

Device Modeling Report

COMPONENTS:

DIODE/ SCHOTTKY RECTIFIER / STANDARD

PART NUMBER: 1SS322

MANUFACTURER: TOSHIBA

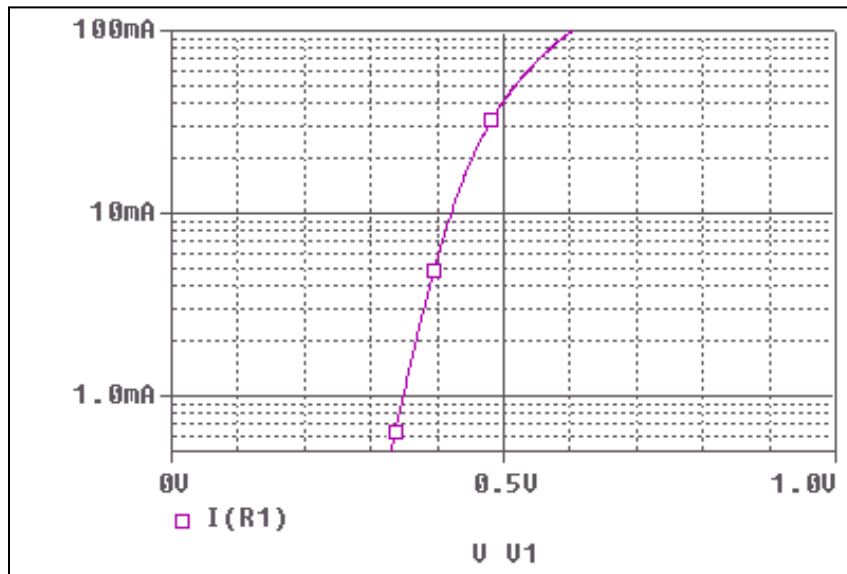


Bee Technologies Inc.

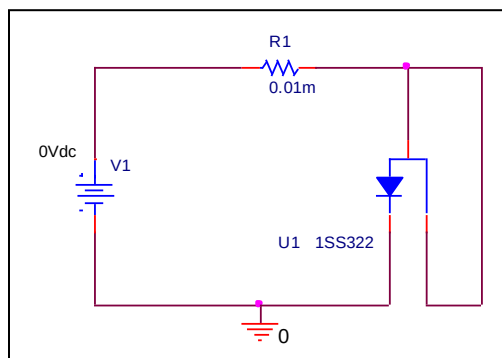
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

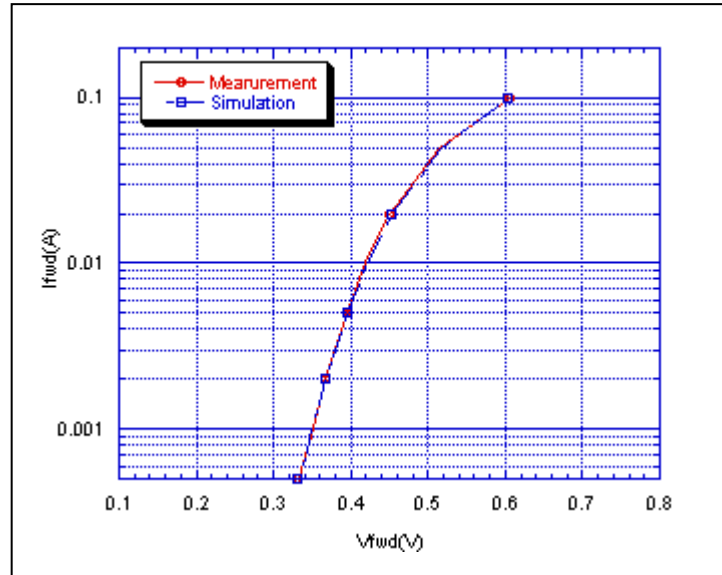


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

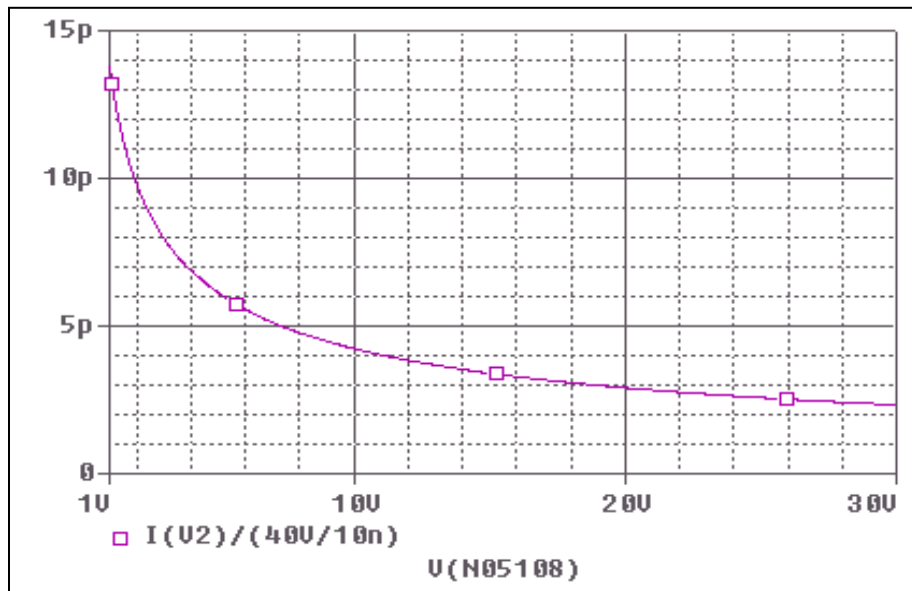


Simulation Result

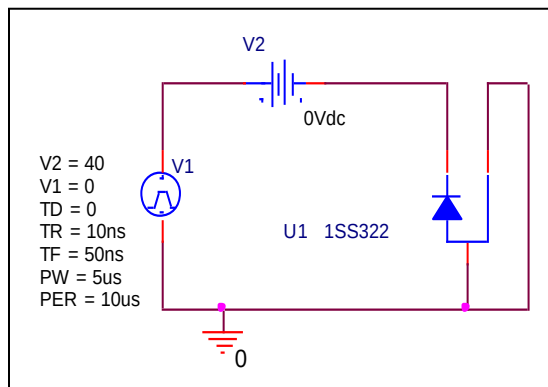
Ifwd(A)	Vfwd(V) Measurement	Vfwd(V) Simulation	%Error
0.0005	0.332	0.330	-0.57
0.001	0.352	0.349	-0.94
0.002	0.367	0.368	0.27
0.005	0.395	0.396	0.20
0.01	0.420	0.421	0.14
0.02	0.450	0.452	0.49
0.05	0.515	0.517	0.39
0.1	0.605	0.603	-0.26

Junction Capacitance Characteristic

Circuit Simulation Result

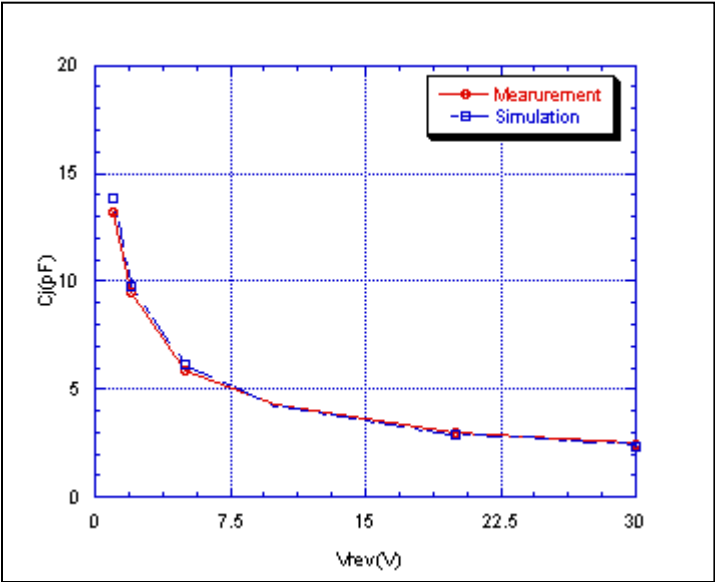


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

Vrev(V)	Cj(pF) Measurement	Cj(pF) Simulation	%Error
1	13.200	13.800	4.55
2	9.500	9.800	3.16
5	5.900	6.100	3.39
10	4.250	4.200	-1.18
20	3.030	2.900	-4.29
30	2.400	2.300	-4.17