

Device Modeling Report

COMPONENTS:
DIODE/ SCHOOTTKY RECTIFIER / STANDARD
PART NUMBER: D2FS4
MANUFACTURER: SHINDENGEN

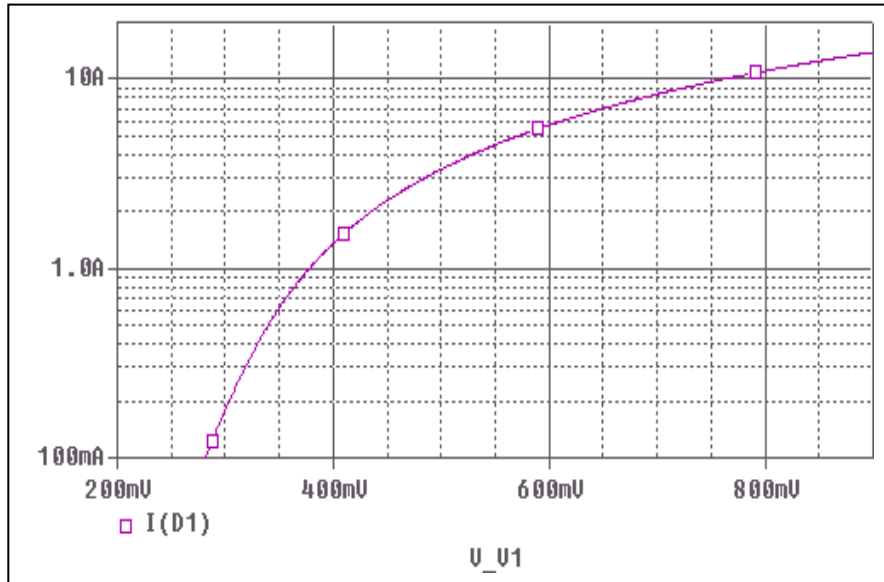


Bee Technologies Inc.

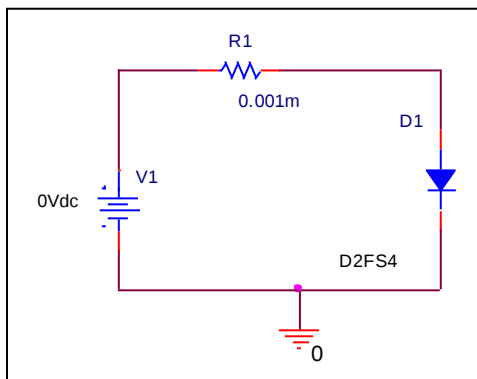
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

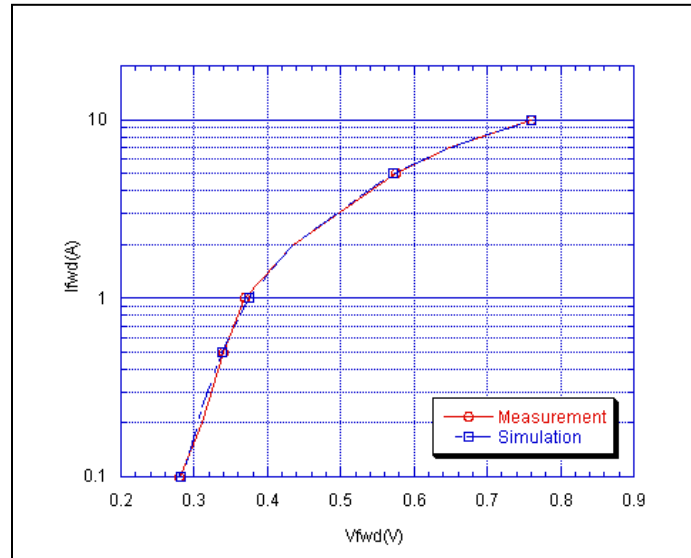


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

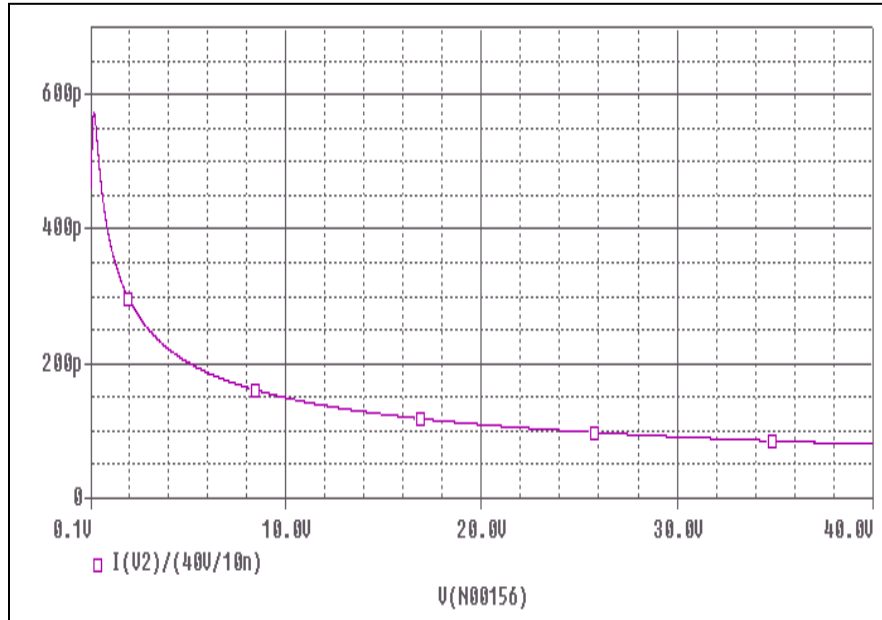


Simulation Result

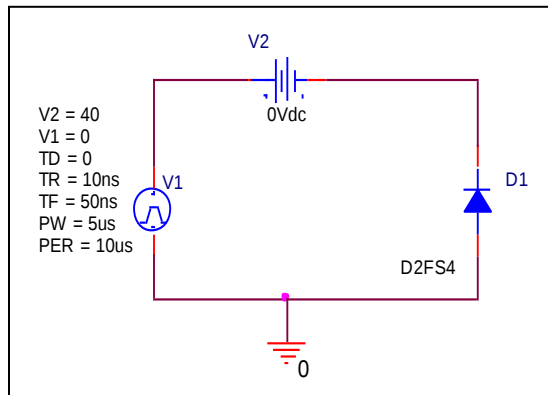
Ifwd(A)	Vfwd(V) Measurement	Vfwd(V) Simulation	%Error
0.1	0.280	0.281	0.36
0.2	0.310	0.305	-1.61
0.5	0.340	0.339	-0.29
1	0.370	0.375	1.35
2	0.434	0.435	0.23
5	0.575	0.572	-0.52
10	0.760	0.761	0.13

Junction Capacitance Characteristic

Circuit Simulation Result

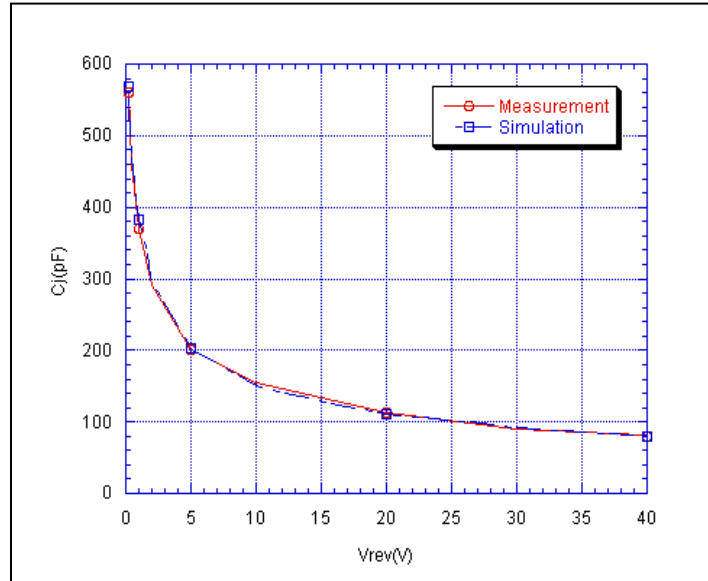


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

V_{rev} (V)	C_j (pF) Measurement	C_j (pF) Simulation	%Error
0.2	560.000	568.000	1.43
0.5	460.000	475.000	3.26
1	370.000	382.000	3.24
2	290.000	295.800	2.00
5	200.000	202.600	1.30
10	155.000	151.000	-2.58
20	113.000	111.000	-1.77
40	79.000	80.300	1.65
0.2	560.000	568.000	1.43