

Device Modeling Report

COMPONENTS:

DIODE/ SCHOTTKY RECTIFIER/PROFESSIONAL

PART NUMBER: EK13

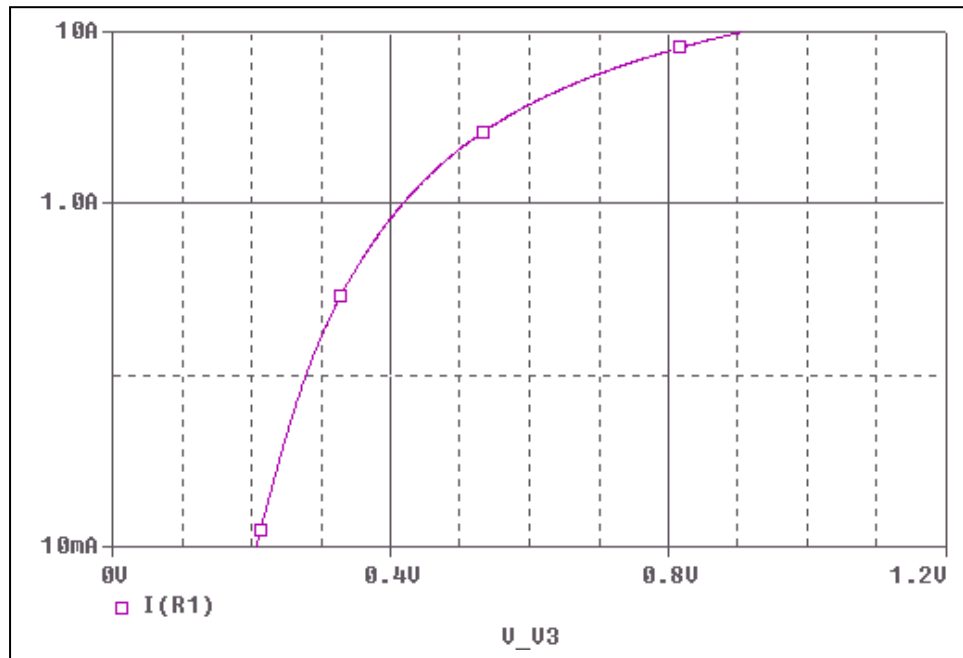
MANUFACTURER: SANKEN



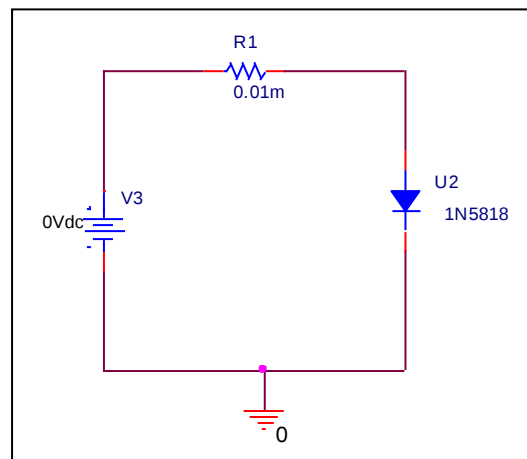
Bee Technologies Inc.

Forward Current Characteristic

Circuit Simulation Result

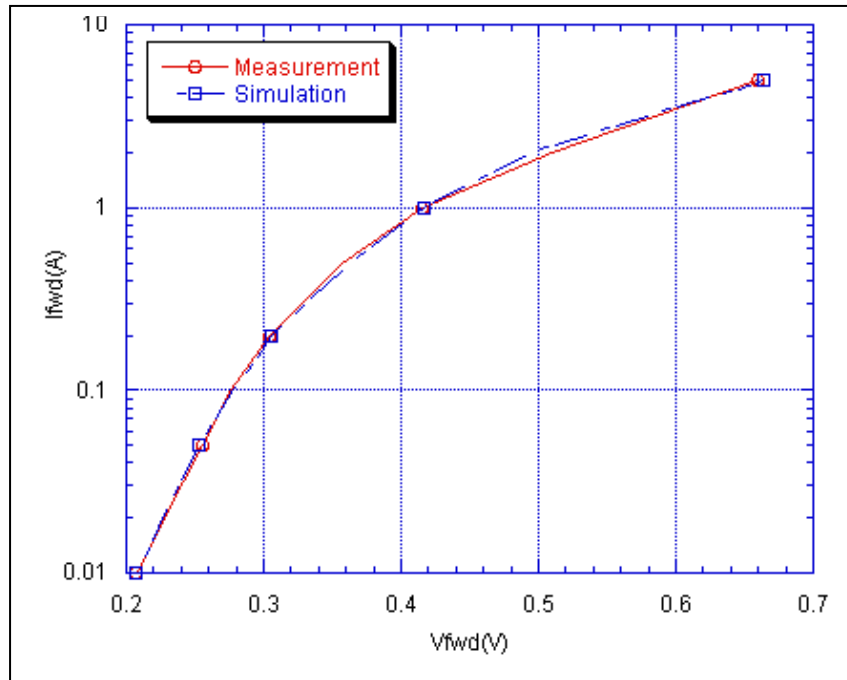


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

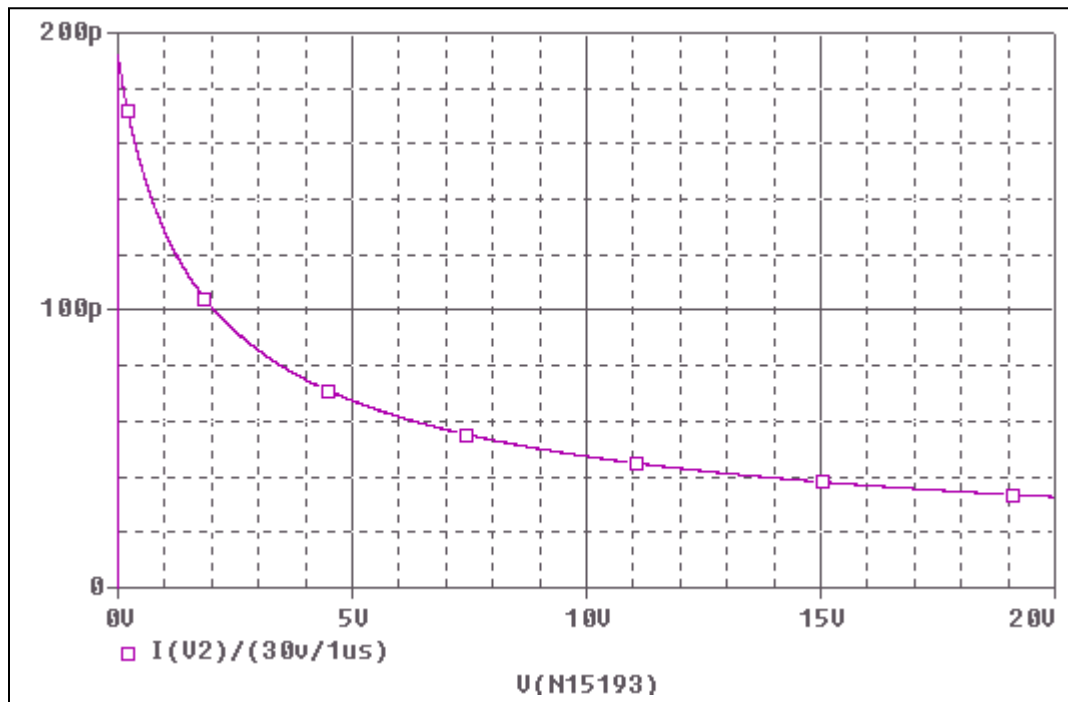


Simulation Result

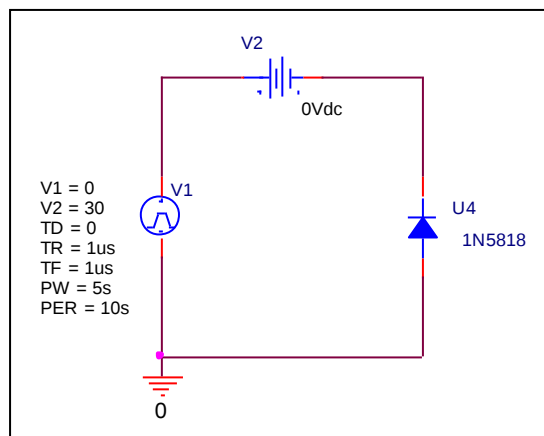
I_{fwd} (A)	V_{fwd} (V) Measurement	V_{fwd} (V) Simulation	%Error
0.01	0.21	0.21	0.00
0.02	0.23	0.23	-0.88
0.05	0.26	0.25	-1.17
0.1	0.28	0.28	0.36
0.2	0.30	0.31	1.32
0.5	0.36	0.36	1.40
1	0.42	0.42	0.48
2	0.51	0.50	-2.94
5	0.66	0.66	0.61

Junction Capacitance Characteristic

Circuit Simulation Result

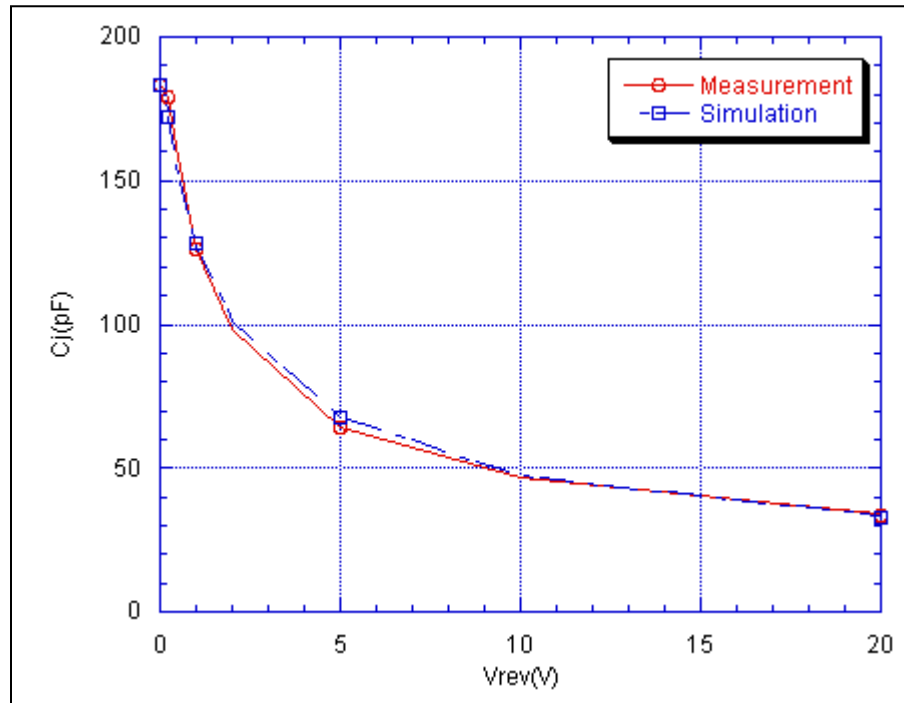


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

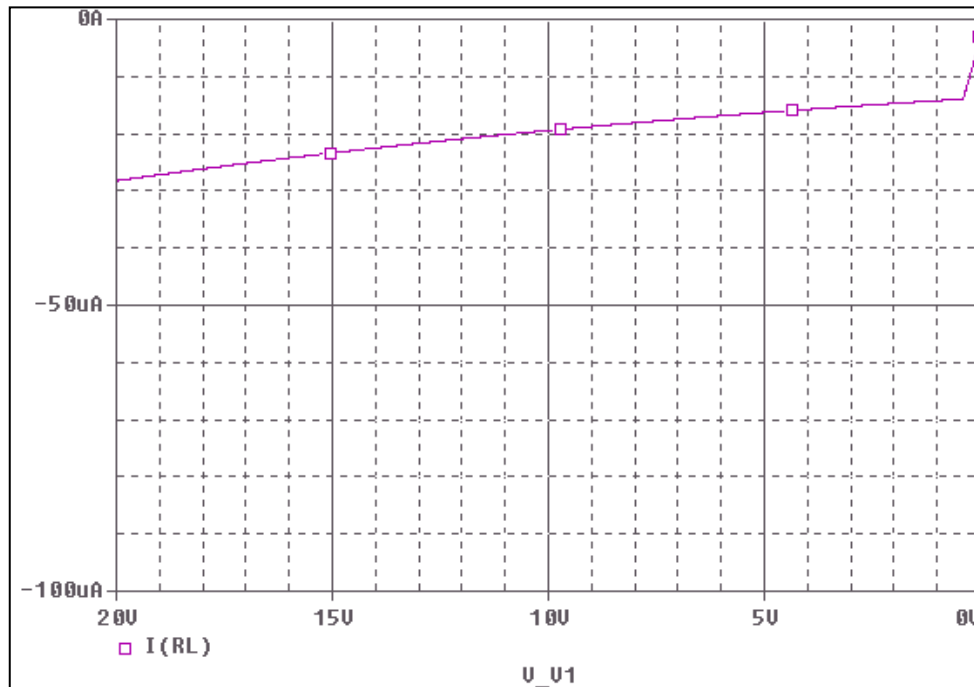


Simulation Result

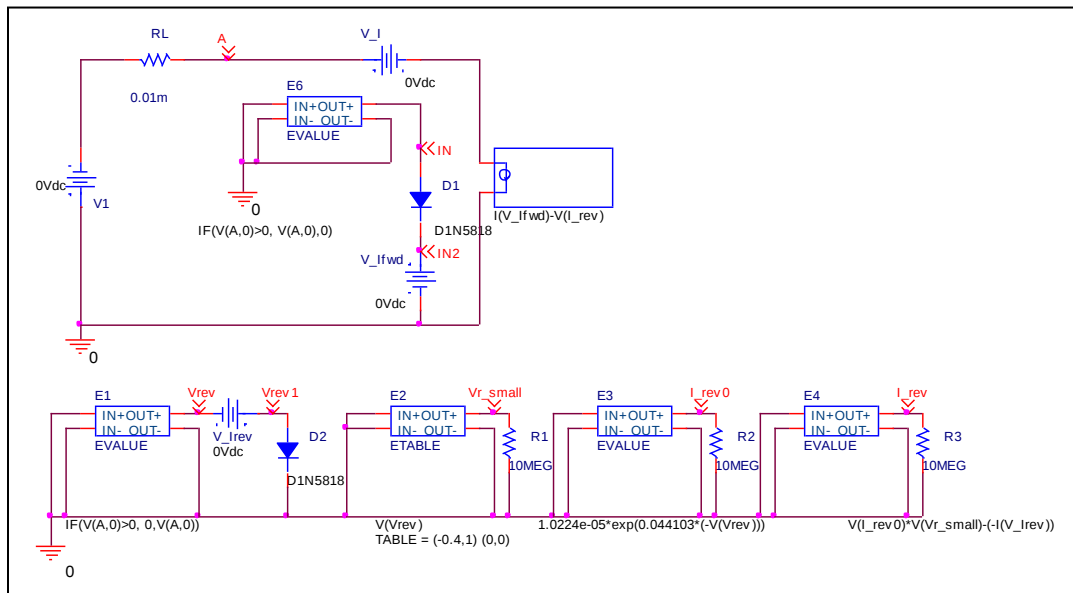
Vrev(V)	Cj(pF) Measurement	Cj(pF) Simulation	%Error
0	183.51	183.51	0.00
0.1	181.78	181.36	-0.23
0.2	179.31	172.34	-3.88
0.5	157.97	151.62	-4.02
1	126.08	128.33	1.78
2	98.43	101.27	2.89
5	64.20	67.41	4.99
10	46.66	47.37	1.51
20	33.55	32.78	-2.31

Reverse Characteristic

Circuit Simulation Result

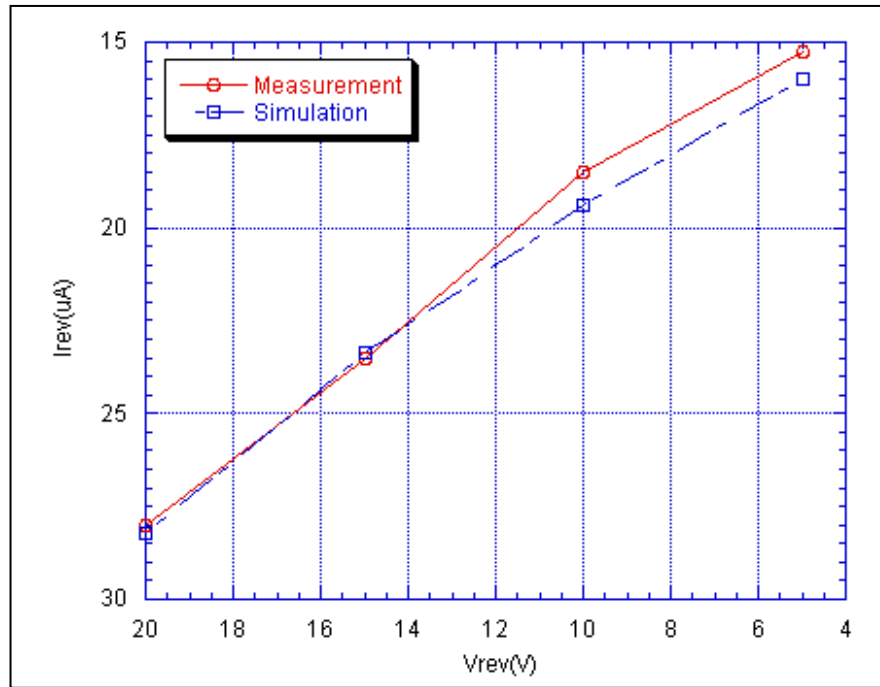


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

$V_{rev}(V)$	$I_{rev}(\mu A)$ Measurement	$I_{rev}(\mu A)$ Simulation	%Error
5	15.25	16.00	4.92
10	18.50	19.40	4.86
15	23.50	23.35	-0.64
20	28.00	28.20	0.71

Reverse Characteristic

Reference

