

Device Modeling Report

COMPONENTS:

DIODE/ SCHOOTTKY RECTIFIER / STANDARD

PART NUMBER: DF30JC6

MANUFACTURER: SHINDENGEN

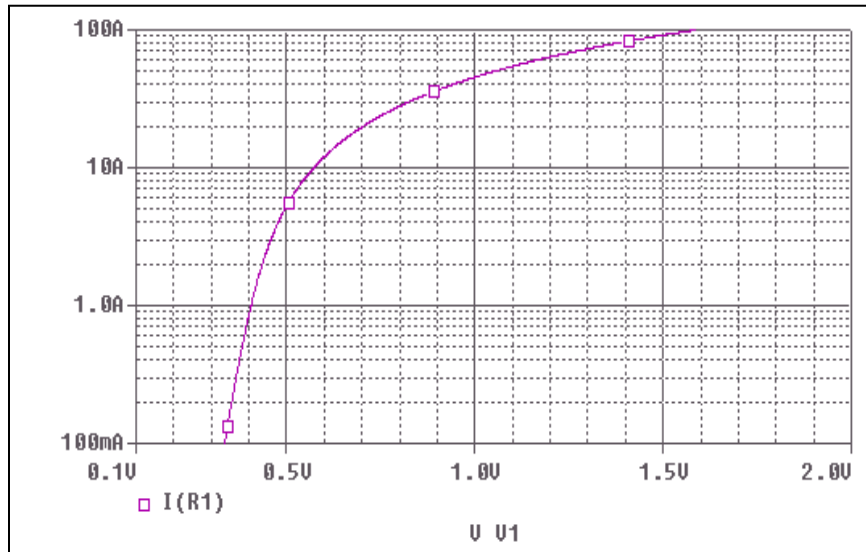


Bee Technologies Inc.

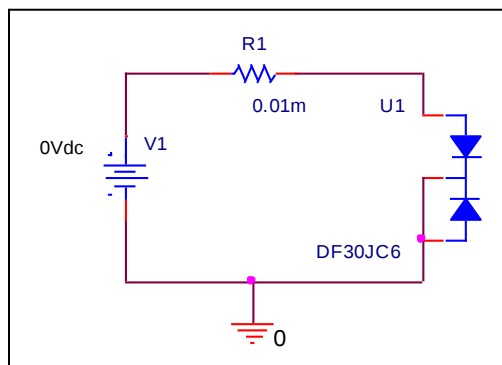
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

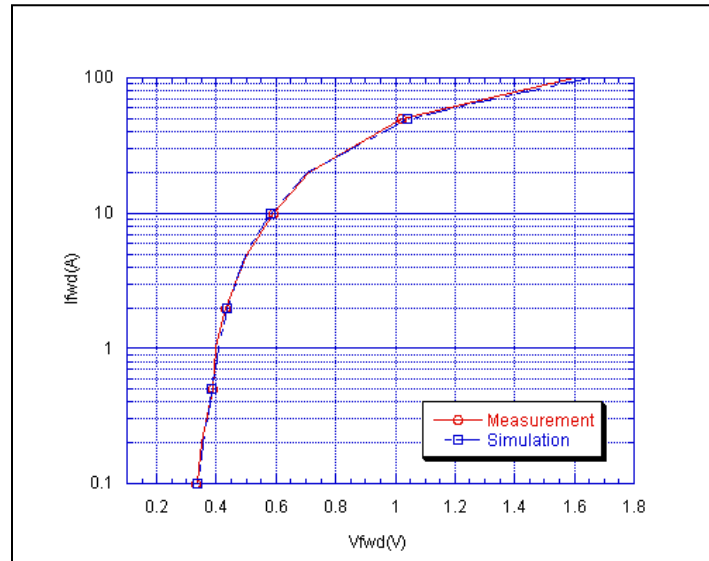


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

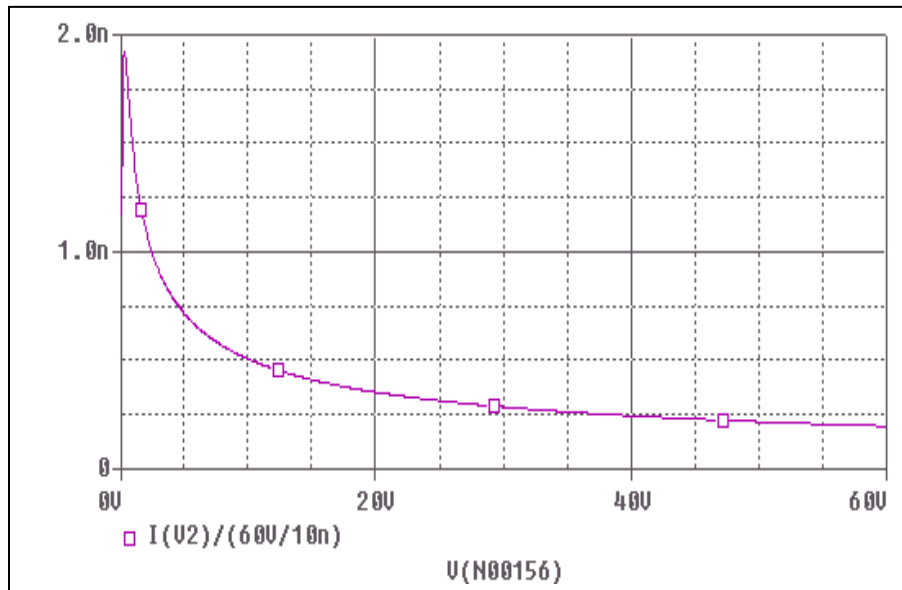


Simulation Result

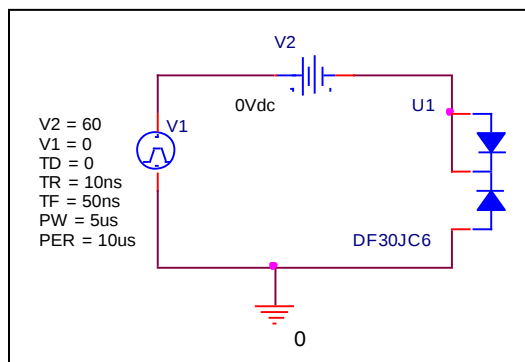
Ifwd(A)	Vfwd(V) Measurement	Vfwd(V) Simulation	%Error
0.1	0.330	0.335	1.52
0.2	0.350	0.353	0.86
0.5	0.390	0.381	-2.21
1	0.400	0.405	1.35
2	0.430	0.436	1.28
5	0.500	0.495	-1.00
10	0.590	0.580	-1.69
20	0.710	0.705	-0.77
50	1.020	1.041	2.03
100	1.600	1.650	3.12

Junction Capacitance Characteristic

Circuit Simulation Result

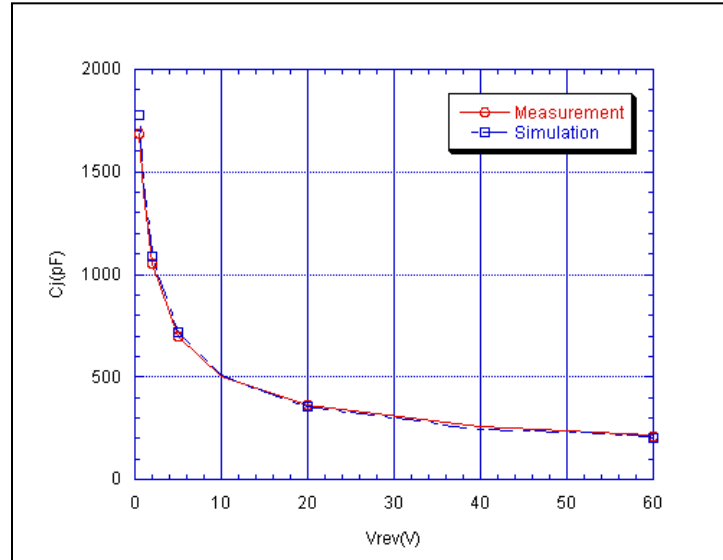


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

V_{rev} (V)	C_j (pF) Measurement	C_j (pF) Simulation	%Error
0.5	1700.000	1780.000	4.71
1	1400.000	1450.000	3.57
2	1050.000	1090.000	3.81
5	697.000	717.400	2.93
10	500.000	507.300	1.46
20	360.000	354.000	-1.67
60	208.000	200.000	-3.85