

Device Modeling Report

COMPONENTS:
DIODE/ SCHOOTTKY RECTIFIER / STANDARD
PART NUMBER: SF5S6
MANUFACTURER: SHINDENGEN

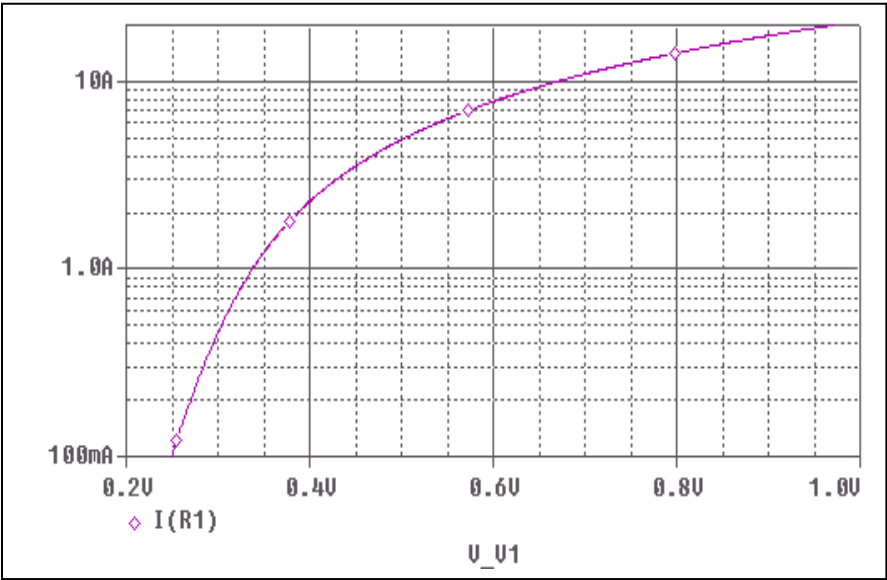


Bee Technologies Inc.

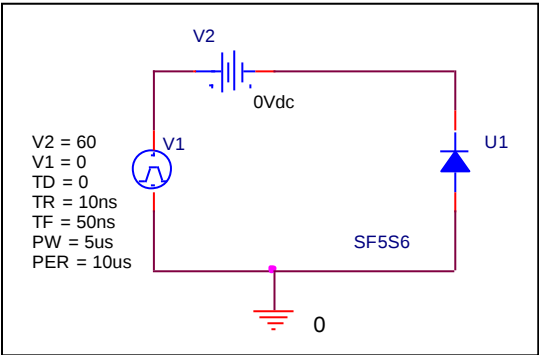
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

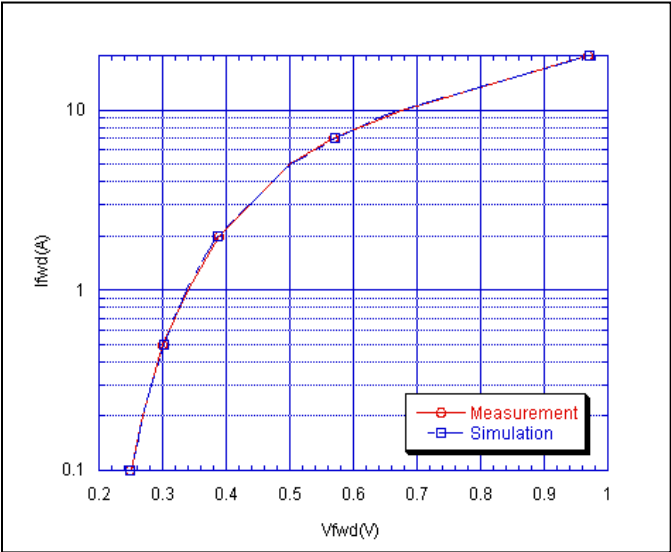


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

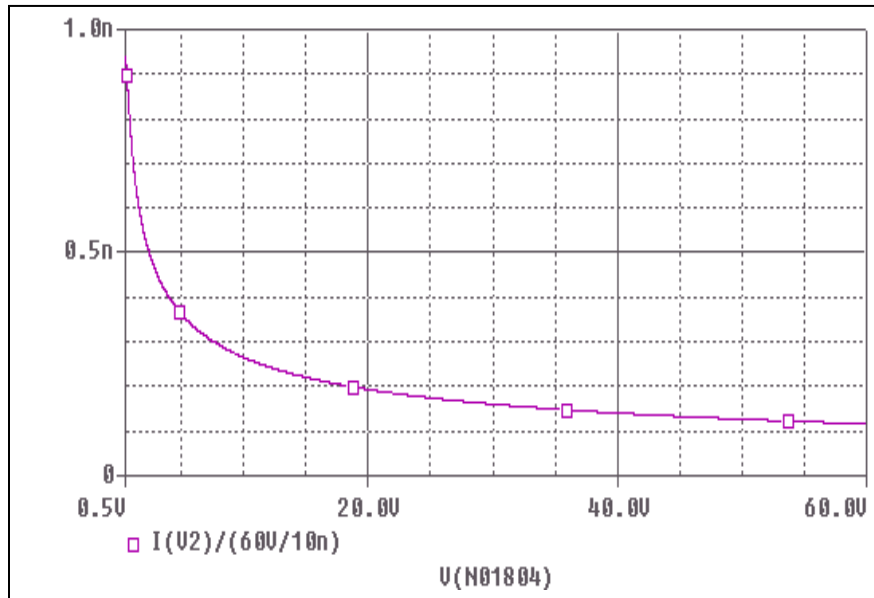


Simulation Result

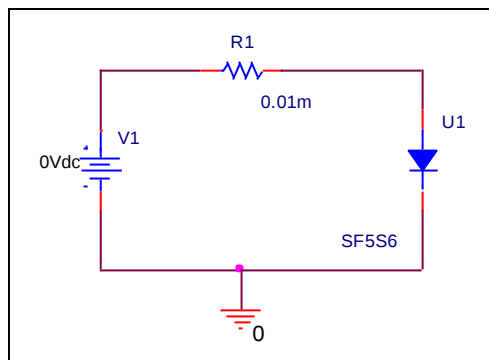
Ifwd(A)	Vfwd(V) Measurement	Vfwd(V) Simulation	%Error
0.1	0.250	0.249	-0.40
0.2	0.272	0.270	-0.74
0.5	0.301	0.303	0.66
1	0.340	0.337	-0.88
2	0.390	0.387	-0.77
5	0.500	0.503	0.60
10	0.675	0.669	-0.89
20	0.970	0.971	0.10

Junction Capacitance Characteristic

Circuit Simulation Result

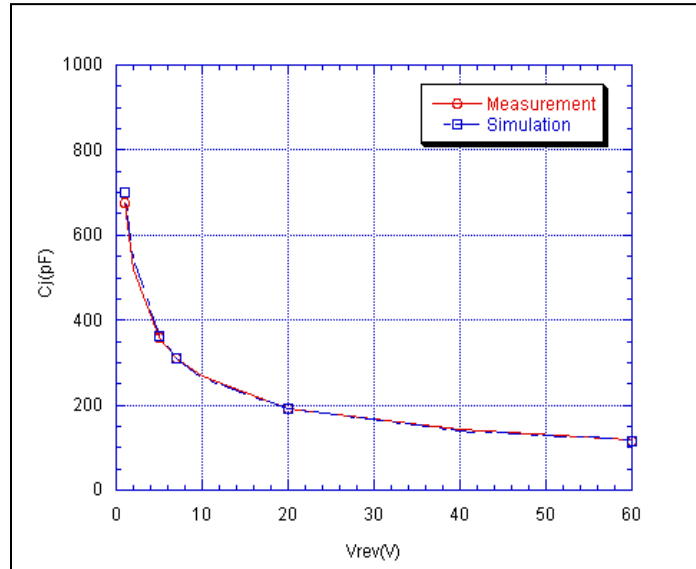


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

$V_{rev}(V)$	$C_j(pF)$ Measurement	$C_j(pF)$ Simulation	%Error
1	675.00	700.00	3.70
2	529.00	548.60	3.71
5	360.00	362.20	0.61
10	268.00	265.10	-1.08
20	192.00	192.30	0.16
40	142.00	139.90	-1.48
60	115.00	116.60	1.39