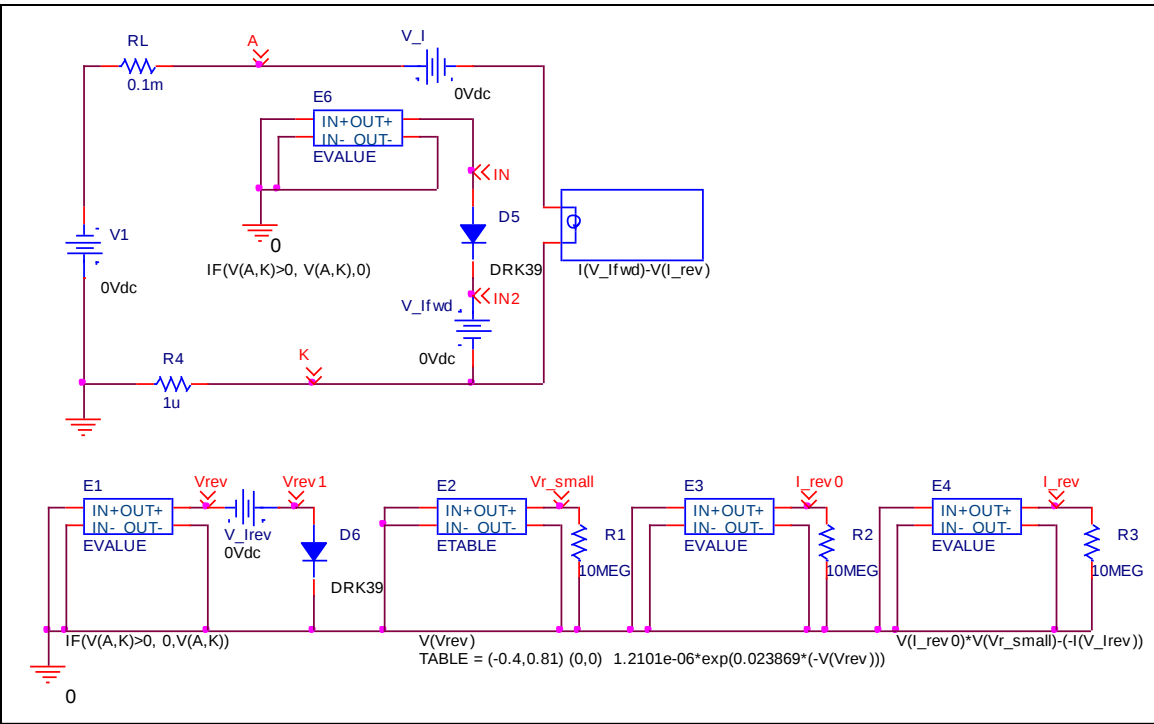
V_{rev} (V)	C_j (pF) Measurement	C_j (pF) Simulation	%Error
0	352.74	355.78	0.86
0.1	338.85	327.83	-3.25
0.2	315.71	303.80	-3.77
0.5	255.15	254.09	-0.42
1	203.82	205.65	0.90
2	154.14	155.69	1.01
5	100.19	102.10	1.91
10	71.70	71.65	-0.07
20	51.34	49.48	-3.63
50	31.15	30.09	-3.39

Reverse Characteristic

Circuit Simulation Result

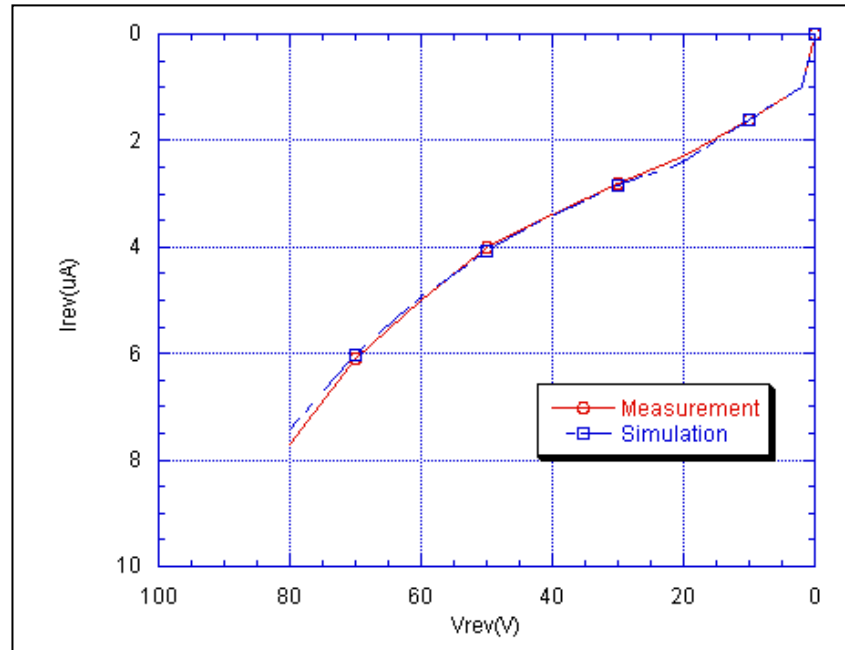


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

$V_{rev}(V)$	$I_{rev}(\mu A)$ Measurement	$I_{rev}(\mu A)$ Simulation	%Error
20	2.30	2.40	4.35
30	2.80	2.84	1.43
40	3.40	3.38	-0.59
50	4.00	4.07	1.75
60	5.00	4.94	-1.20
70	6.10	6.04	-0.98
80	7.70	7.45	-3.25

Reverse Characteristic

Reference

