

Device Modeling Report

COMPONENTS: DIODE/ SCHOTTKY RECTIFIER
PART NUMBER: RB060L-40
MANUFACTURER: ROHM

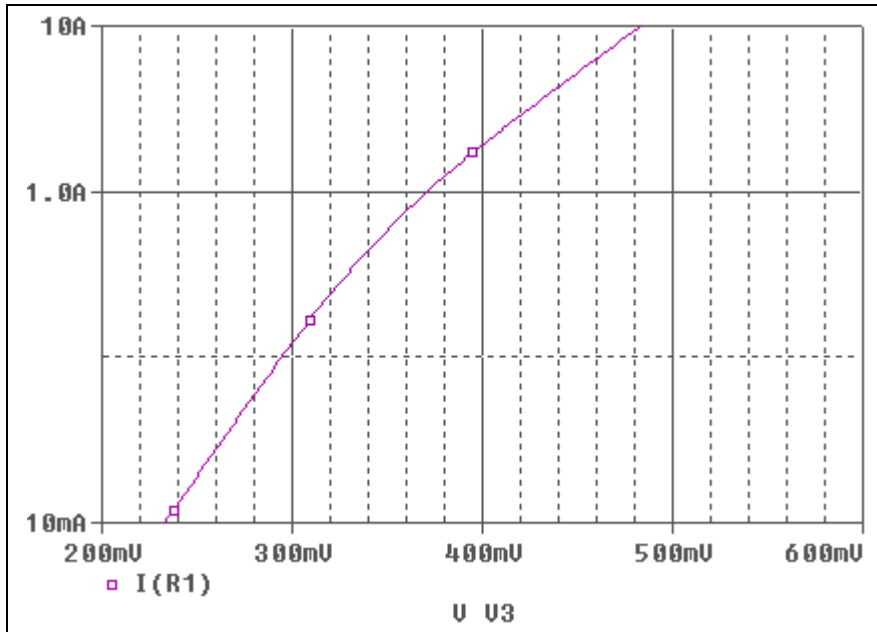


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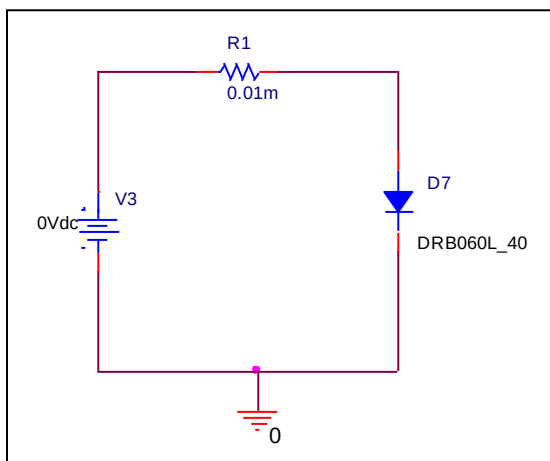
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

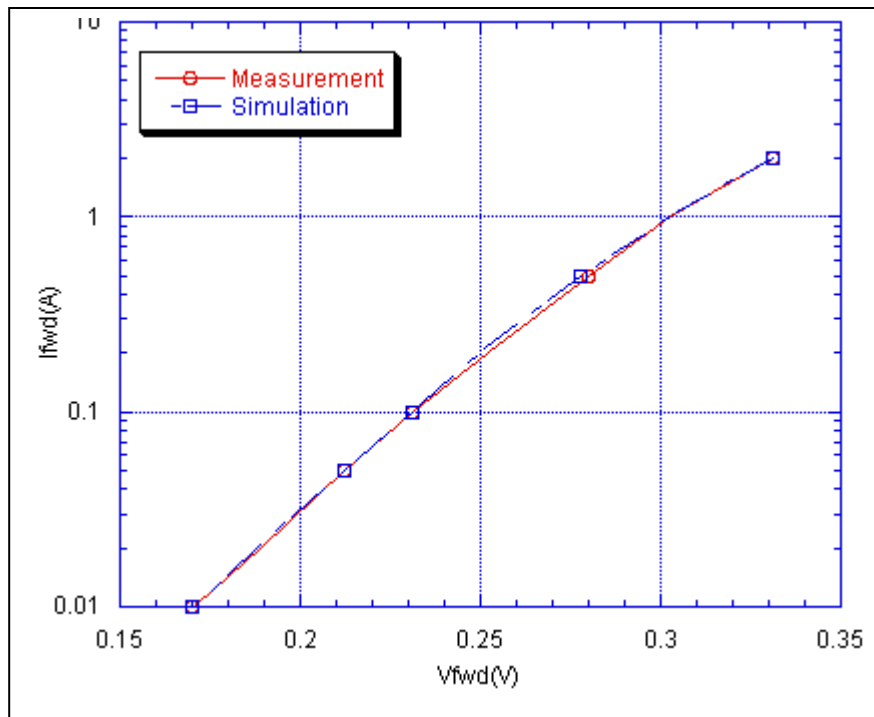


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

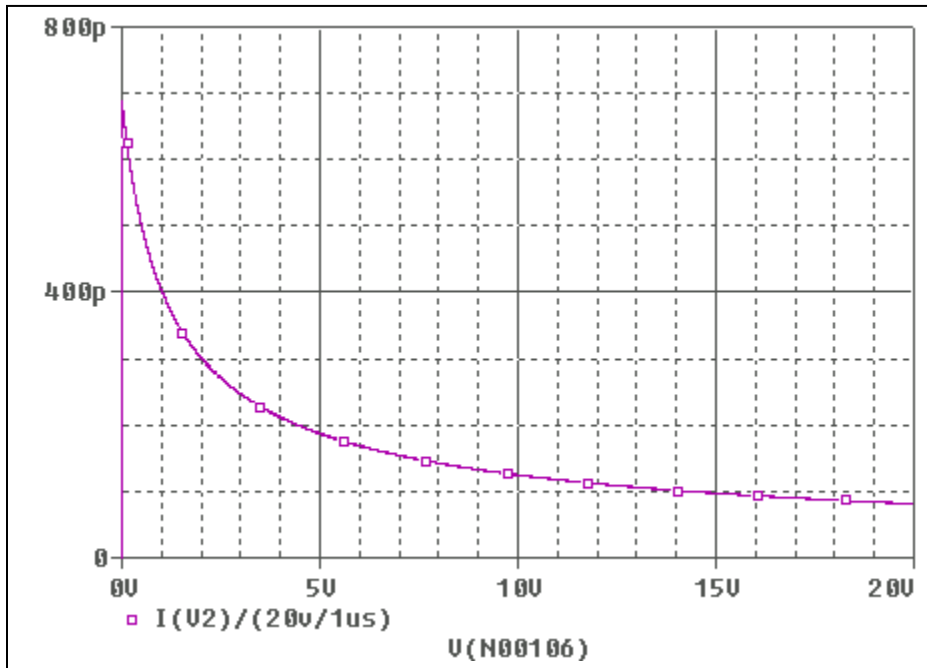


Simulation Result

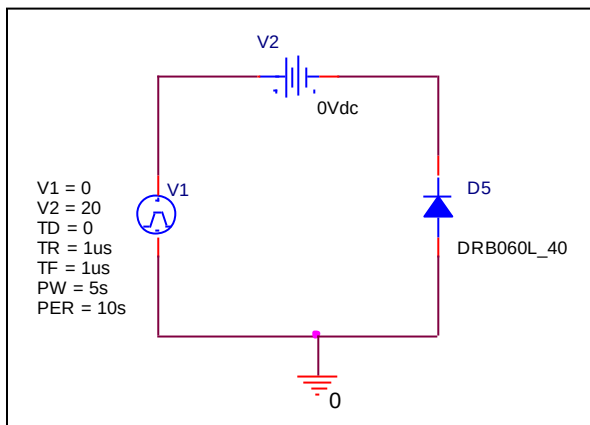
Ifwd(A)	Vfwd(V) Measurement	Vfwd(V) Simulation	%Error
0.01	0.231	0.233	0.86
0.02	0.250	0.251	0.40
0.05	0.275	0.275	0.00
0.1	0.296	0.294	-0.68
0.2	0.316	0.314	-0.64
0.5	0.346	0.344	-0.58
1	0.372	0.370	-0.54
2	0.400	0.401	0.25

Junction Capacitance Characteristic

Circuit Simulation Result

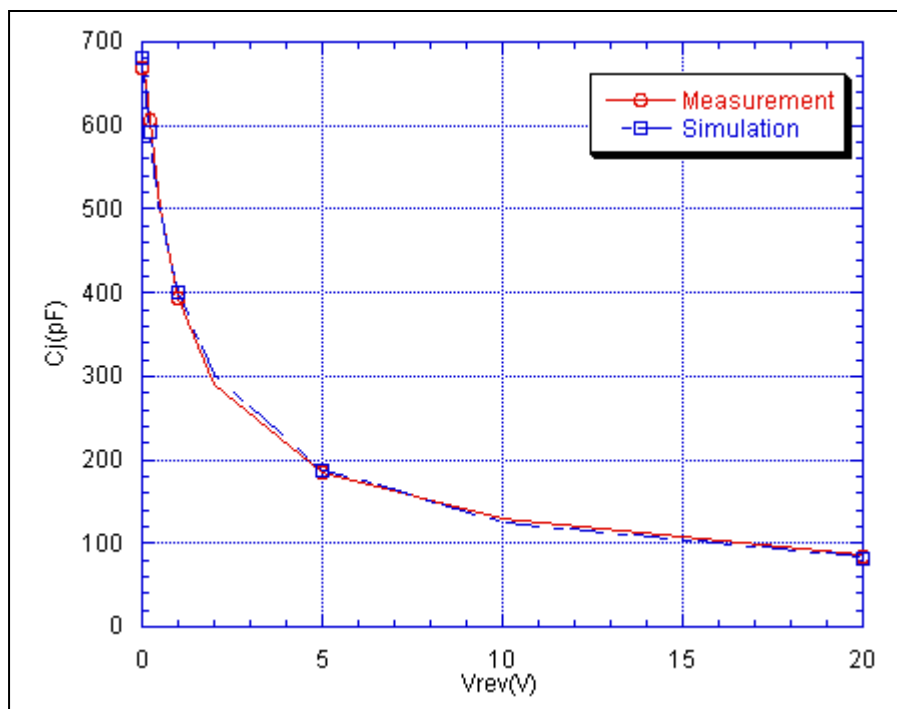


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

V_{rev} (V)	C_j (pF) Measurement	C_j (pF) Simulation	%Error
0	668.048	681.954	2.04
0.1	653.072	636.911	-2.54
0.2	607.792	593.021	-2.49
0.5	501.583	499.268	-0.46
1	393.875	401.097	1.80
2	291.234	301.018	3.25
5	184.082	186.942	1.53
10	129.744	124.546	-4.17
20	84.82	81.21	-4.44