

Device Modeling Report

COMPONENTS:
DIODE/ SCHOOTKY RECTIFIER / STANDARD
PART NUMBER: DF40SC4
MANUFACTURER: SHINDENGEN

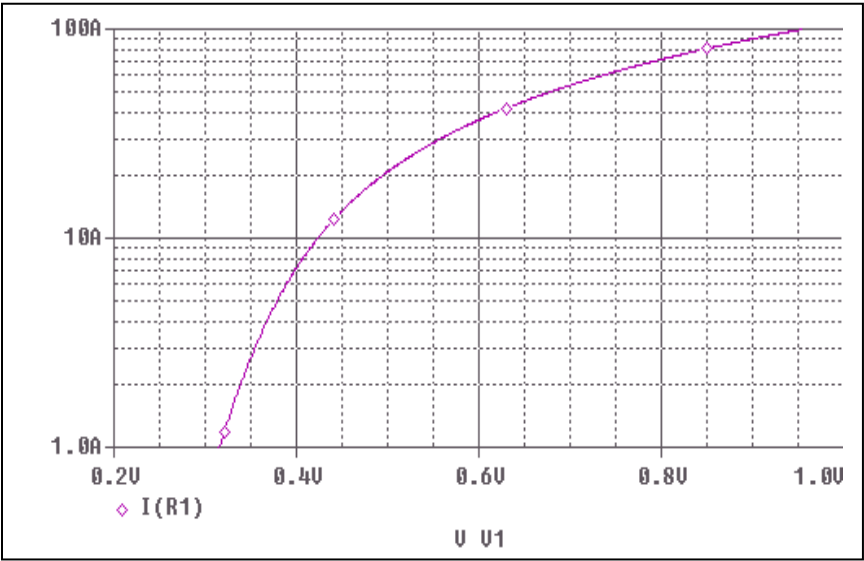


Bee Technologies Inc.

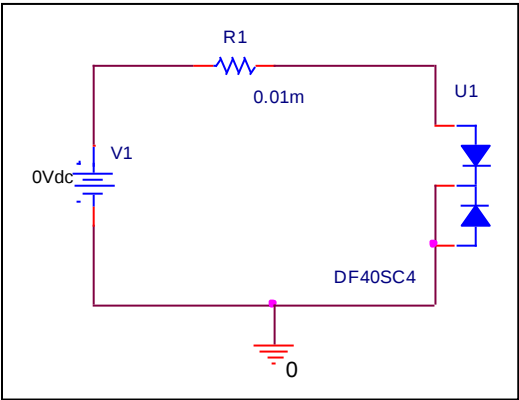
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

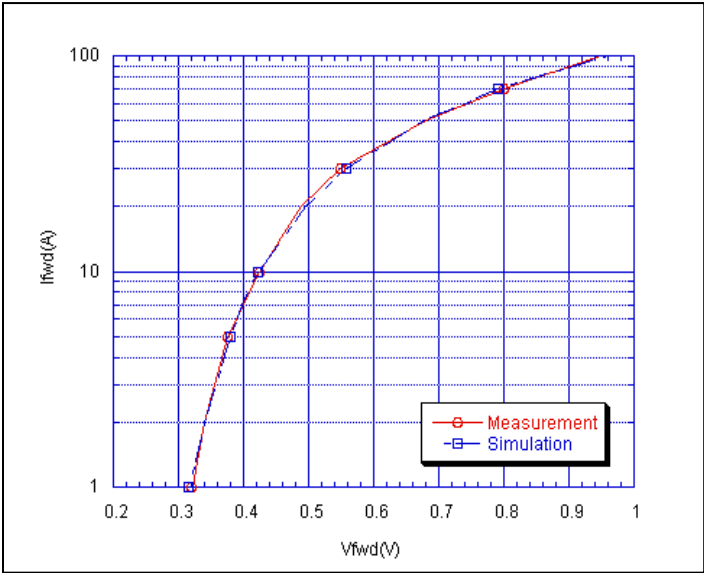


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

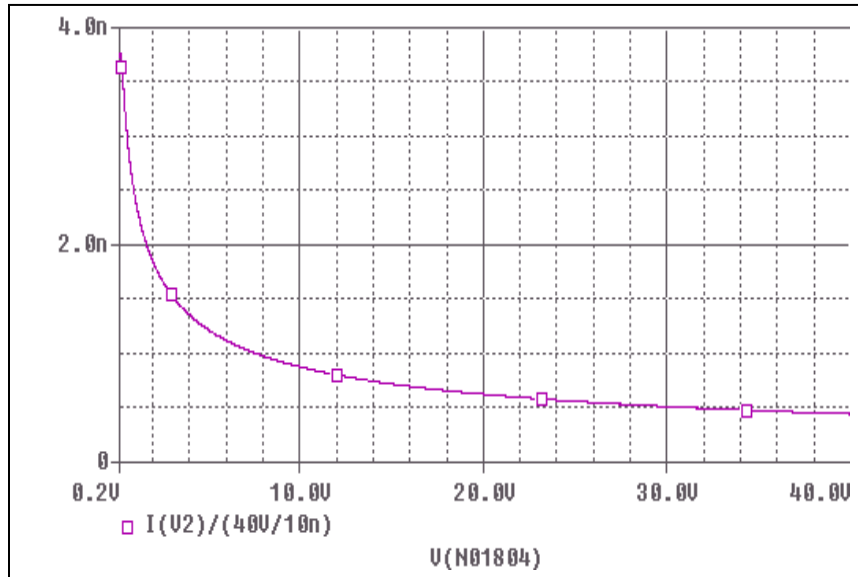


Simulation Result

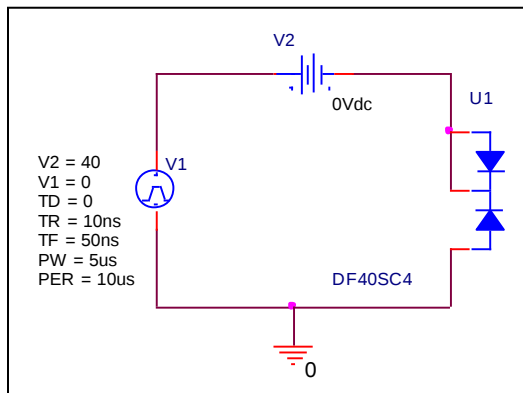
Ifwd(A)	Vfwd(V) Measurement	Vfwd(V) Simulation	%Error
1	0.320	0.316	-1.38
2	0.340	0.339	-0.29
5	0.375	0.379	1.07
10	0.425	0.423	-0.38
20	0.490	0.495	1.10
50	0.680	0.678	-0.31
100	0.950	0.958	0.84

Junction Capacitance Characteristic

Circuit Simulation Result

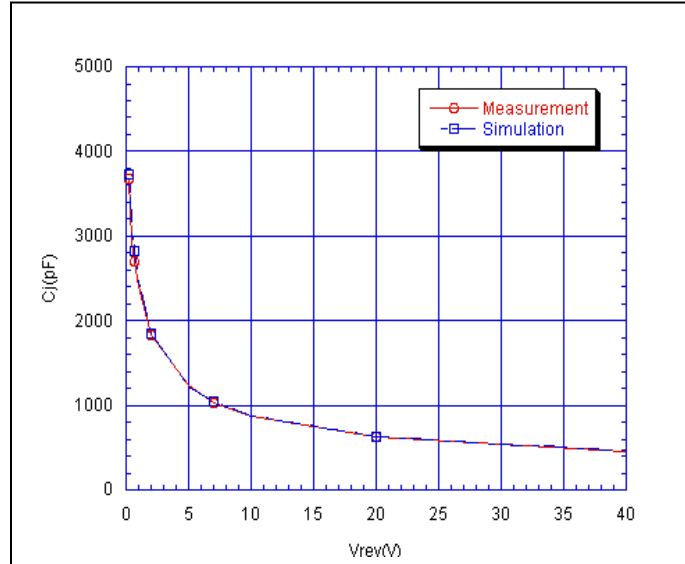


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

V_{rev} (V)	C_j (pF) Measurement	C_j (pF) Simulation	%Error
0.2	3670.00	3731.00	1.66
0.5	2950.00	3070.00	4.07
1	2400.00	2450.00	2.08
2	1830.00	1854.00	1.31
5	1230.00	1217.00	-1.06
10	880.00	878.30	-0.19
20	630.00	626.40	-0.57
40	440.00	446.60	1.50