

Device Modeling Report

COMPONENTS:
DIODE/ SCHOOTTKY RECTIFIER / STANDARD
PART NUMBER: DF20PC3M
MANUFACTURER: SHINDENGEN

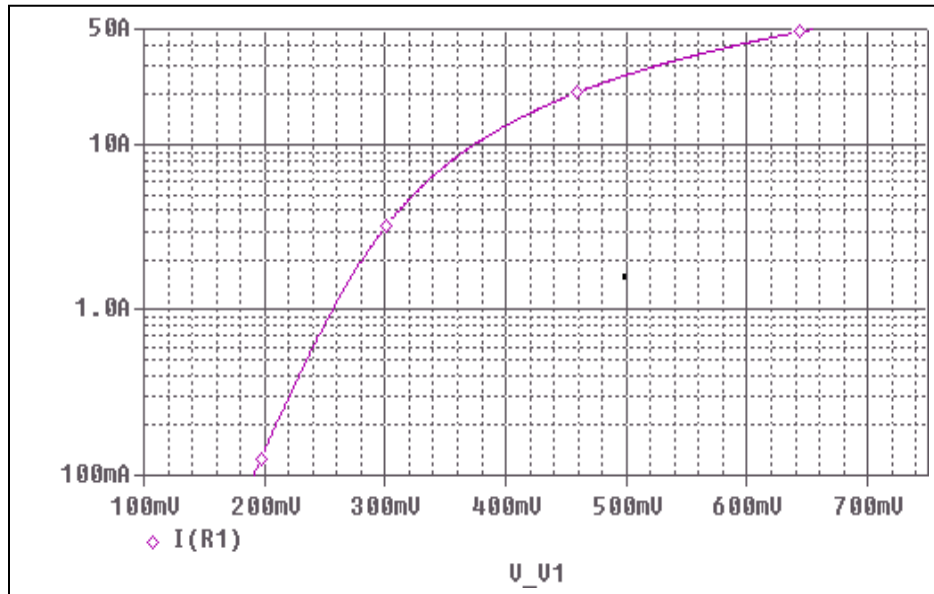


Bee Technologies Inc.

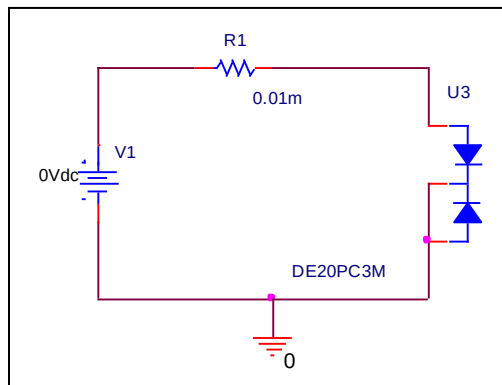
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

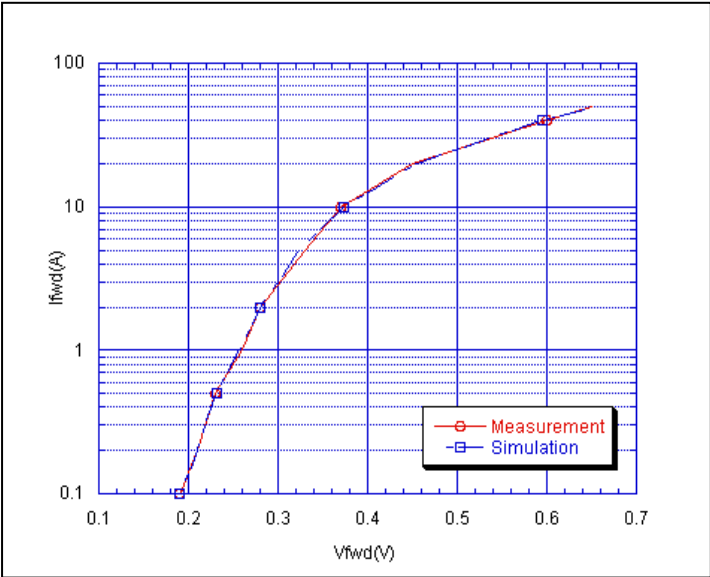


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

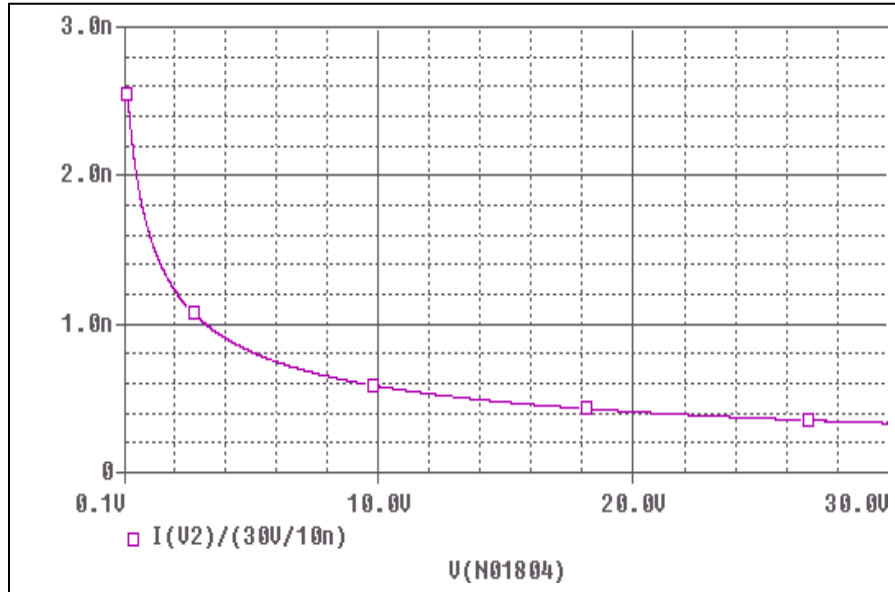


Simulation Result

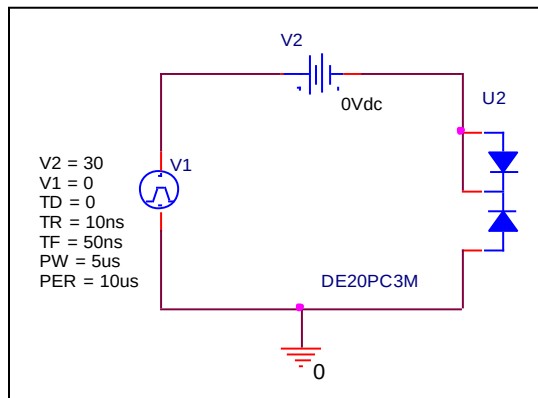
Ifwd(A)	Vfwd(V) Measurement	Vfwd(V) Simulation	%Error
0.1	0.190	0.191	0.42
0.2	0.210	0.209	-0.33
0.5	0.230	0.231	0.43
1	0.260	0.256	-1.46
2	0.280	0.281	0.21
5	0.330	0.324	-1.94
10	0.370	0.374	0.97
20	0.450	0.454	0.98
50	0.650	0.655	0.77

Junction Capacitance Characteristic

Circuit Simulation Result

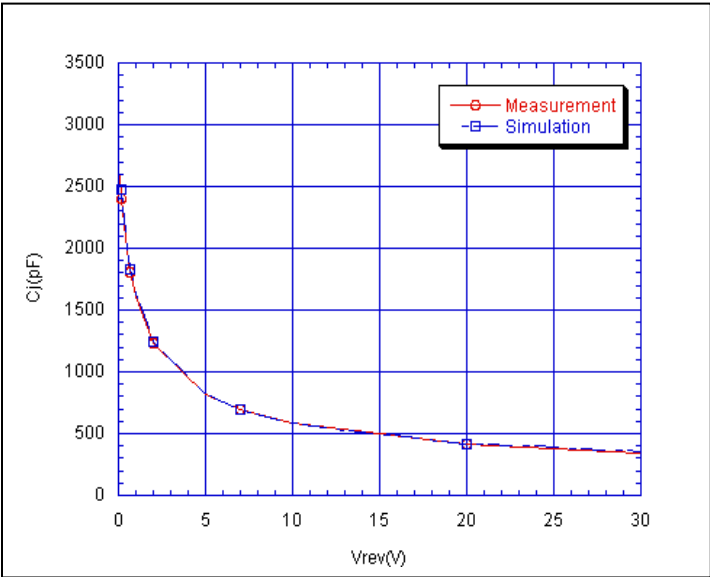


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

Vrev(V)	Cj(pF) Measurement	Cj(pF) Simulation	%Error
0.1	2600.000	2520.000	-3.08
0.2	2400.000	2480.000	3.33
0.5	1990.000	2020.000	1.51
1	1610.000	1636.000	1.61
2	1230.000	1239.000	0.73
5	820.000	815.000	-0.61
10	580.000	581.300	0.22
20	410.000	409.400	-0.15
30	330.000	338.400	2.55