

Device Modeling Report

COMPONENTS:

DIODE/ SCHOTTKY RECTIFIER/PROFESSIONAL

PART NUMBER: RB060L-40

MANUFACTURER: ROHM

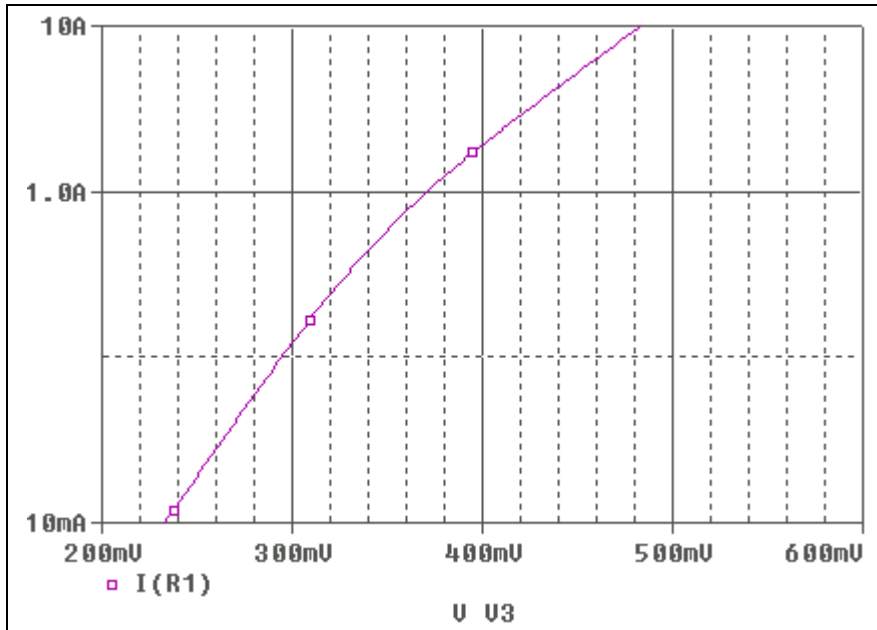


Bee Technologies Inc.

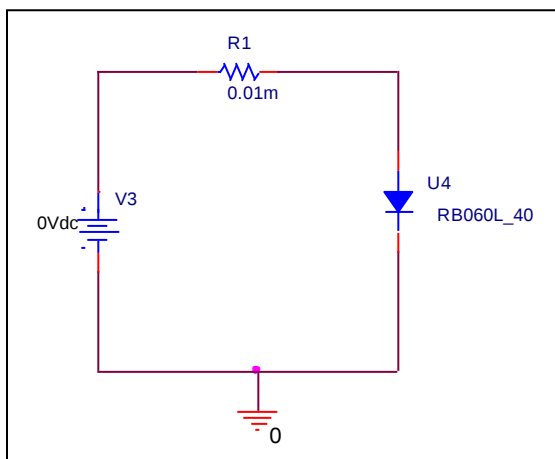
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

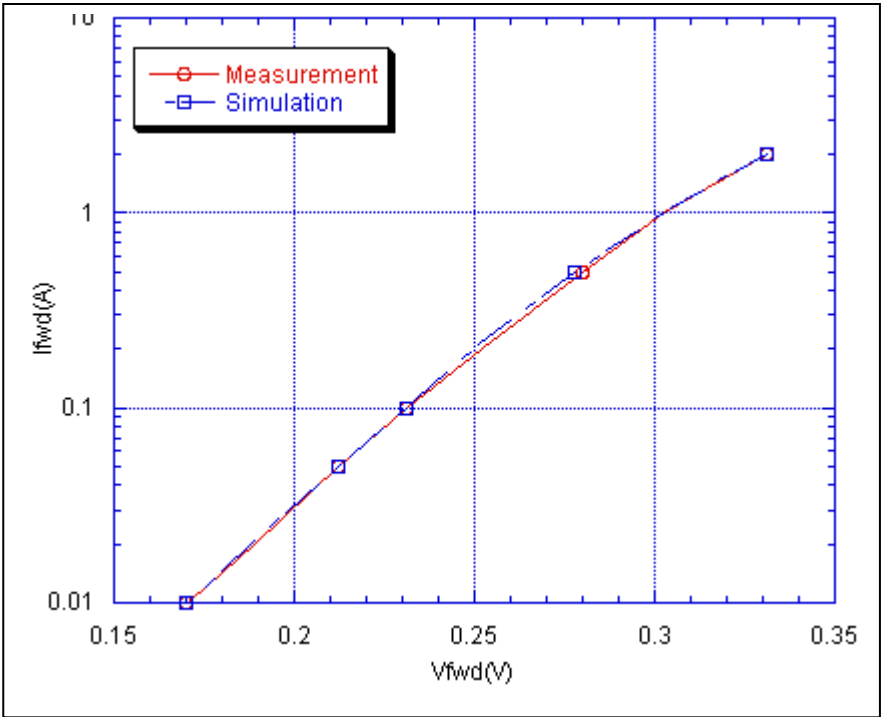


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

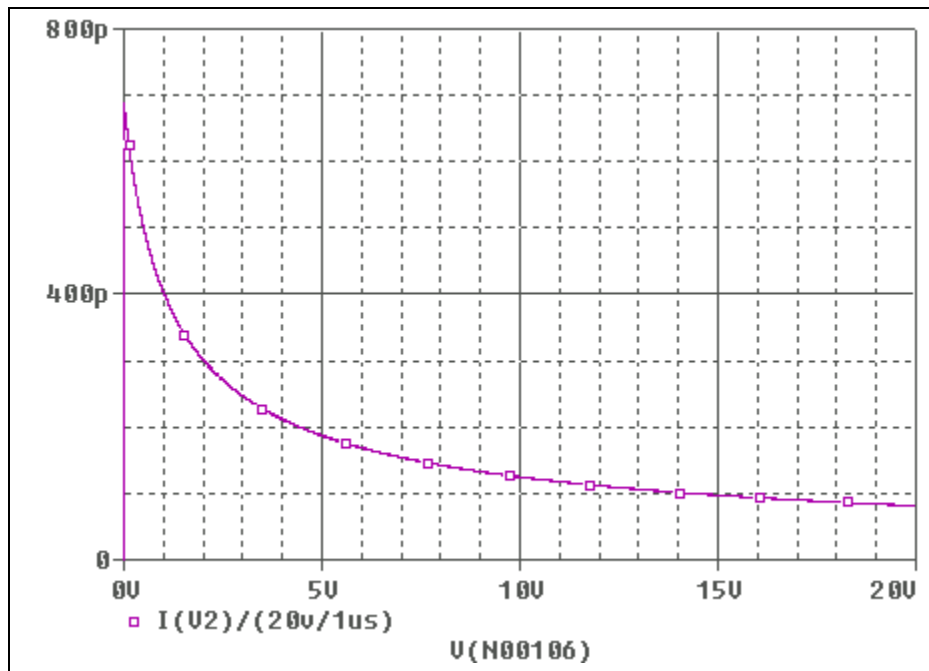


Simulation Result

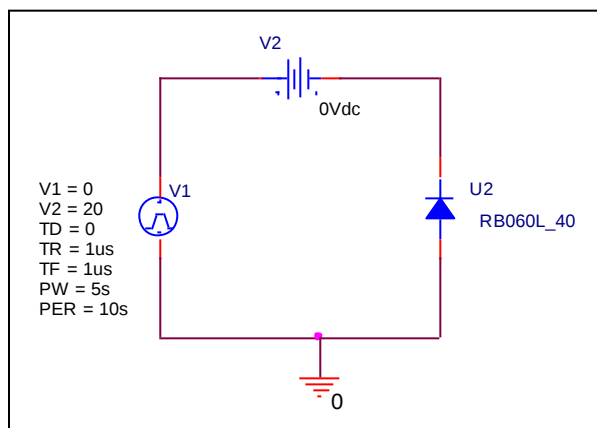
Ifwd(A)	Vfwd(V) Measurement	Vfwd(V) Simulation	%Error
0.01	0.231	0.233	0.86
0.02	0.250	0.251	0.40
0.05	0.275	0.274	-0.36
0.1	0.296	0.294	-0.68
0.2	0.316	0.314	-0.64
0.5	0.346	0.344	-0.58
1	0.372	0.370	-0.54
2	0.400	0.401	0.25

Junction Capacitance Characteristic

Circuit Simulation Result

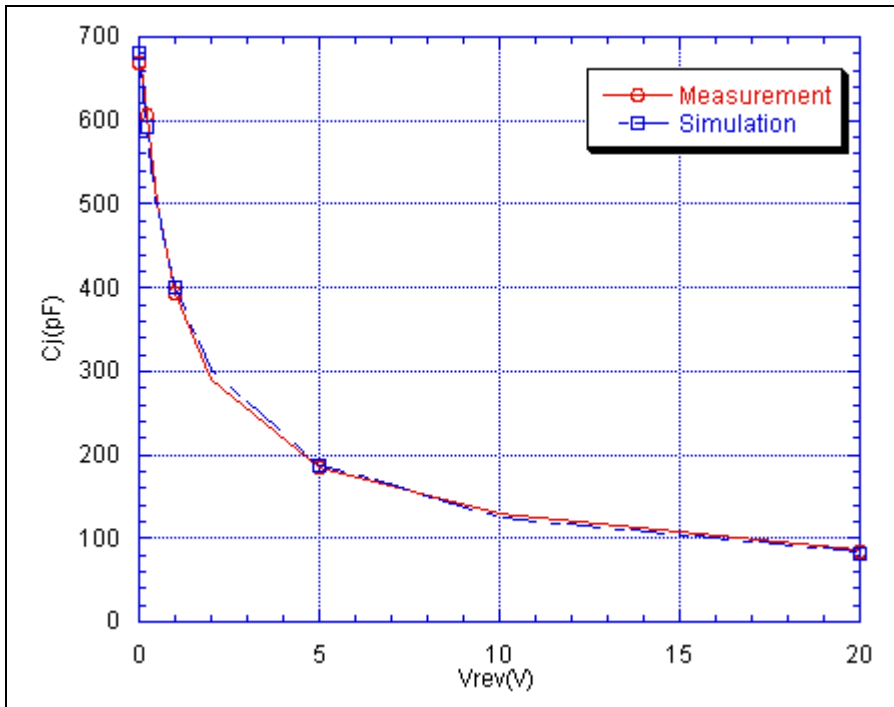


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

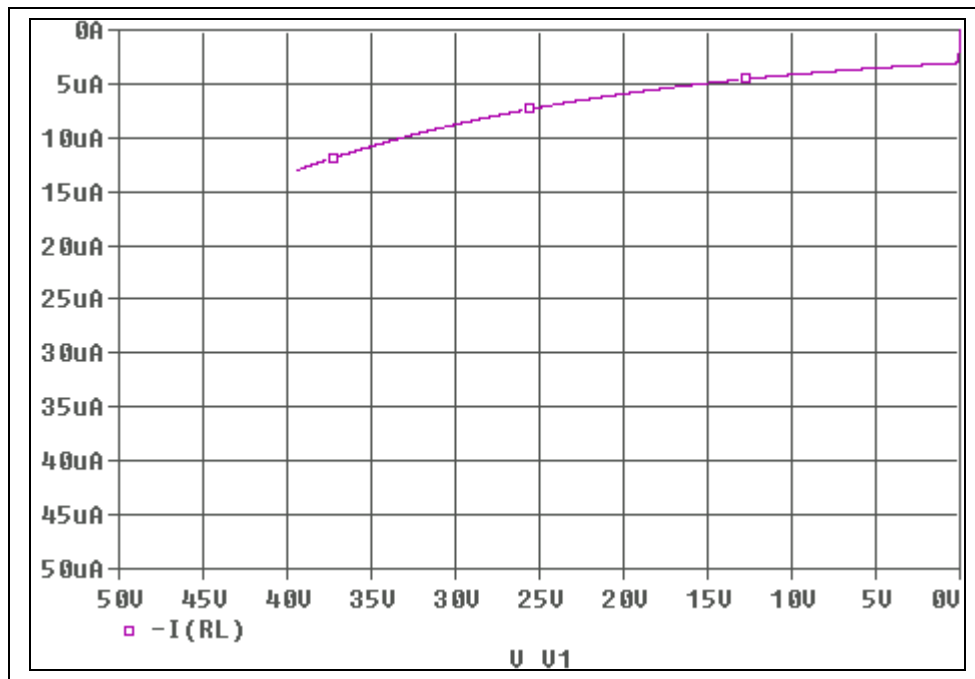


Simulation Result

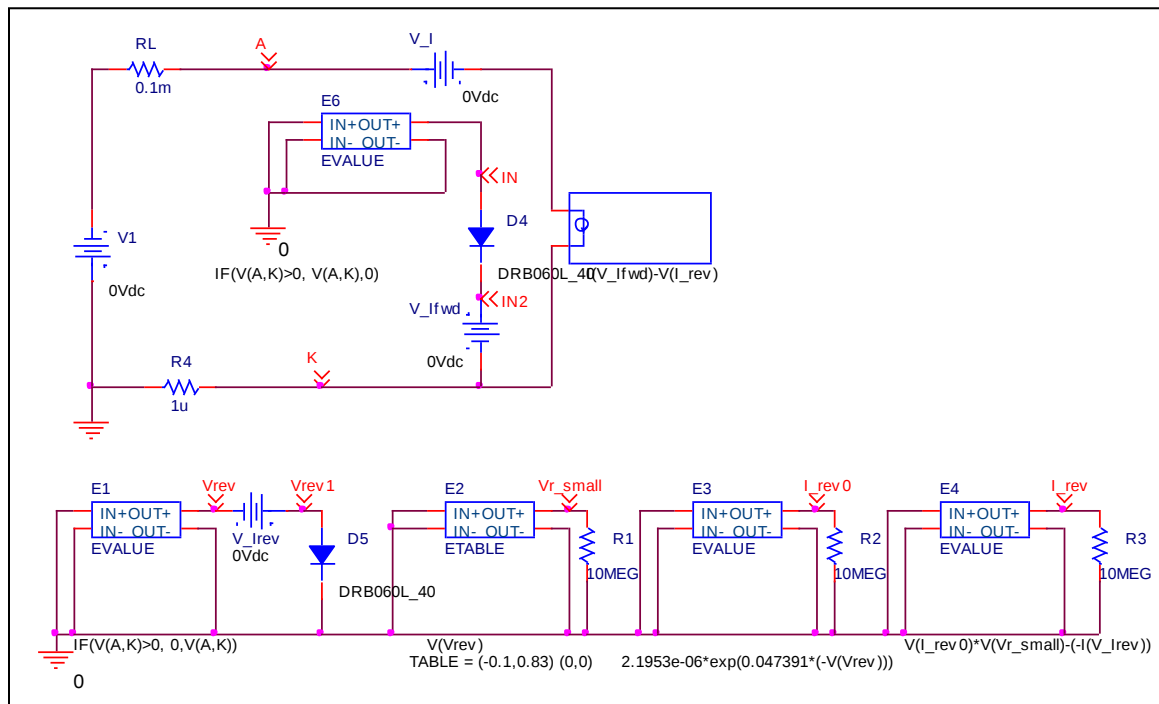
Vrev(V)	Cj(pF) Measurement	Cj(pF) Simulation	%Error
0	668.048	688.639	2.99
0.1	653.072	636.937	-2.53
0.2	607.792	593.345	-2.43
0.5	501.583	499.355	-0.45
1	393.875	401.192	1.82
2	291.234	301.118	3.28
5	184.082	187.030	1.58
10	129.744	124.693	-4.05
20	84.82	81.45	-4.14

Reverse Characteristic

Circuit Simulation Result

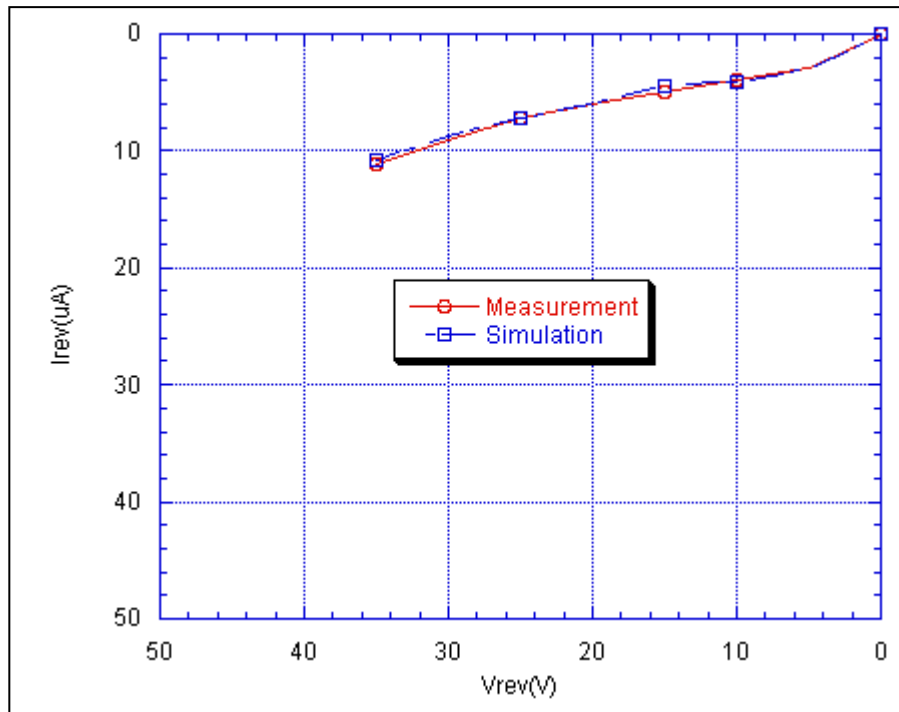


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

$V_{rev}(V)$	$I_{rev}(\mu A)$ Measurement	$I_{rev}(\mu A)$ Simulation	%Error
10	4.000	4.150	3.61
15	5.000	4.390	-13.90
20	6.000	5.930	-1.18
25	7.200	7.180	-0.28
30	9.000	8.780	-2.51
35	11.200	10.800	-3.70

Reverse Characteristic

Reference

