Device Modeling Report

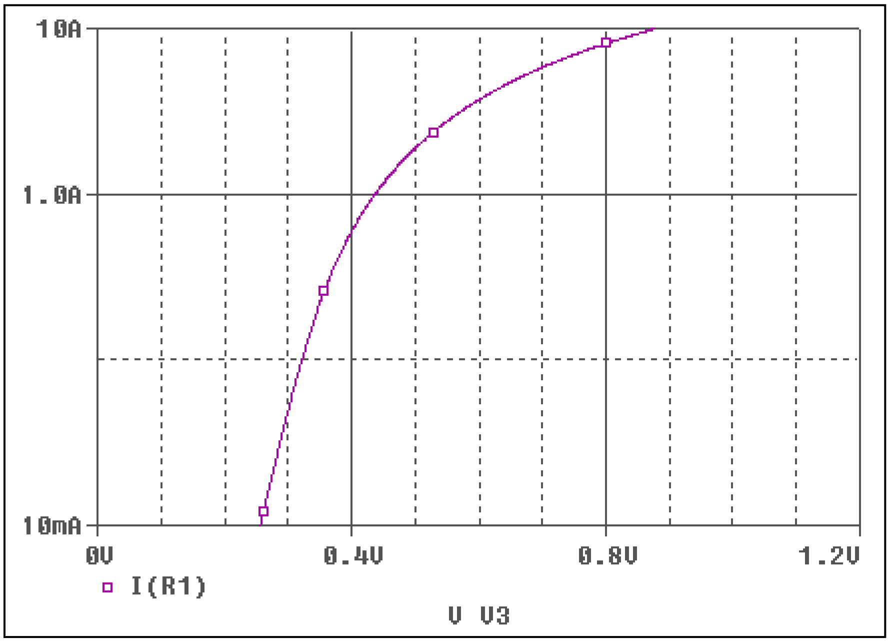
COMPONENTS:
DIODE/ SCHOTTKY RECTIFIER/ STANDARD
PART NUMBER: SB350
MANUFACTURER: General Semiconductor

Bee Technologies Inc.

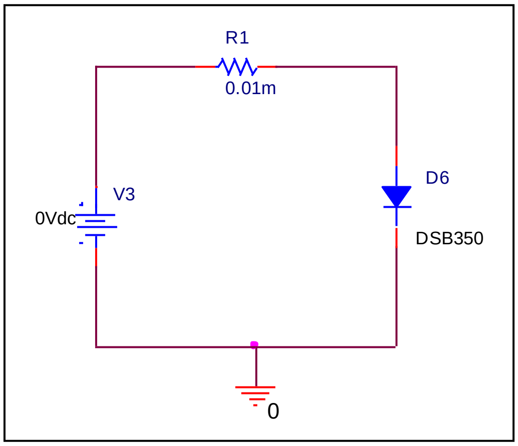
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

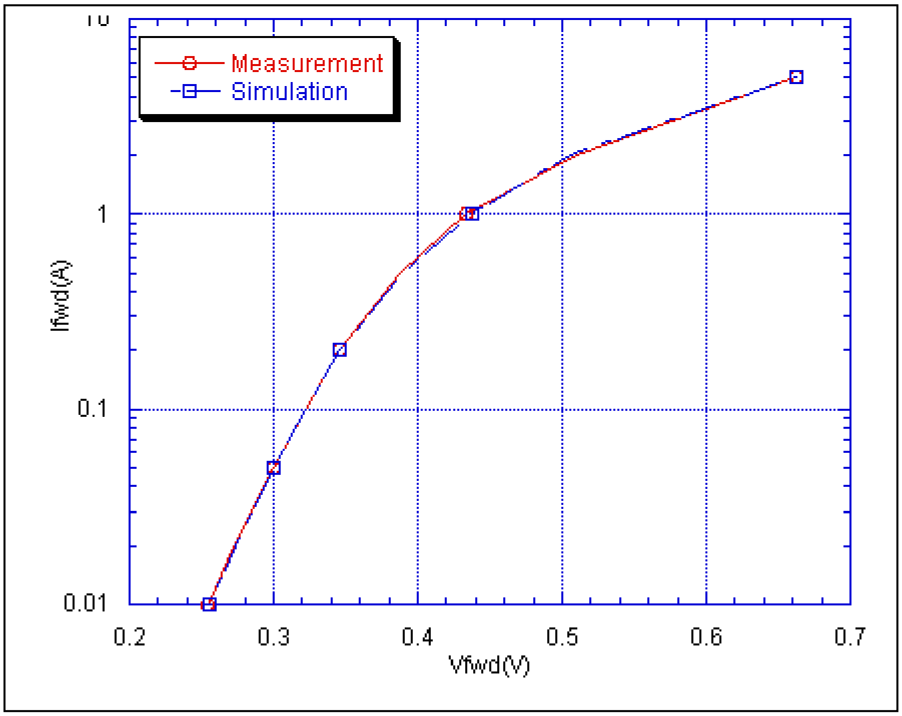


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

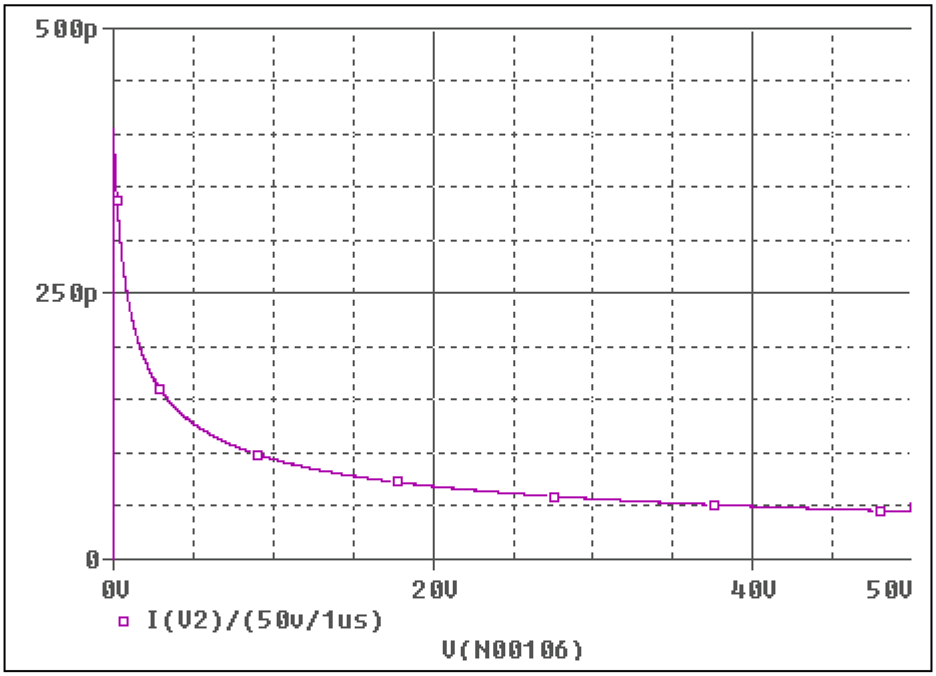


Simulation Result

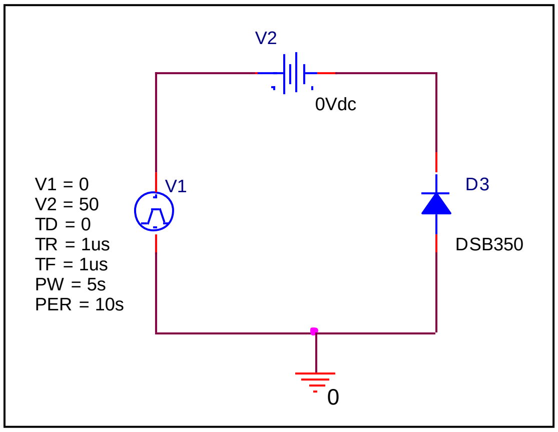
Ifwd(A)	Vfwd(V) Measurement	Vfwd(V) Simulation	%Error
0.01	0.254	0.255	0.392
0.02	0.272	0.274	0.730
0.05	0.300	0.298	-0.671
0.1	0.322	0.321	-0.312
0.2	0.346	0.345	-0.290
0.5	0.388	0.389	0.257
1	0.433	0.437	0.915
2	0.510	0.506	-0.791
5	0.662	0.661	-0.151

Junction Capacitance Characteristic

Circuit Simulation Result

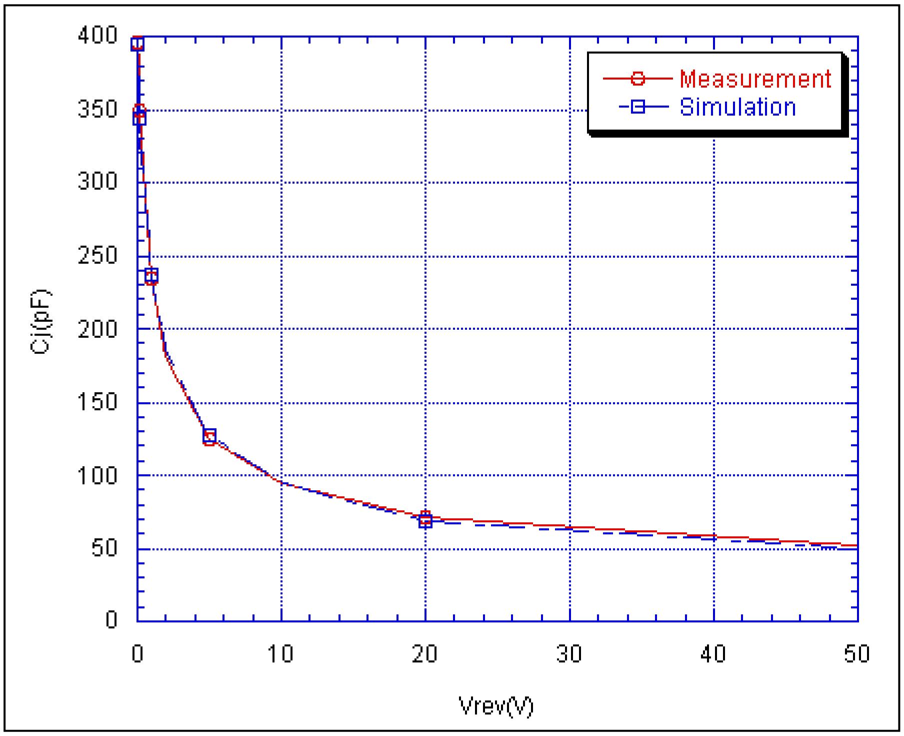


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

Vrev(V)	Cj(pF) Measurement	Cj(pF) Simulation	%Error
0	395.418	394.253	-0.295
0.1	382.813	370.918	-3.207
0.2	348.742	344.036	-1.368
0.5	290.631	288.951	-0.581
1	233.741	236.782	1.284
2	180.825	185.046	2.281
5	124.351	127.586	2.536
10	93.917	94.480	0.596
20	71.406	68.923	-3.603
50	50.050	48.276	-3.675