

Device Modeling Report

COMPONENTS:
DIODE/ SCHOOTTKY RECTIFIER /STANDARD
PART NUMBER: DE5S6M
MANUFACTURER: SHINDENGEN

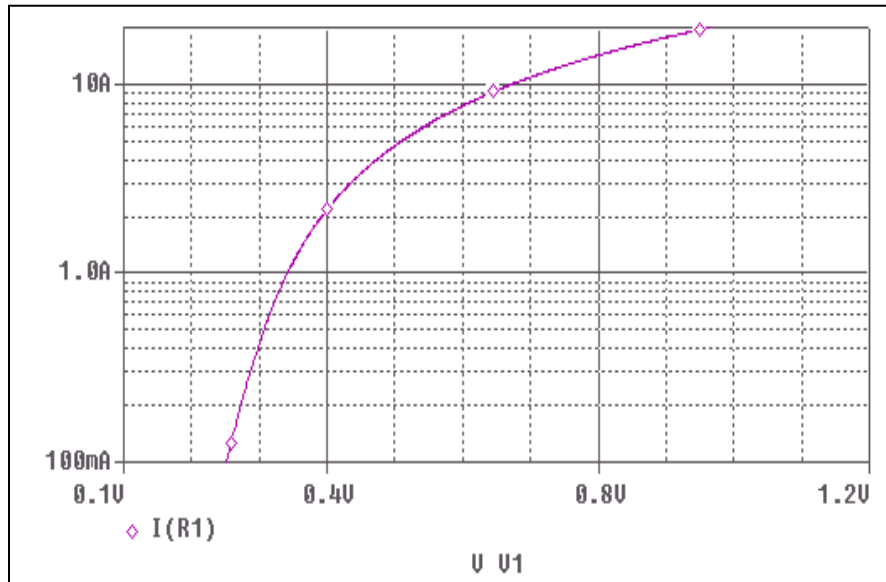


Bee Technologies Inc.

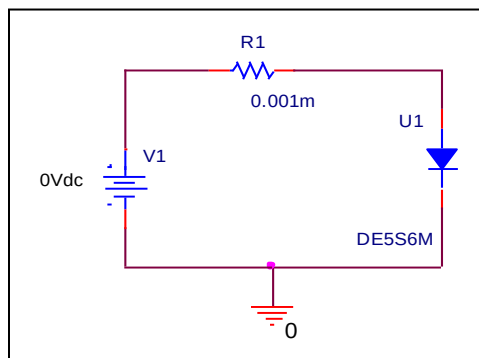
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

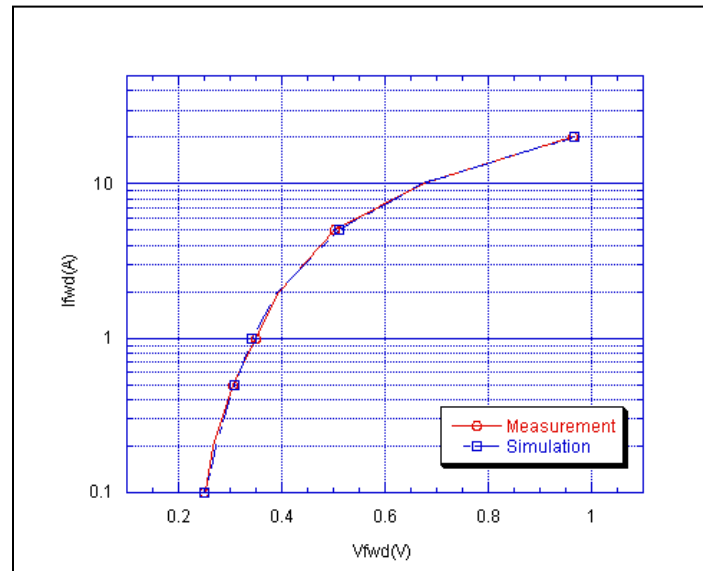


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

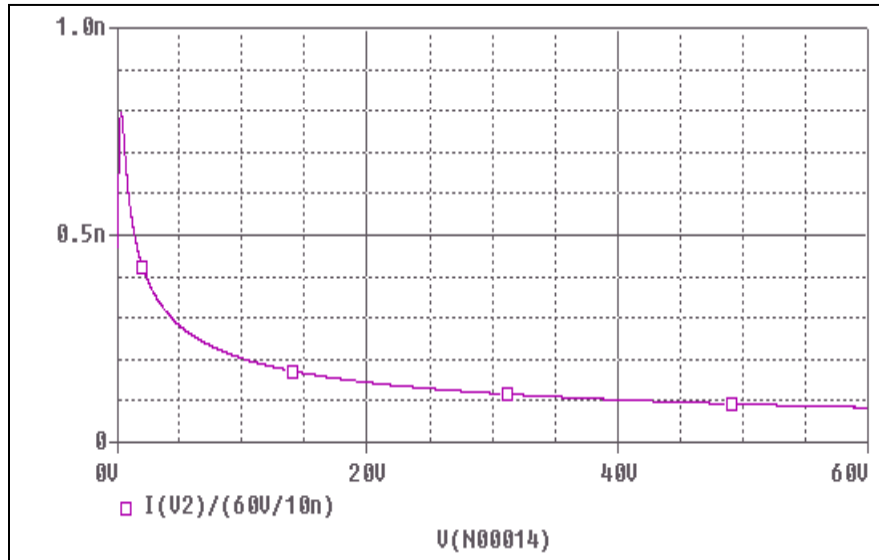


Simulation Result

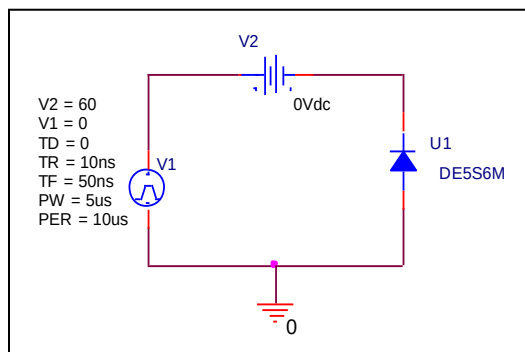
I_{fwd} (A)	V_{fwd} (V) Measurement	V_{fwd} (V) Simulation	%Error
0.1	0.250	0.252	0.60
0.2	0.267	0.273	2.17
0.5	0.307	0.307	0.10
1	0.350	0.341	-2.51
2	0.395	0.392	-0.73
5	0.502	0.510	1.59
10	0.675	0.673	-0.34
20	0.965	0.966	0.10

Junction Capacitance Characteristic

Circuit Simulation Result

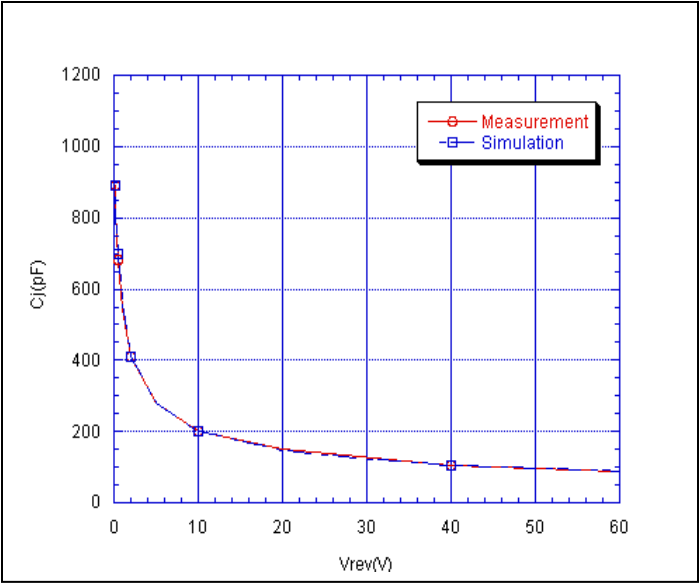


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

Vrev(V)	Cj(pF) Measurement	Cj(pF) Simulation	%Error
0.1	895.000	890.000	-0.56
0.2	820.000	800.000	-2.44
0.5	683.000	700.000	2.49
1	555.000	564.800	1.77
2	409.000	410.000	0.24
5	280.000	282.200	0.79
10	200.000	202.800	1.40
20	150.000	146.300	-2.47
60	85.000	84.300	-0.82