

Device Modeling Report

COMPONENTS:
DIODE/ SCHOTTKY RECTIFIER/STANDARD
PART NUMBER: EK13
MANUFACTURER: SANKEN

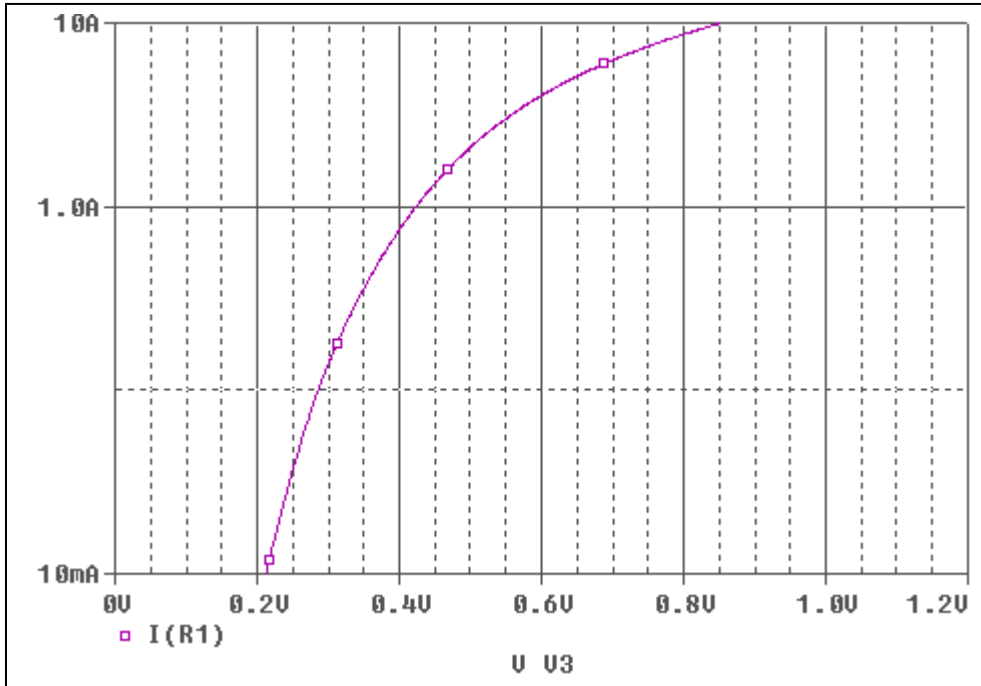


Bee Technologies Inc.

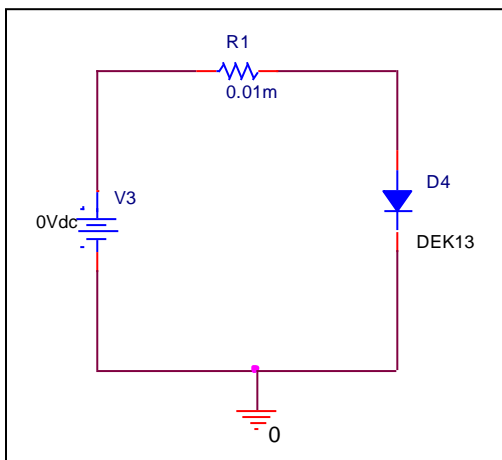
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

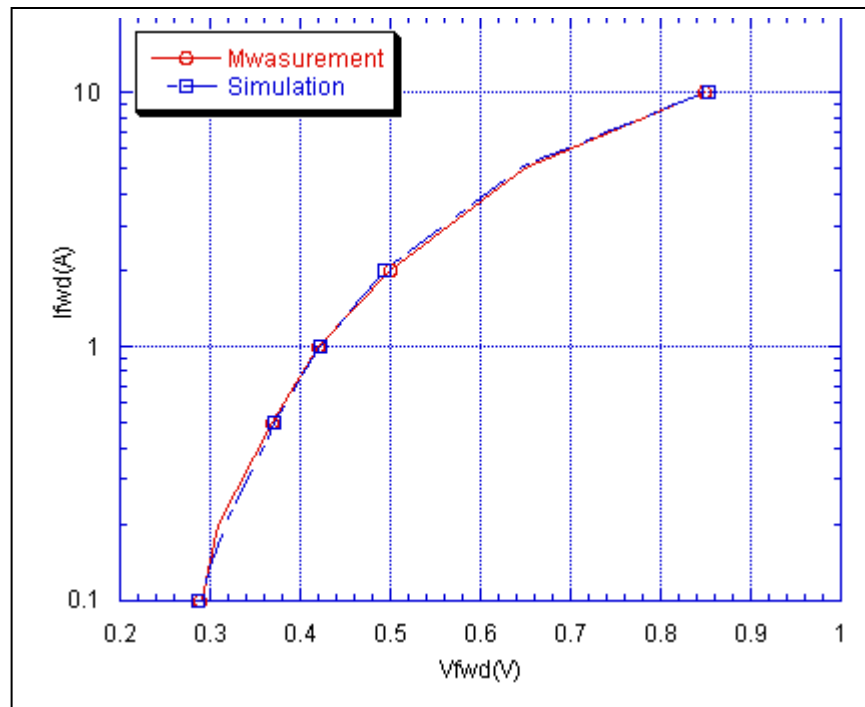


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

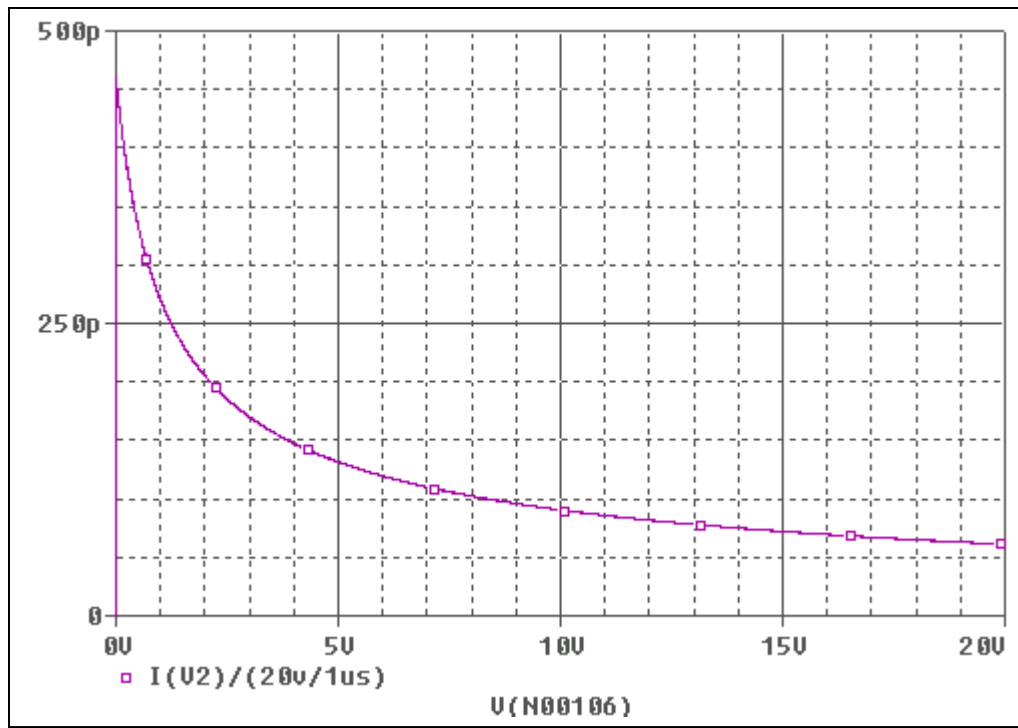


Simulation Result

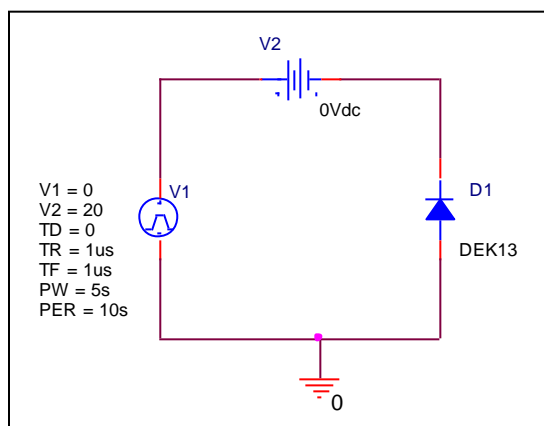
Ifwd(A)	Vfwd(V) Measurement	Vfwd(V) Simulation	%Error
0.1	0.29	0.29	-1.38
0.2	0.31	0.32	2.26
0.5	0.37	0.37	0.27
1	0.42	0.42	0.71
2	0.50	0.49	-1.20
5	0.65	0.65	-0.77
10	0.85	0.85	0.47

Junction Capacitance Characteristic

Circuit Simulation Result

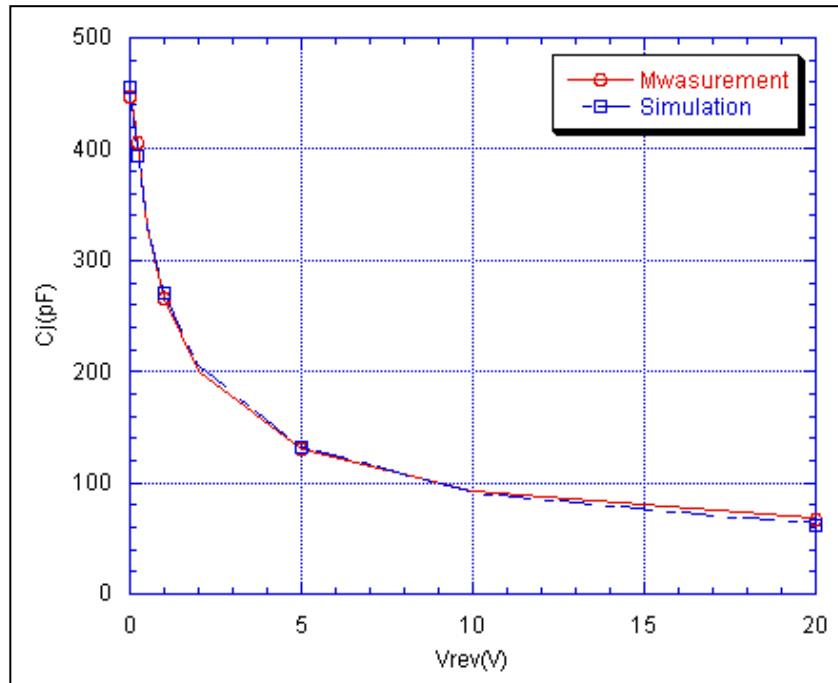


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

Vrev(V)	Cj(pF) Measurement	Cj(pF) Simulation	%Error
0	447.07	456.32	2.07
0.1	432.41	424.14	-1.91
0.2	405.73	397.46	-2.04
0.5	330.25	332.47	0.67
1	264.79	270.15	2.02
2	200.73	205.27	2.26
5	130.18	131.61	1.10
10	92.30	90.41	-2.06
20	64.13	61.19	-4.57