

Device Modeling Report

COMPONENTS:
DIODE/ SCHOOTTKY RECTIFIER / STANDARD
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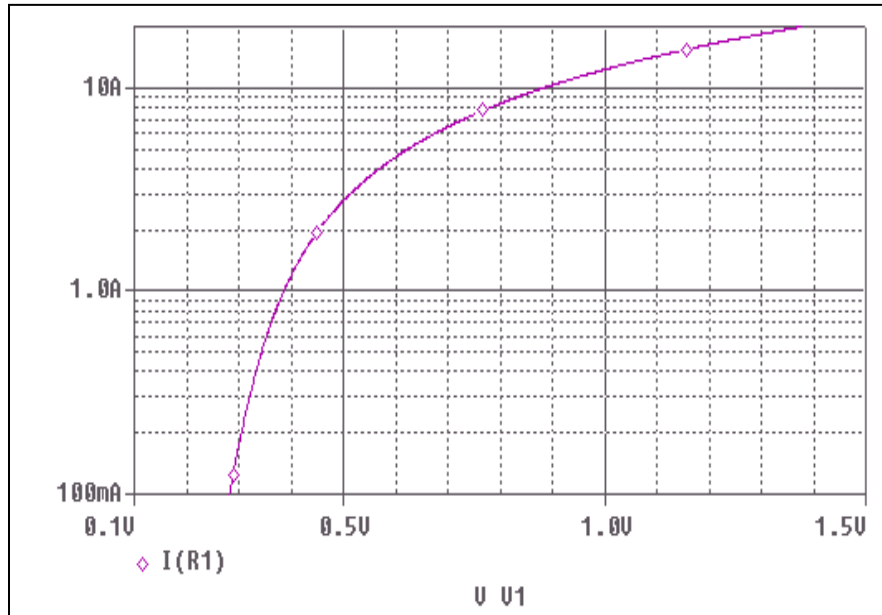


Bee Technologies Inc.

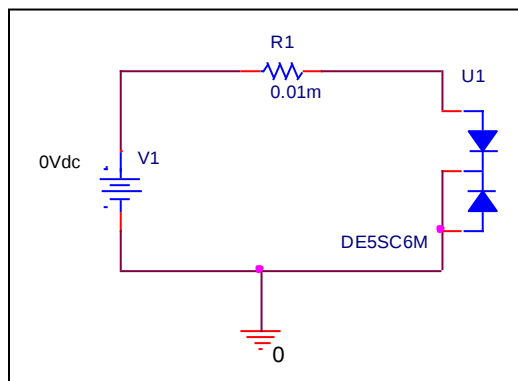
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

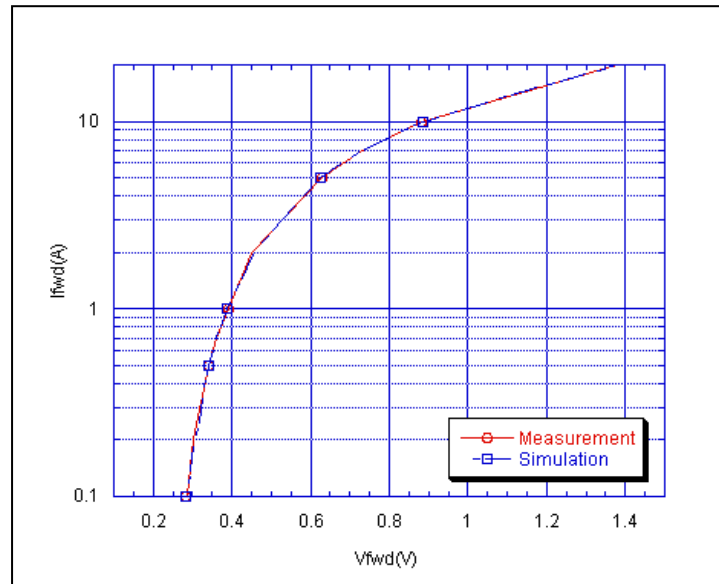


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

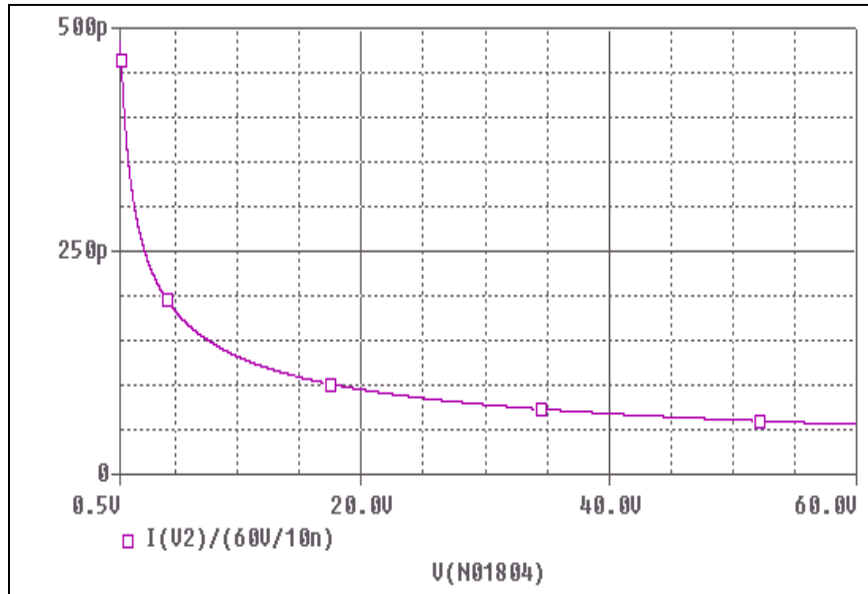


Simulation Result

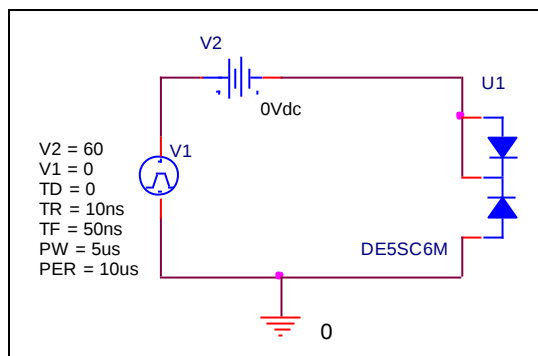
Ifwd(A)	Vfwd(V) Measurement	Vfwd(V) Simulation	%Error
0.1	0.283	0.282	-0.28
0.2	0.304	0.305	0.23
0.5	0.342	0.343	0.29
1	0.390	0.387	-0.90
2	0.450	0.453	0.58
5	0.630	0.623	-1.06
10	0.880	0.886	0.66
20	1.380	1.375	-0.35

Junction Capacitance Characteristic

Circuit Simulation Result

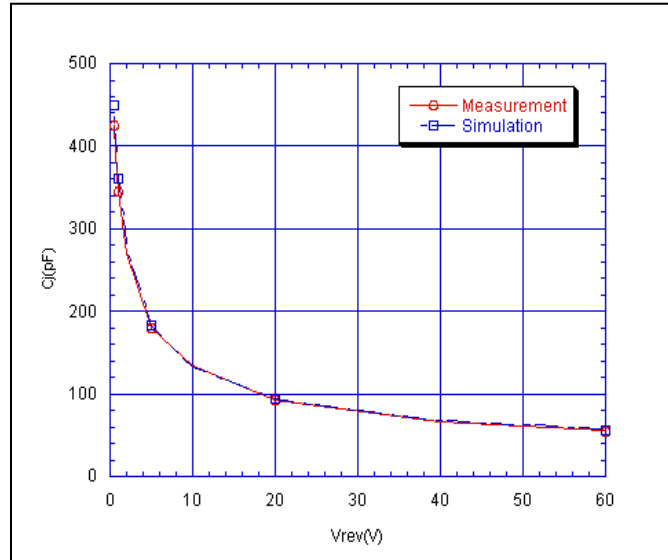


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

V_{rev} (V)	C_j (pF) Measurement	C_j (pF) Simulation	%Error
0.5	430.00	450.00	4.65
1	345.00	360.00	4.35
2	270.00	276.10	2.26
5	180.00	182.20	1.22
10	135.00	132.00	-2.22
20	93.00	94.90	2.04
40	67.00	68.00	1.49
60	54.00	56.10	3.89