

Device Modeling Report

COMPONENTS:
DIODE/ SCHOOTTKY RECTIFIER / STANDARD
PART NUMBER: D1FP3
MANUFACTURER: SHINDENGEN

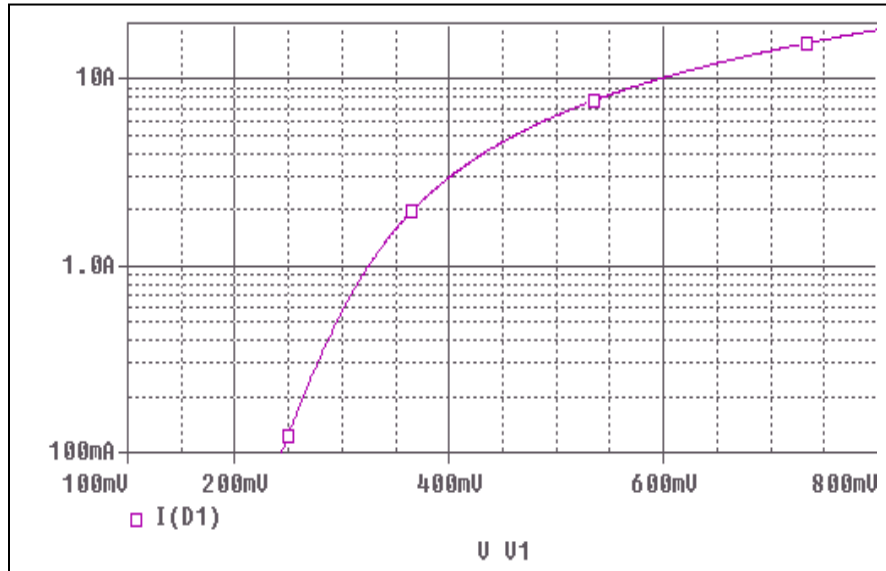


Bee Technologies Inc.

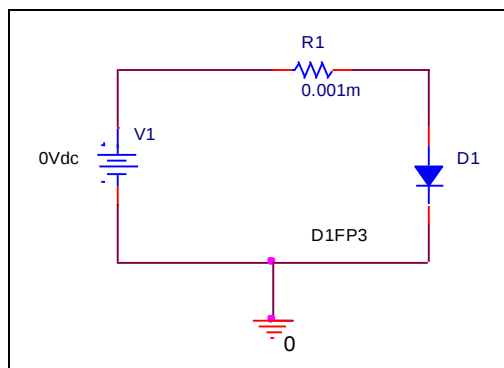
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

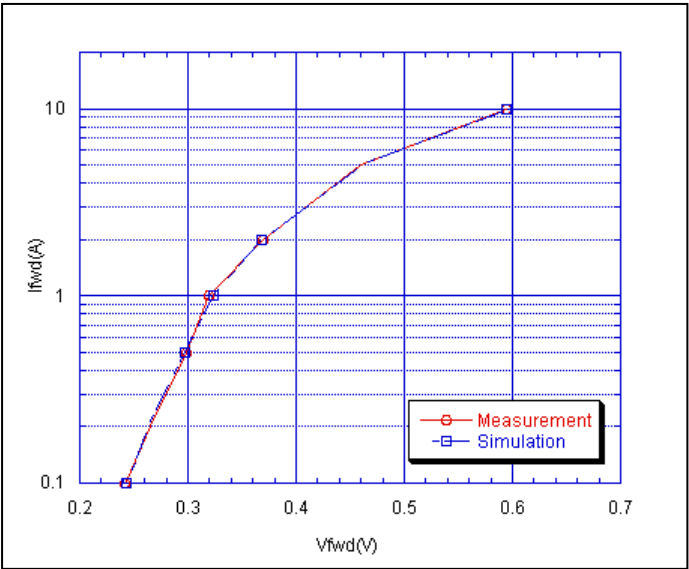


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

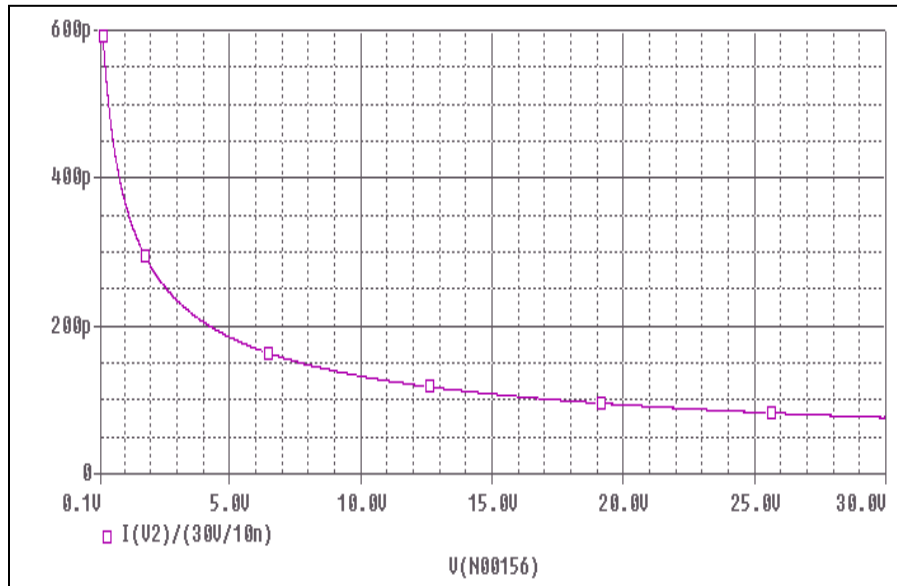


Simulation Result

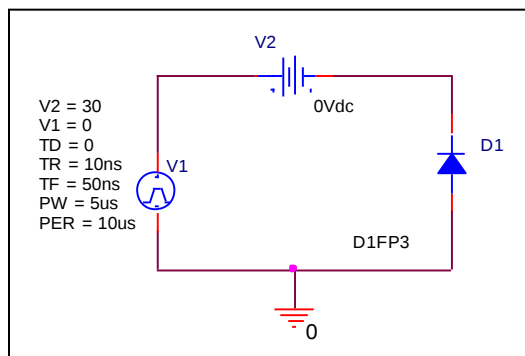
$I_{fwd}(A)$	$V_{fwd}(V)$ Measurement	$V_{fwd}(V)$ Simulation	%Error
0.1	0.242	0.243	0.41
0.2	0.265	0.264	-0.38
0.5	0.298	0.297	-0.34
1	0.320	0.324	1.25
2	0.370	0.368	-0.54
5	0.460	0.461	0.22
10	0.591	0.595	0.68

Junction Capacitance Characteristic

Circuit Simulation Result

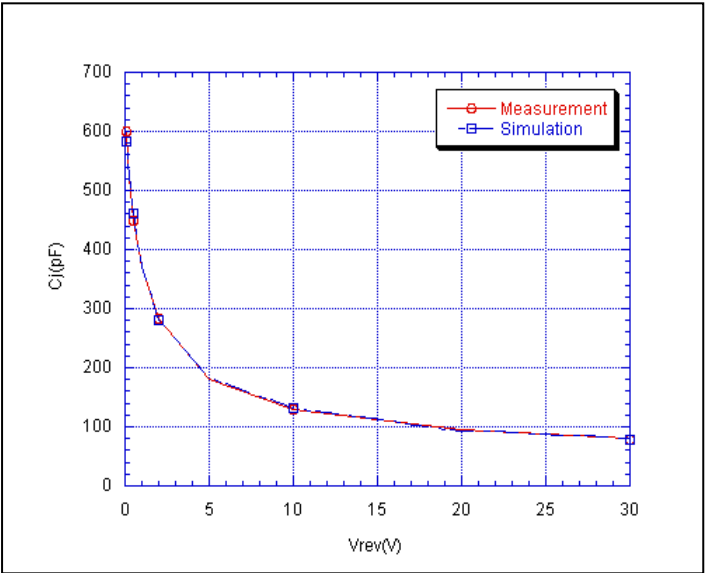


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

Vrev(V)	Cj(pF) Measurement	Cj(pF) Simulation	%Error
0.1	600.000	584.000	-2.67
0.2	550.000	560.000	1.82
0.5	450.000	460.000	2.22
1	370.000	371.000	0.27
2	282.000	280.000	-0.71
5	180.000	183.000	1.67
10	130.000	131.000	0.77
20	95.000	94.000	-1.05
30	79.000	78.000	-1.27