

Device Modeling Report

COMPONENTS:

DIODE/ SCHOTTKY RECTIFIER / STANDARD

PART NUMBER: D5S9M

MANUFACTURER: SHINDENGEN

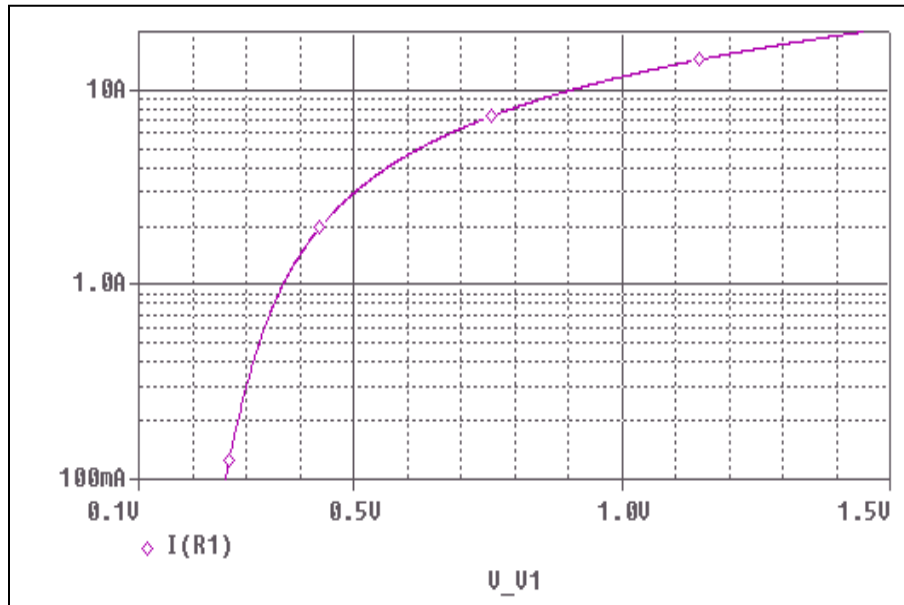


Bee Technologies Inc.

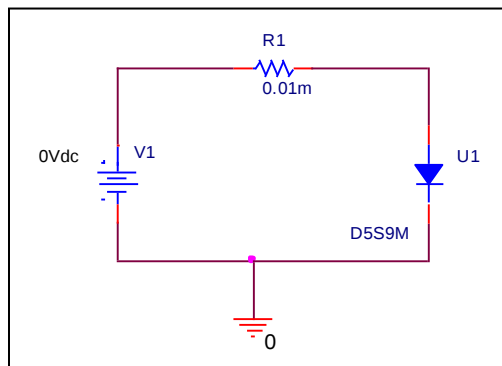
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

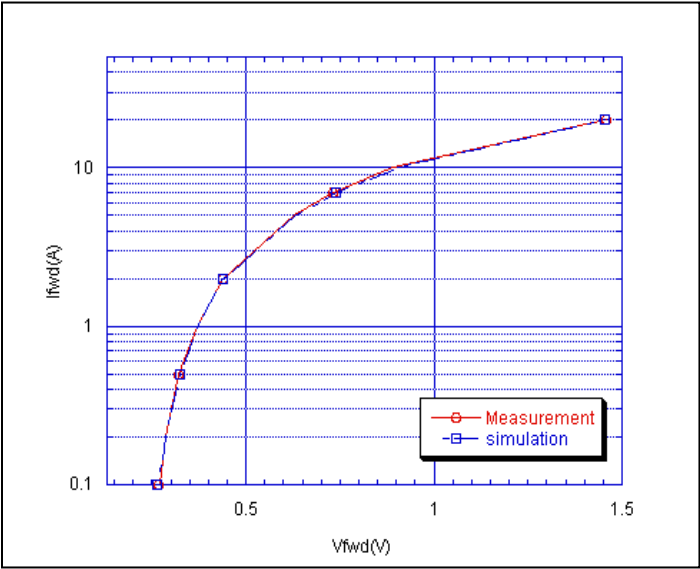


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

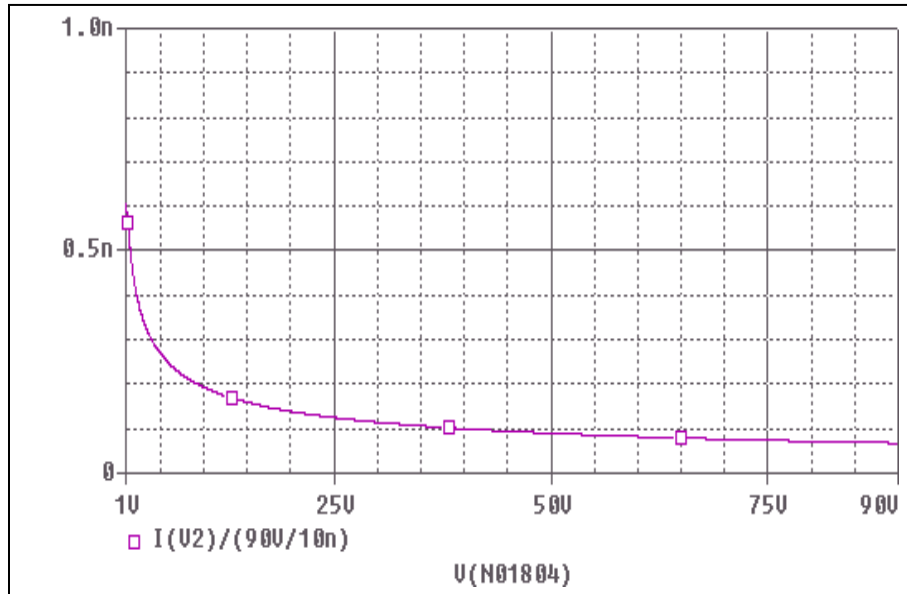


Simulation Result

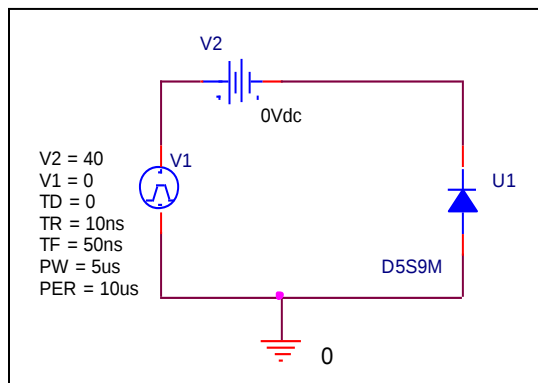
$I_{fwd}(A)$	$V_{fwd}(V)$ Measurement	$V_{fwd}(V)$ Simulation	%Error
0.1	0.268	0.262	-2.43
0.2	0.287	0.285	-0.77
0.5	0.320	0.325	1.41
1	0.370	0.369	-0.30
2	0.440	0.440	0.05
5	0.630	0.632	0.35
10	0.890	0.905	1.72
20	1.460	1.456	-0.25

Junction Capacitance Characteristic

Circuit Simulation Result

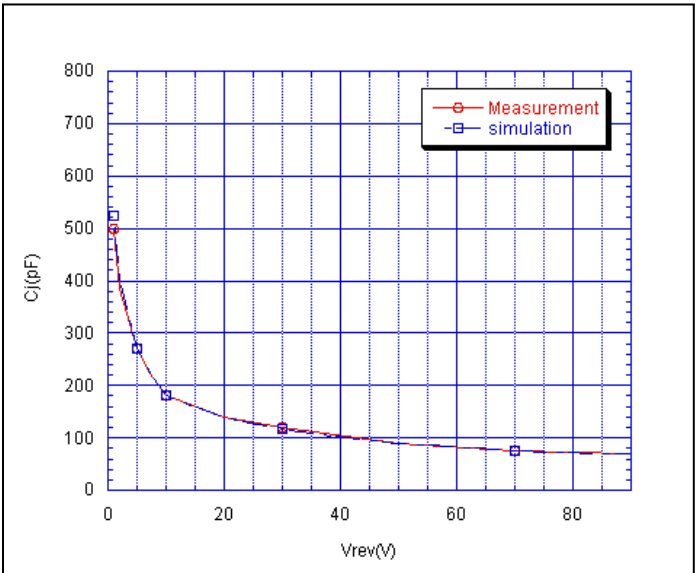


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

Vrev(V)	Cj(pF) Measurement	Cj(pF) Simulation	%Error
1	505.00	525.00	3.96
2	385.00	400.00	3.90
5	270.00	269.50	-0.19
10	180.00	182.00	1.11
20	140.00	138.80	-0.86
50	89.00	89.50	0.56
90	68.00	67.70	-0.44