

Device Modeling Report

COMPONENTS: DIODE/ SCHOTTKY RECTIFIER
PART NUMBER: RB160L-40
MANUFACTURER: ROHM

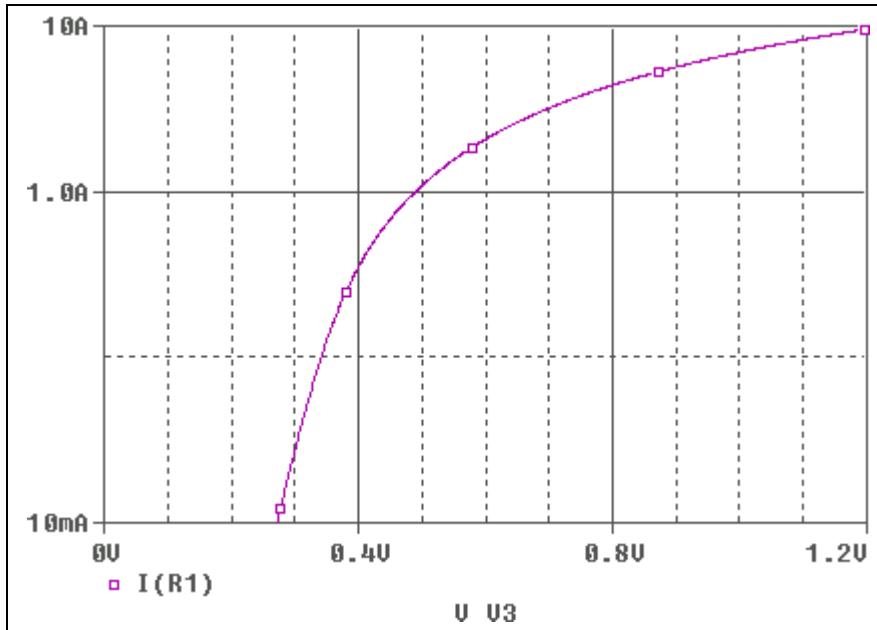


Bee Technologies Inc.

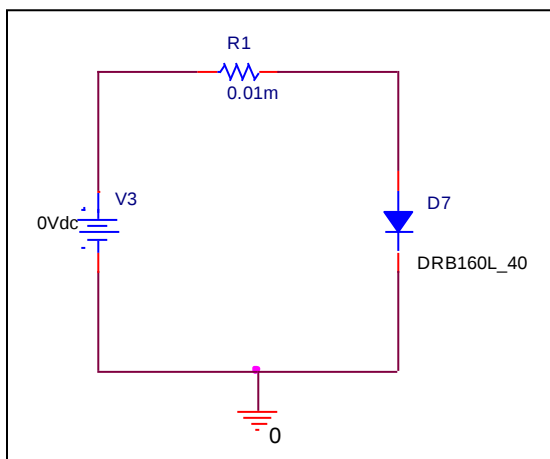
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

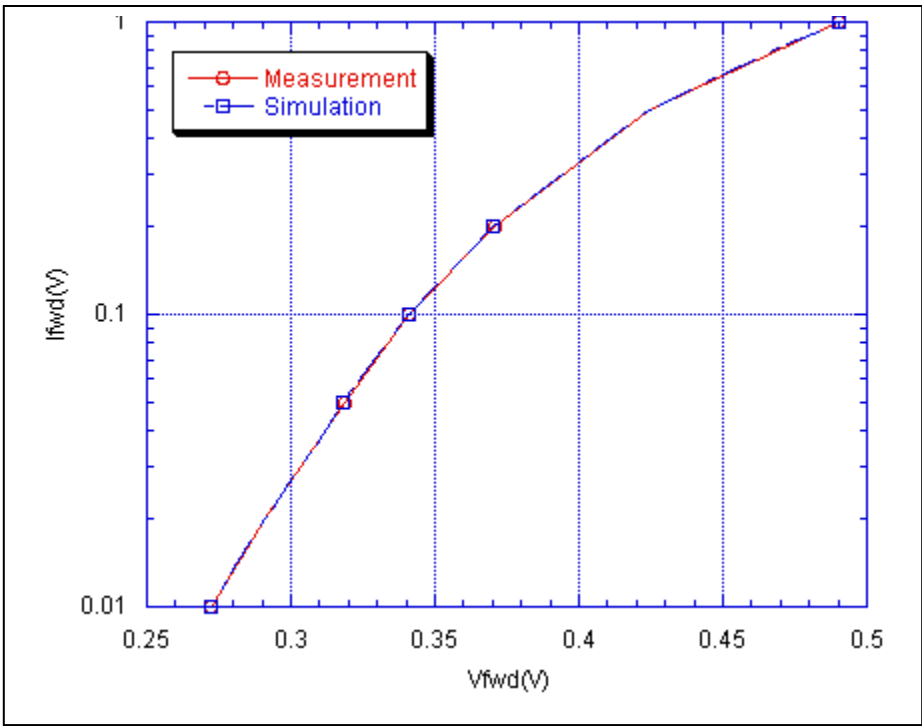


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

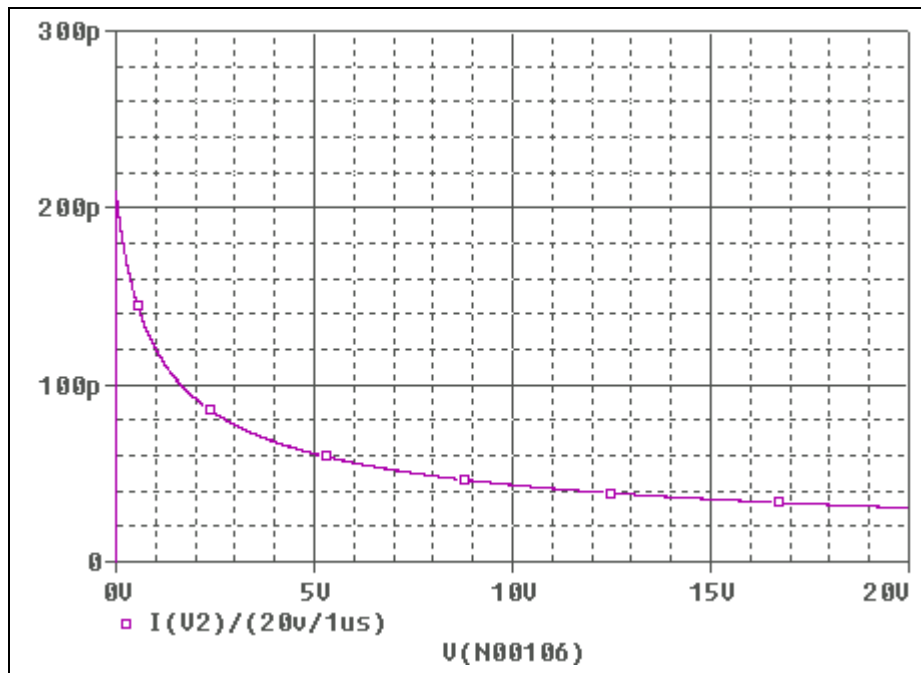


Simulation Result

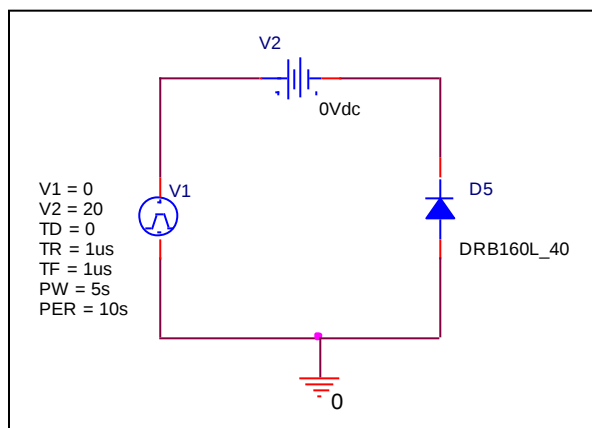
Ifwd(A)	Vfwd(V) Measurement	Vfwd(V) Simulation	%Error
0.01	0.272	0.271	-0.37
0.02	0.291	0.290	-0.34
0.05	0.319	0.318	-0.31
0.1	0.341	0.340	-0.29
0.2	0.371	0.370	-0.27
0.5	0.424	0.423	-0.24
1	0.490	0.490	-0.02

Junction Capacitance Characteristic

Circuit Simulation Result

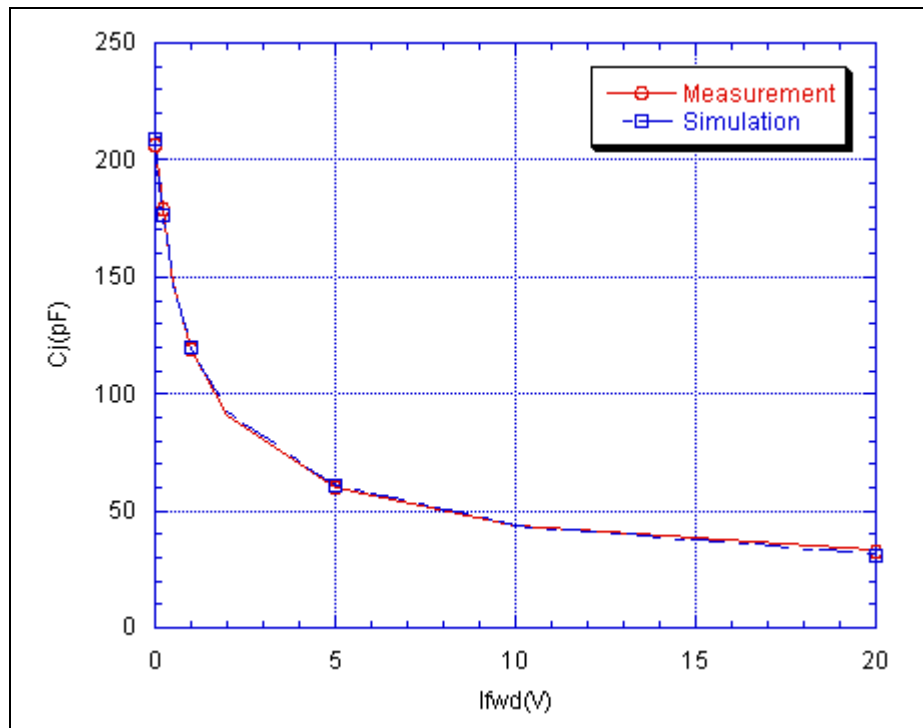


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

Vrev(V)	Cj(pF) Measurement	Cj(pF) Simulation	%Error
0	206.217	209.103	1.38
0.1	193.335	191.132	-1.15
0.2	179.354	176.829	-1.43
0.5	147.404	147.800	0.27
1	118.827	119.724	0.75
2	90.955	92.284	1.44
5	60.264	60.923	1.08
10	43.844	43.465	-0.87
20	31.48	30.64	-2.77