

Device Modeling Report

COMPONENTS:
DIODE/ SCHOOTKY RECTIFIER / STANDARD
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MANUFACTURER: RENESAS



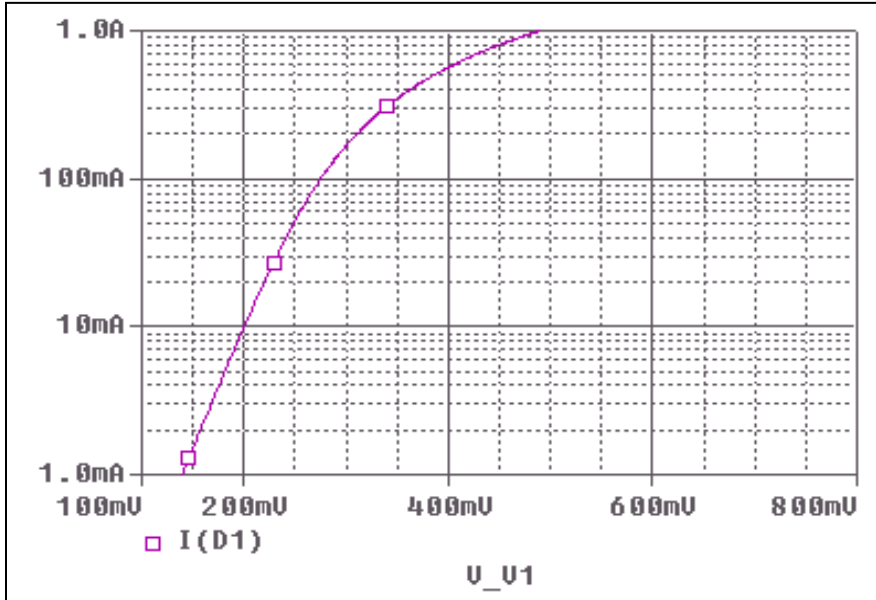
Bee Technologies Inc.

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

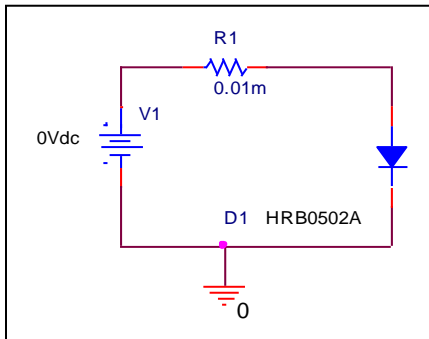
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Forward Current Characteristic

Circuit Simulation Result

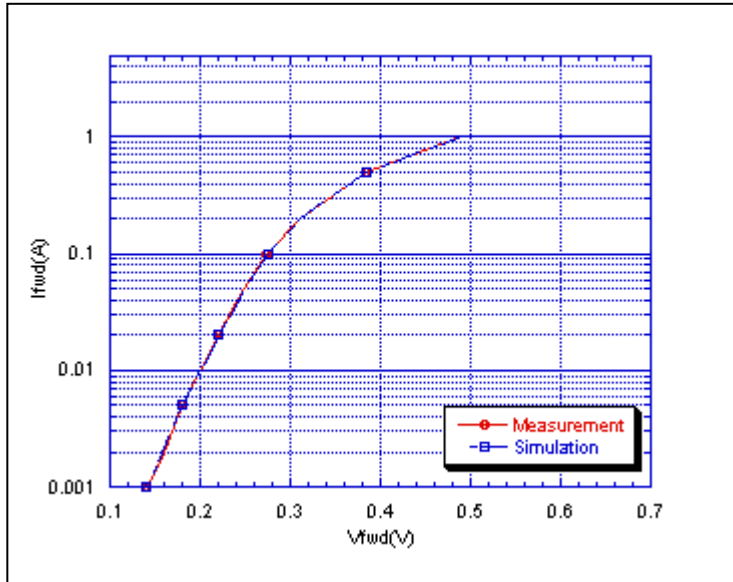


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

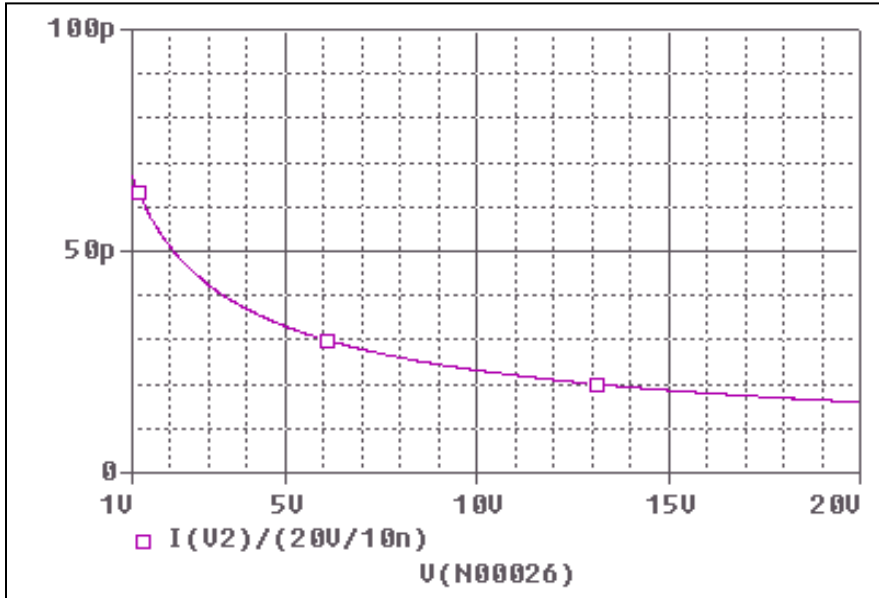


Simulation Result

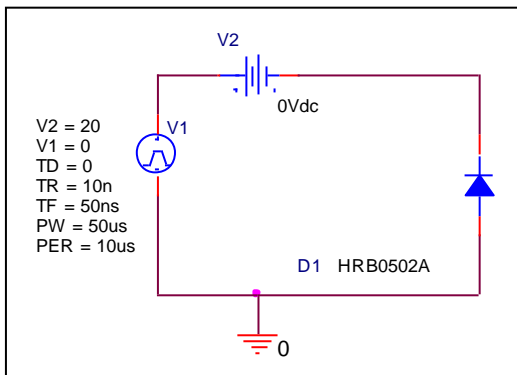
Ifwd(A)	Vfwd(V) Measurement	Vfwd(V) Simulation	%Error
0.001	0.14	0.14	-0.71
0.002	0.16	0.16	-1.88
0.005	0.18	0.18	0.56
0.01	0.199	0.200	0.50
0.02	0.220	0.220	-0.14
0.05	0.248	0.249	0.20
0.1	0.273	0.275	0.73
0.2	0.310	0.310	0.03
0.5	0.385	0.385	0.10
1	0.490	0.490	0.02

Junction Capacitance Characteristic

Circuit Simulation Result

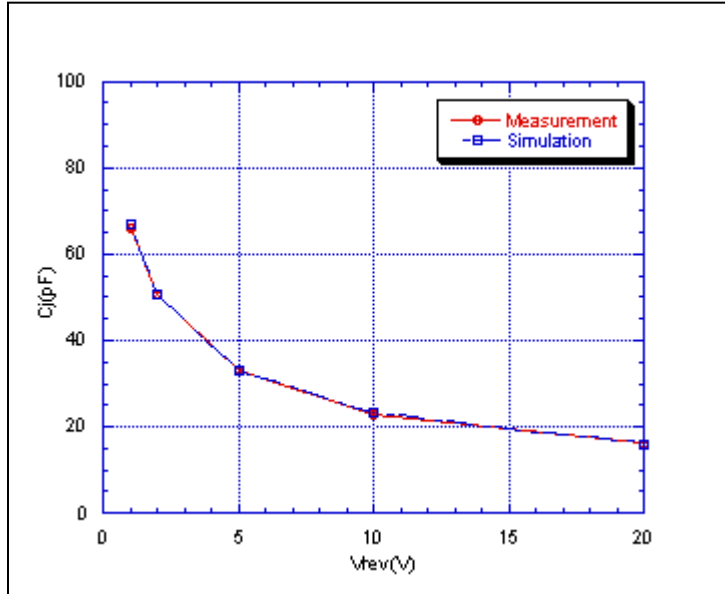


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

Vrev(V)	Cj(pF) Measurement	Cj(pF) Simulation	%Error
1	66.000	67.000	1.52
2	50.500	50.800	0.59
5	32.788	33.000	0.65
10	23.000	23.100	0.43
20	15.980	16.000	0.13